HOME SCIENCE: NURTURING INNOVATIONS AND SKILL DEVELOPMENT

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CONTENTS

ABSTRACTS

Skill Development and Home Science

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Abstract

Home science is described as a multipurpose programme of study which helps in developing the skills, abilities and capacities for successful home making and family living in a dynamic society. It is different from other academic fields – as it has a concern for home and family living. Learning skills will not only increase the opportunities but will also empower an individual which will go a long way in aiding the overall development of person. The world around us is changing very fast. We can see a remarkable change in our economic, social and cultural environment. As a result our values, goals, standards, attitudes and life style are also changing. The need of the hour is to adapt to these changes because it is the law of nature that those who do not change, they perish. Home science has a variety of disciplines which involves education and research in areas of Food and Nutrition, Clothing and Textiles, Human Development, Family Resource Management and Extension Education. It is a professional field which imparts training and skill development in areas like cookery, catering, child care, Interior decoration, Fashion designer, Fashion choreographer etc.

Key words: *Home science, skill development, Fields, Career opportunities.*

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Introduction

Home Science is a study about science involving food and nutrition, health, environment, human development and other departments in the field of science. Home science is offered as undergraduate, post graduate, diploma and certification course by selective universities and colleges in India. It is the study of general topics arising on socio-economic level. One can complete their undergraduate and even post-graduate courses in the field of home science. Education is a process which aims the overall development of individual with positive changes in the behaviour so that they can turn in effective member of society. Home science education is helping individuals to live more happy and satisfying personal, family and social life. Home science as a subject has five branches, as known by various names in different colleges like foods and nutrition, human development, clothing and textiles, family resource management and development communication and extension. All these provides spectrum of opportunities, few among them are given below.

1. **Foods & Nutrition:** The effective management of food intake and nutrition are both key to good healths. Smart nutrition and food choices can help prevent disease. Eating the right foods can help your body cope more successfully with an ongoing illness. Understanding good nutrition and paying attention to what you eat can help you maintain or improve your health. There are some skill development courses in the field of food & nutrition:-
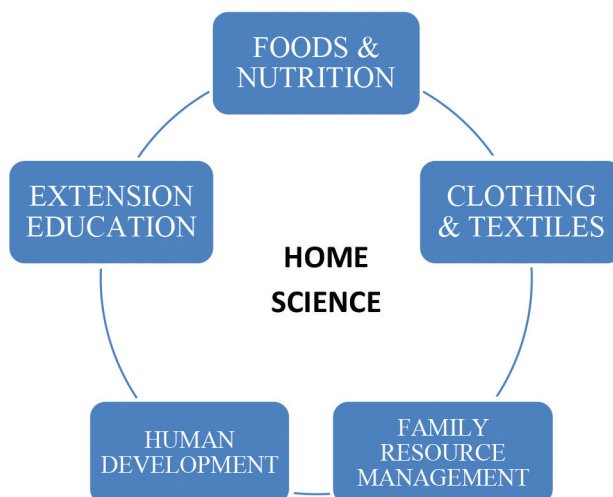
- **Nutrition Expert:** After graduating in home science, students can go for a post diploma course in nutrition & dietetics & seeks jobs as dieticians in hospitals and fitness centres. They can even work as children nutritionists and help them come out of their eating problems.

- **Sports Nutritionist:** Students learn how to help athletes achieve peak performance through healthy meal planning. Students also explore how supplements, powders and sports drinks enhance sports performance.

- **Public Nutrition and Wellness Education:** This course delves into nutrition as it applies to health and disease prevention. Nutritionists can work in mass media industry, writing regularly for news paper columns on health issues and nutrition.

- **Cookery Classes / Food Preservation:** cookery classes in baking, salads, desserts, preservations healthy & nutritious snacks& many more can be prepared & sold. A cooperative society as is for lijjat papad, can be formed and the profit equally distributed among the members.

- **Cafeterias / Hotels / Catering:** home science students can work in hotels as chef & can prepare healthy & delicious food. Catering services can be provided at parties in the schools, colleges, offices etc.

2. **Clothing & Textiles:** It deals with skills & knowledge required for selection, construction & care of clothing, principles of design in relation to clothing, and the manufacture of fabrics, properties of textile fibres in relation to use in home, different types of weaves, repair & storage of clothes. **Following** are some skill development courses in the field:-

- **Fashion Designing/Fashion Merchandising:** it is a blend of fashion sense & business expertise merchandising involves selecting, buying & selling textile apparels and other clothing accessories. It also involves developing campaigns, displays, advertisements, manufacturing, marketing as well as promoting sales. After learning the basics of sewing, the graduates can go for more advanced dress designing course in a fashion institute and establish themselves as fashion designers.

- **Computer Aided Textile Designing:** In CAD student is taught to appreciate and develop her own values and design concepts in traditional and contemporary processes, using

resourcefulness and imagination. Printing and weaving, provide systematic training in surface designs and fabric structure, in weaving, to learn mixed weaves and coloured effect, fabric analysis and loom mechanism.

- **Skill Development Program for Weavers:** As it is a skill up-gradation program, it is necessary to educate the weavers with the proper working methods required for improvement in productivity.

- **Fashion Choreographer / Modelling:** modelling is a business in which graduates of clothing & textile wear newly designed dress styles for people to see & buy. A fashion choreographer assists in setting up a fashion show. It is here where the art of fashion choreography comes into play. They train models on how to walk with confidence and grace so as to accentuate the collection designed by the designer by not being too stiff or theatrical.

3. **Family resource management:** Resource management is the process in which individuals and families use what they have to get what they want. It begins with thinking and planning and ends with the evaluation of actions taken. Three fundamental concepts in resource management are values, goals, and decision making.

- Interior Architecture / Designing: Interior designers make interior spaces functional, safe, and beautiful for almost every type of building: offices, homes, airport terminals, shopping malls, and restaurants. They select and specify colors, finishes, fabrics, furniture, flooring and wall coverings, lighting, and other materials to create useful and stylish interiors for buildings. Interior designers help transform spaces and are specialists in combining form and function.

- Hobby Classes: Students can learn various types of skills in hobby classes like paintings, rangoli, flower arrangement, trousseau packing, best out of waste etc and develop these into their entrepreneurship.

4. **Human/Child development:** Human development refers to the biological and psychological development of the human being throughout the lifespan. It consists of the development from infancy, childhood, and adolescence to adulthood. Child development is typically defined as the progression by which children change and acquire knowledge, behaviours, and skills as they progress through childhood.

- **Childcare Centres / Nursery Schools:** Early childhood care and development focuses the age group of 2-5 years by providing nutritional food, imparting learning through play way methods, concentration on early childhood development skills with adequate health care and hygiene promotion activities.

- **Nanny / Childcare worker:** The growing demand for quality childcare has created specialized fields for working with young children and their families. home science graduates work in before- and after-school programs, summer camps, infant nurseries, and family home-based programs.

- **Counselling Services:** Child psychology is concerned with the development of a person over the course of their childhood. This involves the development of a child's mental processes as well as emotional and social behaviour. It is important to state that

development does not end at adulthood. Adults continue to experience changes in their mental, emotional and social behaviours. The professional might provide services to special needs children, helping kids with learning disabilities, physical disabilities, and other issues

5. **Extension Education:** This field deals with improved method of teaching, extending home science knowledge to various sections of the society; attitude, values, knowledge and practices prevalent in the society. Extension education is defined as an educational process to provide knowledge to the rural people about the improved practices in a convincing manner and help them to take decision within their specific local conditions.

- **Extension specialists:** After graduating in home science one can work at grass root level by generating research based information and solutions in the different areas of home science. They can plan, develop, organize and evaluate training programs.

Conclusion

Home Science is a multipurpose academic programme of study which includes the basic and applied disciplines. It prepares the female students for the greatest of all professions that of wife and mother, and trains them in the care and management of the home. Further it develops awareness of the needs of all special value for women who are desired to provide general education, extend intellectual horizons, provide specialised education, and develop leaders. As a home scientist one can nurture several skills and build capacity that can enable one to set up various entrepreneurs.

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Designers Or Ergonomists-
Can Home Science Win The Race

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Abstract

Home Science is no longer what it used to be -a study confined to the requirements of the four walls of the house. Just like the modern home, this area of study too has changed and developed to meet the challenges of the present time. And herein lays the beauty of the subject - its flexibility and ability to take in anything and everything from any other discipline and mould it into its own. The multidisciplinary role of Home Science should not dilute its importance or make it appear unable to support itself. In order to maintain its dignity, it must therefore, create its own special space or niche which in no way trespasses into the territory of any other discipline. It should have its own individuality and command respect on the basis of its own body of knowledge and exemplary research in the field. The skills that we impart to our students should not just be at par with the skills that can be attained by pursuing other discipline of studies but offer much more for them to be able to stand out in the crowd.

More specifically, the area of designing - interior designing, landscape designing, product etc. are very popular courses of study being offered by the private institutions outside the realm of government colleges and universities. A number of studies have shown that in the coming times there will be a huge requirement for designers. The issue for the profession is not whether there will be a demand for interior design services, but rather, of what kind and provided by whom."

The present paper deals with this question - should the designers be from - private, diploma giving institutions or degree students from universities of repute which can teach designing not just in isolation but in the light of changing family characteristics, newer needs and requirements and most importantly in tune with emphasis on creating healthy environments. If the later is the obvious answer then are we equipping our students with the essential skills essential for the profession? Or are we again losing out to the private institutions?

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Introduction

Home Science- missed opportunities

Traditionally, whatever had been the role of Home science, as times changed and newer job opportunities came into the market, it was essential that the course curriculum should have changed to meet the requirements of the newer professions. But perhaps, unfortunately, this did not happen. That is the reason that Food and Nutrition students have to compete with students doing a specialization course in Hotel Management. The Textiles or Fabric and Apparel Sciences have to fight for a place under the sun (which should have belonged to them) with students from

NIFT and other private institutions. The Communication and Extension field also has competitors from media institutes and those training students in social work. The special educators and counselors should ideally have been our students with specialization in Human Development.

The same is true for Resource Management. Although, there is no way our students can compete with students doing a two year management course (MBA), we might still have chance in the design area. But are we imparting them with the right skills.

Need for Imparting Skills

Kaushik, K. (2014), points out that the current education system in the country is non-responsive to the skill demands of the existing and future industry, leading to a supply-demand gap on various counts. According to a report by the World Economic Forum (Mehta,V.,2014), India has 487 million workers, but more than two-thirds of Indian employers report that they struggle to find workers with the right skills. This shows that there are opportunities for skilled workforce provided the right skills are imparted in the right way.

Skills related to designing - Interior / Exterior/ Product

Initially, aimed only at making a homemaker make the best use of her space and design it amicably, the field of resource management incorporated 'professional level' Interior Decoration or Design into its syllabus. The subject of Ergonomics was also included in some way or the other. Today, these are two vastly developed areas of study with direct linkage with the job market. Guerin, D. A., Martin, C. S. (2010), in their study on the Interior Design profession's body of knowledge and its relationship to people's health, safety and health concluded that Codes; Communication; Design; Furnishings, Fixtures and Equipment; Human Needs; Interior Building Construction; and Professional Practice constitute body of knowledge of an interior designer. Under Home Science a number of these areas - more specifically - design, furnishings, fixtures, equipment, human needs and interior building construction are dealt in some detail but there is definitely a need to go deeper and to provide more intensive study of these areas.

Hernecheck, P. J., Rettig, K. D., Sherman, M. R., (1983), in their paper on Professional Viewpoints of Competencies for Interior Design Entry- Level Positions also pointed out that competencies such as space planning, furniture arrangement color theory, oral communication skills were important for entry level positions in interior design. And in most Home Science colleges these areas do form an integral part of the curriculum.

So what is lacking? Guerin, D.A. (n.d), in his paper on 'Issues facing Interior Design Education in the twenty first century considers professional identity, liberal arts foundation, interdisciplinary elements, international concerns, technology integration, and scholarship activities as major issues. These issues need to be thoroughly incorporated in our curriculum.

Of immense importance is the necessity to integrate technology into the syllabus. The design industry has long moved from paper and pen techniques of drawing plans to highly specialized softwares. It is in this area that we lag behind the private institutions teaching Interior Design. In most of the Home Science institutions, AUTO - CAD is taught. The need however, is to go on to more specialised softwares such as 3ds -MAX, Revit, SketchUp Pro, Infurnia etc.

Most Interior Design teaching institutes teach some of these softwares. But it is in an institution teaching Home Science that design is taught in relation to the family and its need, different activities carried out in the space, patterns of space use, economics of effective space

use and most importantly in relation to entrepreneurship. The most important advantage is the presence of a subject such as Ergonomics which is barely touched upon by private institutes. A designer designs keeping in mind aesthetics but an ergonomists designs keeping in mind the functionality or use of the area and the people using the space. This results in a more functional use of space or designing of products that are more user friendly. The market can definitely understand and appreciate the difference if only attempts are made to publicize in a big way. The design industry must be made to take notice of Home Science students doing their specialization in the area of Resource Management.

At the same time, however, it is equally important to bridge the skill gap that exists especially related to the design softwares. The latest softwares must be taught and the students should be given enough opportunities to practice. There must be on - the - site training, field visits, interaction with interior designers of repute and an exposure to the international design scenario. The time is running out fast and if serious and immediate steps are not taken immediately, this race will be lost too.

Conclusion

In conclusion, it can be said that in terms of theoretical concepts, the students pursuing Resource Management stream of Home Science have sufficient knowledge. In addition to the design concepts, they also study family, sociology, economics and most importantly ergonomics which give them an advantage of better understanding of space and its use. But they need to know more software, have more intensive on - the - job training, more market interaction and most importantly - wide publicity of their skills in the design market.

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Role of Home Science in Nurturing Starts-Ups and Entrepreneurship

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Abstract

Entrepreneurship is about being an entrepreneur, which can be defined as one who brings with new innovations, finance, and business, in an effort to transform innovations into economic goods. Home science is an interdisciplinary field. It works with focus on many disciplines which covers a broad area of different aspects related to home science i.e. food & nutrition, textile and apparel designing, human development and family studies, resource management and extension education and communication management. These all fields fill with lot of opportunities relatedto entrepreneurship. Earlier it prepared an individual obtain recent scientific information to cope with the day to day problems but today efforts are being made to provide facilities to invigorate the theoretical knowledge to trainees/students through field of training so that they are able to launch entrepreneurship. Food & Nutrition is deals with nature of food. In this field training an individual can starts- ups their entrepreneur in catering, can start their own bakery and restaurant. Many institutions provide training programs for skill development in their interest of area. Through the training in textile field an individual go with their star-up through opening their boutique, dyeing and printing unit, embroidery center, and weaving unit. Through resource management field training it helps to an individual to start their craft work. Their continuous efforts are play an important role for entrepreneurship. Nowadays women entrepreneurial development is one of the important areas of concern, majority countries has been focused upon it as a part of over all human resource development.

Key words: *Entrepreneurship, Home science, Innovation, Start-up*

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Introduction

Home Science is a both science and art related multi-disciplinary field of study involving biology, chemistry, physics, physiology, hygiene, economics, rural development, child development, sociology and family relations, community living, art, nutrition, textiles and home management. One can specialize in any of the five streams of home science - Food and Nutrition, Resource Management, Human Development, Fabric and Apparel Science and Communication and Extension or have a general understanding of all streams. A career in Home Science is best suited for modern women with keen aesthetic sensibilities in contemporary arts & modern housekeeping among others.

Entrepreneurship is the act of being an entrepreneur, which can be define as "one who undertakes innovations, finance, and business acumen, in an effort to transform innovations,

into economic goods. Entrepreneurship means small business owners opening up their shop doors on main street. Ultimately, entrepreneurship encompasses these and many other business ventures that share a commitment to turning an idea into a profitable business. Entrepreneurial development is one of the important area majority countries has been focus upon as a part of over all human resource development. It is well ascertained by policy makers across the courtiers that strategic development of an economy required equal participation and equal opportunities to all sect and genders. Entrepreneurial development is one the significant factor for sustainable socio-economic development. The motivational factors of an individual which influence on entrepreneurial factors, and how it facilitate the educators and educational institutions to develop infrastructure, design programs and course ware, ensure training and development activities that in tune with the requirement of entrepreneurial education in rural and semi urban areas where small and medium scale industries are more located.

Entrepreneurship in Home Science

Home science is an interdisciplinary field of knowledge with focus on Food & Nutrition, Fabric & Apparel Designing, Human development, Resource Management and Communication & Extension. Earlier it prepared an individual obtain recent scientific information to cope with the day to day problems but today efforts are being made to provide facilities to invigorate the theoretical knowledge of the students through field training and research laboratories so that they are able to launch entrepreneurship programmes successfully.

Food and Nutrition deals with nature of food; the constituents of food; food required for the growth and maintenance of body functions; food needs at the different stages of life; nutrimental deficiencies and ways of overcoming them; preparation of food in a way so as to conserve the maximum nutritive value and preserve its flavour; the biochemical changes that food undergo during digestion; preservation of food and food habits.The study in this field objectively prepare the students to work in any of the following enterprises:- Catering, Confectionery and Bakery, Ready to cook/Serve food, Health centers, Hobby centers etc.

Resource management:

Resource Management undertakes the study of managing the home economically and effectively. The home implies the basic facts about housing designs, furnishing which will save money and labor and methods of getting the maximum work done through the minimum equipment. Management of home is making the best use of the available resources, to derive the best value to conserve time, energy, money, space and labour. An individual could open their own craft workshop, can go in field of interior designing, hobby centres etc.

Fabric and apparel designing:

This domain of Home Science focus on the selection, construction and care of clothing; its effect on the family income; the behaviour and chemical nature of different textiles; types of weaves; the quality, color, shrink ability and durability of fabrics; quality of natural fibers like silk, wool, cotton, nature of synthetic fibers like nylon, rayon, teri-cot etc. Following are the listed fields of entrepreneurship.

a) Boutique.

b) Dyeing and Printing unit

c) Readymade Garment unit.

d) Embroidery centre

e) Weaving unit.

Human development:

Human Development enriches emotional relationship among family members. The most important amongst a family are the children. They must be brought up in an atmosphere conducive to growth and development. Children's character must be strengthened to meet the challenges of their life by their parents and other family members. An individual could open their own child care centers, old age homes, Rehabilitation centres for children with specialneeds etc.

Polices for entrepreneurship/start-ups

The function of entrepreneurship in economy is not hidden to anybody. Most of the business activities are executed by entrepreneur. These persons with reference to their characteristics can enter business market. Entrepreneur's role is not only in the boost of production but also in the recruitment of mass labour force. With the awareness of role of entrepreneurship in economy, government is interested to direct and guide entrepreneur's need to capital, technology and other amenities for performing their activities like:

1) Training: Fundamental training changes according to product but will require involving improving of entrepreneurial skills. As per requirement of entrepreneur, training is offered by government. Many government institutions and NGOs carry out EDPs (Entrepreneurship Development Programme) and MDPs (Management Development Programme). These programmes are conducted by MSME's, NIESBUD, NSIC, EDI, etc.

2) Marketing Assistance:

The government and non-government institutions offer marketing support. Generally MSME products are promoted during trade fairs but NSIC directly market the MSME product at national level and in a foreign country.

3) Promotional Schemes:

Central government has been implementing incentive scheme for offering refund of payment upto 75% of cost for obtaining ISO 9000 certification.

4) Concession on Excise Duty:

MSME units with an income-expenditure of Rs.1 crore or less per year has been excused from excise duty charges. In addition, for production of branded products through MSME in rural areas excise duty is excused.

5) Credit Facility to MSME:

Credit offered by banks to micro-small-medium segment is bounded under priority sector. Small Industries Development Bank of India (SIDBI) is apex institution for financing MSME. Some institutions viz. SIDBI, SFCs, and scheduled banks, SIDCs, NSICs are envisioned for funding.

6) Policies and Schemes for Promotion of MSME Implemented by State Governments:

All the state governments facilitate (particularly in Maharashtra) technical and other support services to entrepreneurs through their Directorates of Industries, and District Industries Centers.

Even if schemes differ state wise but common areas of support are expansion and administration of industrial estates, suspension/deferment of sales tax, and priority in distribution of power and water connection, etc.

Conclusion

This can be concluded that home science is an interdisciplinary field of knowledge and there is a lot of opportunity for an individual entrepreneurship. Entrepreneurship can make a particularly strong contribution to the economic well-being of the family and communities, country poverty reduction. With their skills and with the help of government an individual can start their entrepreneur and contribute in economy of country and can develop job opportunities.

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Role of Home Science in Shaping Future Economy

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Abstract

Home Science deals with all aspects of the life of the community and the nation. It integrates the application of knowledge synthesized from different sciences and humanities to improve the human environment, family nutrition, management of resources, child development, community resource management and consumer competence. Today Home Science is described as a multipurpose programme of study which take care of individual's need and interests and develops need abilities and capacities for successful homemaking in a dynamic society. it aims at developing the nation through eradication of poverty and illiteracy, infusing creativity in all aspects of life, social reform and enlighten, increasing food production, its better distribution and preservation, reduction in unemployment by promoting self employment, rural development, urban development, population education, income generation, resource mobilization and utilization. Home Science extension education has played an important role in strengthening the inner ability of our women by enhancing their level of education and by imparting financial independence. The establishment of adult education, continuing education and community resource centres all over the world is a reflection of the need, necessity and relevance of extension education. Being one of the major roles of University, extension education acts as change agents in conveying messages, ideas, knowledge, technology, information and skills to a captive target audience, and also brings back the viewpoints and feed back of the people back to the sources for further improvement. Home scientists with their knowledge and concern and human life and happiness can work effectively since many of the national development programs are for women and children. Home scientists can successfully help the nation to achieve their targets. The role of Home Science as an educational discipline in developing the future citizen and inculcating in them citizenship qualities for their future role is significant.

Keywords: *Home Science, Extension Education, Home Scientist*

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Introduction

The word Home Science can be interpreted as Systematic Education for home living. The art of home making had a significant place in the sixty four arts an individual had to master for successful living."Home Science deals with all aspects of the life of the community and the nation. It integrates the application of knowledge synthesized from different sciences and humanities to improve the human environment, family nutrition, management of resources, child development, and community resource management and consumer competence."Today Home Science is described as a multipurpose programme of study which take care of individual's need and interests and develops need abilities and capacities for successful homemaking in a dynamic society. Home Science extension aims at dissemination of scientific knowledge and technology among the rural masses, in order to improve their quality of life. The social, technological and economic development

of the country has its ultimate objective in improving the quality of life of its population. Hence, the overall goals of all national development programmes are to make adequate provision for fulfilling the basic needs of the people- like good food, clothing, adequate housing, good health care facilities, education, recreation and job opportunities. In the age of globalization, a multitude of pressures and problems such as physical, social, emotional and psychological nature confront the individuals, families and communities. Extension focuses on dissemination of the information relating to advanced technology in agricultural production, which includes usage of improved seeds, methods of use of chemical fertilizers. application of advanced scientific knowledge to the farming and home of the rural people; Scientific management of land based farming such as horticulture, sericulture, dairying, poultry etc, by the farming community; Overall improvement of the quality of life of the rural people within the framework of the national economic and social policies as a whole. The eradication of extreme poverty and hunger, promotion of gender equity and the empowerment of women, combating HIV/AIDS, malaria and other diseases, and ensuring environmental sustainability, are among the declared United Nations' Millennium Development Goals, which are closely related to the extension function. In this context of growing pressures in the work environment and the external world of competitions, the family assumes a vital role in shaping the citizens of tomorrow. Here comes the major role of Home Science extension education, as it equips the future citizens with relevant knowledge and competence, and prepares them to become efficient custodians of the nation's futures. Through its various spheres of involvements, it aims at developing the nation through eradication of poverty and illiteracy, infusing creativity in all aspects of life, social reform and enlighten, increasing food production, its better distribution and preservation, reduction in unemployment by promoting self employment, rural development, urban development, population education, income generation, resource mobilization and utilization. Apart from providing nutrition education to the community, extension education helps the community to know the trends in income, employment, poverty, unemployment, labor force participation, and other social and economic statistics which are very crucial for the development of the nation. Extension education has played an important role in strengthening the inner ability of our women by enhancing their level of education and by imparting financial independence.

Home Science education has played an important role in strengthening the inner ability of our women by enhancing their level of education and by imparting financial independence. Home Science extension education has played an important role in strengthening the inner ability of our women by enhancing their level of education and by imparting financial independence. The establishment of adult education, continuing education and community resource centers all over the world, is a reflection of the need, necessity and relevance of extension education. Being one of the major roles of University, extension education acts as change agents in conveying messages, ideas, knowledge, technology, information and skills to a captive target audience, and also brings back the viewpoints and feed back of the people back to the sources for further improvement. Home scientists with their knowledge and concern and human life and happiness can work effectively since many of the national development programs are for women and children. Home scientists can successfully help the nation to achieve their targets. The role of Home Science as an educational discipline in developing the future citizen and inculcating in them citizenship qualities for their future role is significant.

Job Prospects in Home Science: For a young student, home science opens up a vast array of career choices. For example;

- Depending on the specialization, one can have the option of working as a dietitian, food scientist, textile designer, interior designer, apparel designer, family counselor, teacher, researcher and social worker.

- The hotel industry also has a high demand for the skills of a Home Science graduate in the areas of housekeeping and food catering.

- Students with a Masters in Home Science can take up teaching the subject in schools and colleges.

- They can also work with food brands as sales representatives, food analysts, and research assistants. In fact, many MNCs prefer Home Science candidates because of their sound knowledge in chemistry, nutrition, and other sciences.

- Home Science education equips you with the indispensable knowledge to become an entrepreneur. You can start a school, set up your nutrition consultancy, or get into textile manufacturing.

Conclusion

Home Science is available as a subject in class 11th and 12th in some schools, covering three important aspects – food and nutrition, human development and family resource management. You can enroll for an undergraduate degree in Home Science after passing out of Higher Secondary Education or its equal. As an undergraduate degree, it involves the study of subjects such as Physics Chemistry and Biology, hygiene, rural development, food, clothing, textiles, interior decoration, psychology, and sociology. Home Science is also available as a diploma program. Some of the best colleges in Dubai offer Home Science courses, including Manipal University (Dubai Campus), Dubai Women's College, BITS Pilani (Dubai Campus), Ajman University of Science & Technology, Canadian University of Dubai and ETA College. Once you get your degree in Home Science, you can opt for a Masters and PhD. You can choose from any of the five areas of specializations mentioned below:

Food and Nutrition: Science of food, clinical and community nutrition.

Home Resource Management: Managing resources, interior decoration, and planning.

Science of Textiles: Science of fabrics, garment designing, and maintenance of fabrics.

Human Development: Psychology, child and elderly care, marriage and relationship guidance.

Communication and Education: Social science, media of communication, programme planning, and training. After a UG course in Home Science, you can also pursue a master's degree in the fields of Social Work, Mass Communication, and Development Studies. Those aspiring to join the teaching profession can follow up their graduation in Home Science with a bachelor's in education.

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Diversification in Home Science Education

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Abstract

Home Science, a multidisciplinary field of study that includes health, diet, caring child, textile and garment designing, managing resources and other subjects concerned with a home. Home science diversification is wide and related with every member of the society, that's why it makes their important place in this growing world. Home science diversification starts with the family nutrition, clothing and managing human resources to augment improvement of humanities. Some of the factors that influence the nature and pace of home science diversification are variations in demand of food and clothing, acceleration of crimes due to depleting family values and emerging technology in our life. But diversification in home science varies across culture due to heterogeneity in social and religious values and socio economic status. The role of home science diversification is a means to women empowerment. Involvement of women is a major parameter in the field of home science, which improves women status in our society, empowers them to take charge of their life, gives them the opportunity of entrepreneurship etc. Diversification in home science is one means to increase the quality of life for the individual, the family and the community in terms of physical, mental and social health.

Key words: Diversification, Home science

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Introduction

Home Science concept is based on the devoted desire to improve the well-being of the community through every home. This can be achieved through the systematic arrangement of human resources with modern scientific knowledge. Home Science can take a prominent role in developing good individuality and a maximum utilization of an individual's potentialities to make a good sense of personality in a person. Family is the basic building block of our society and science of home has direct relation with the family that's why it makes their important place in the growing world.

History of Home Science

When we go back and illuminate the journey of home science then we found its history is short. In the beginning, Home Science was mentioned as domestic science, home craft or domestic economy. Home science gives their impression during British Rule between 1920 and 1940. In this period home science only considered in schools. At college level, Home Science was started by Lady Irwin College, Delhi in 1932.Whereas in secondary school, Home Science was firstly introduced by the State of Baroda. Then in 1938 Madras University accepted Home Science

at the degree level and the well-known & pioneering Home Science colleges in Chennai are the Queen Mary's College and the Women's Christian College, which appeared on the Indian horizon in 1942. Then in the mid 1960's and 1970's teaching of Home Science was recognized in most of the Agricultural Universities. There is a steady progress of Home Science education in India at the school and college levels. At present thousands of post graduates and Ph. D degree holders are in prominent positions in respected institutions all over the country. Home Science has now been claimed to be one of the important subjects in the school curriculum because it offers the fundamental opportunities to develop their best for promoting society.

Diversification in Home Science

There are five different areas of specialization in Home Science which shows their diversity. The five major areas in Home Science are: Human Development • Family and Community Resource Management

- Food and Nutrition

- Textile Science

- Extension Education.

These areas have major changes in their pattern from the past period to modern era, Home science diversification starts with the family nutrition, clothing and managing human resources to augment improvement of humanities. Values of all specialized areas in Home Science changes and developed new parameters.The study of home science is evolved from self-development of students, making a good house wife, to developing empowered women. Home Science emerged as a 'Humane education' i.e. it is marked by an emphasis on humanistic values and concerns. It provides an opportune stage to move forward with the development of the society with wider range of thinking tools.

Maintain Harmony and Well-being in society

In past, Human development only deals with the development of a child from conception to old age. Physical, motor, emotional, language, cognitive and social developments of human beings are included in this. Behavioral problems of children, exceptional children, disorders, specific problems and issues that hinder the development of human beings are also dealt with. But now, Subjects such as, Artificial, Emotional and Spiritual Intelligence, Quality of Life, Gender Studies, Family Values, Family & Child Welfare, Methods & Materials for Teaching Young Children, Child Psychology, Education Psychology, Children with special needs, and Guiding young child's growth, behavior and development, are covered under this specialization and diversify Home Science as a key component for ensuring harmony and welfare in society.

Making professionals in various streams

Now the study of Home Science diversifies in Multidimensional and multidisciplinary area exhibiting many diverse characters. It involves teachings from physiology to human development to fabric science to fashion to fine art. The Food and Nutrition subject of Home Science covers areas as diverse as Human Nutrition, Public Health Nutrition, Community Nutrition, Clinical Nutrition, Diet Therapy & Nutrition Counselling, Food Chemistry, Food Hygiene & Sanitation, Food Analysis, Food Preservation and Food Standards & Quality Control for producing Nutritionists and Diet Counselors.In Clothing and Textiles students are offered courses in Indian Textiles &

Costumes, Retailing & Merchandising of Textiles & Apparel, Computer aided Designing, Garment Manufacturing Technologies etc. which is helpful in developing empowered women, developing a skilled vocational personto developing a professional in the area of Home Science like costume designer etc.

Improves creativity in students

In the field of Textile Science which includes all details about textile fibers and fabrics, fabric construction processes namely spinning, weaving, printing, dyeing, basic principles of apparel designing and construction are elaborated in courses on Traditional & Contemporary Interiors, Applied Crafts, Functional Interiors & Space Management; Computer aided Interior Designing, Scale Perspective Drawing, Ornamental Plants and Special Effects. By which we can say that study of Home Science makes one creative. It deals with economy and entrepreneurship development in students.

Attachment with new technologies

Home Science diversification is broadening day by day. Home Scientists have now not been limited to the five major fields only. They have been able to find their ways into various other related fields of importance. Aspiring Home Scientists are given the opportunity to specialize in Journalism & Mass Communication. For this student are offered courses in Radio & Television Journalism, Photo Journalism and Advertisement, Public Relations & Social Marketing, Public Speaking, Computer Application for Journalism& Mass Communication, Training Methods in Extension etc. In addition courses such as Rural Sociology, Computer Application, Window based applications, Environmental Science and Statistics, impart basic skills to Home Scientists to remain well-informed in this technological era.

Major Role in National Developmental Programs

Home science students have the proper knowledge and concern of human life and happiness. They are able to take part in many national development programs for women and children. Home Science graduates students enroll in various national initiatives aim to improve the quality of life of the countries' people namely, Mid-Day Meal Programme, Integrated Child Development Services, Nation Adult Education Programme, Integrated Rural Development Programme (IRDP), rural welfare programmes etc.

Be a part of Industrial Sectors

Home Science graduates will also have role in various industries. The student ready programme of community science will ensure that they can start their own product formulation units in the areas of food, nutraceuticals, decorative items, apparels, toy making, educational items, traditional textile items etc. Home science graduates shall be capable of starting their own enterprise. They would be job provider with their own startups. It can be said emphatically that every industry would require at least one home scientist. The Govt. shall require them for specialized job in the areas of school education sector, food and nutrition sector, textiles sector, rural welfare sector etc.

Take up welfare programs for societies

It will also ensure to take up welfare programs for community development through counselling

centers in the areas of aptitude tests for children, parental counselling, child counselling, career counselling, nutrition counselling, health and fitness counselling, personality development counselling, dress selection and wardrobe counselling, counselling for special needs children etc.

Conclusion

During the last decade, Home Science has received great attention in the field of education in India. Home Science education is encouraged at all levels by educationists, administrators, governments and philanthropists. Diversification in home science varies across culture due to heterogeneity in social and religious values and socio economic status. The role of home science diversification is a mean of women empowerment. Involvement of women is a major parameter in the field of home sciences, which improves women status in our society, empowers them to take charge of their life, gives them the opportunity of entrepreneurship etc. Changing life style and technological evolution involves the gradual replacement of optimum selection of food, clothing and managing family resources by improving quality of life, sort out community problems and find out solutions for them. Diversification in home science is one means to increase the quality of life for the individual, the family and the community in terms of physical, mental and social health.

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Nurturing Development among Adolescents through Guidance and Counseling

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Abstract

Students play a significant role in the development of its nation in holistic way. The most critical phase of student's life is when they enter adolescence. As adolescence is considered to be a period of stress and storm and storm and strives because it involves multiple changes both psychological and physiological. Adolescence counteracts problems and situations in all walks and phases of life. Adolescents are under pressure to meet the academic expectations of teachers, parents and self. Alarming complexity of modern society poses a variety of complicated problems leading to conflicts, frustration, unhealthy rivalry etc. Adolescence are not mature enough to critically evaluate baffling situations. They need somebody to help in the solution of problems and thus avoid tensions and conflicts. The need for guidance and counselling in modern times has increased because of the multiplicity of problems that the adolescence faces in the various domains of life. Most parents ignore the psychological needs of their adolescents which in turn will affect their mental health. The purpose of this article is to provide direction for future guidance and counselling to adolescence.

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Introduction

World Health Organization (WHO) defines adolescence as the period of life between 10 to 19 years. It is the transient period from dependent childhood to self-sufficient adulthood. Adolescents are a special group because of their developmental stage and the special problems.

In the present scenario the adolescents face enormous problems like Personal Problems, emotional problems, behavioral disorder, loneliness, anxiety, stress, depression and blackout, bullying, exam stress etc**.** Atwater (1988) argues that the adolescent stage of life marked by emotional development that includes mood swings, enthusiasm, tenderness, cruelty, curiosity and apathy. Collins (2002) says that guidance and counselling is important because it provides an insight on working knowledge, skills and attitudes. The UNESCO module on guidance and counselling (2000a) also posited that Guidance is a programme of services to individuals based on their needs and the influence of environmental factors.. Guidance and counselling plays a vital role in preventing educational, personal, social, mental emotional and other similar problems among school students.

Ministry of education and principals of schools are aware of the heavy reliance placed on guidance and counselling services. Adolescents are under the pressure to meet the academic expectations of teachers, parents and self. The challenges for adolescents are coping with the

demand to regularly attend the school, the pressure of studies and examinations, to become perfectionist, learn to remain cool and resilient and do well also on adverse circumstances, emotional balance etc.

Ministry of Human Resource Development and Department of Women and Child Development implemented a centrally sponsored scheme (ICDS) in 2000 for adolescent girls aim at breaking the inter-generational life cycle of nutritional and gender disadvantage and providing a supportive environment for self development, providing literacy and numeracy skills through the non-formal system, training and equipping adolescent girls with homebased and vocational skills, promoting awareness and encouraging them to marry after 18 years. . As part of the Adolescent Girls (AG) scheme, the state government and Union Territories of India implemented a AG scheme named Kishori Shakti Yogana (KSY) as a component of ICDS scheme. The scheme targets adolescent girls in the age group of 11 to 18 years.

The Adolescence Education Programme (AEP) is an important initiative that aims to empower young people with accurate, age appropriate and culturally relevant information, promote healthy attitudes and develop skills to enable them to respond to real life situations in positive and responsible ways.

The major problems of adolescence are:

- Physical changes – happen due to change in the teenager's hormone levels.

- Emotional changes - Hormones affect the teenager not only physically but also emotionally.

- Behavioral changes -Overwhelming emotions can lead to impulsive behaviour.

- Substance Use and Abuse - Teenagers can be easily swayed to the wrong side. Substance abuse is one of the biggest problems that parents of adolescents around the world have to deal with.

- Educational challenges - High school is not all about fashion, friends, and parties. Kids also have a lot of educational activities on their plate.

- Health problems - Adolescents are vulnerable emotionally and physically. Without proper nutrition and healthcare, they are susceptible to illnesses

- Social problems – dating and relationships

- Addiction to cyberspace - The advent of social media has changed the way we interact with each other. It has affected teenage lifestyles the most.

- Aggression and violence -Young boys start to develop muscles, grow tall and have a coarser, manly voice. In addition to that, they are moody and vulnerable and can let others get under their skin.

Rationale for introducing guidance and counselling services

This study is an effort to explore the contribution of introducing guidance and counselling among adolescence. There are many social, emotional, personal, academic problems that teenagers go through. Consuming drugs, including alcohol and tobacco, continue to be a serious problem for these children. Ndondo (2004), points out that some students engage in antisocial behavior such as drug and alcohol abuse and irresponsible sexual behaviour, which leads to decline

of moral integrity, because they lack knowledge on how to effectively spend and manage their leisure time. Examination anxiety among students and poor conflict resolution also contribute to student disturbances (Biswalo 1996). Selecting an appropriate career is a critical task that faces all adolescents in all societies. The selection of a career made during the senior year is among the most critical decisions in a person's lifetime. The wrong choice of an occupation not only brings frustration for the growing adult, but a waste of energy, money and precious time. Through a well planned guidance and counseling programme all these problems at this stage can be sort out. The rationale for introducing guidance and counselling services at schools will to provide personal contact and helps in holistic development. According to Shertzer and Stone (l98l) the following factors necessitated the provision of specialized school guidance and counselling service:

- Changes in the structure of society.
- Pregnancies of unmarried teenagers.
- Early marriages.
- Drug and alcohol abuse.
- The escalation of juvenile delinquency.
- Lack of knowledge concerning the use of leisure time.
- Pressure on traditional values and norms. The high dropout rate in schools.
- Youth unemployment.
- School violence and vandalism.
- The inability of individuals to make a realistic career choice.
- Lack of knowledge regarding the principles of differentiated education

The aims and objectives of guidance and counselling among adolescence

- To cultivate essential life skills in students.
- Maximum use of resources both human and material.
- To bring about the desired changes in the individual for self realisation.
- To provide assistance to solve problems through an intimate personal relationship.
- To achieve positive mental health.
- To help students to make proper and satisfactory adjustments for improved academic pursuits and useful life.
- To enable the stusdents to make proper choices at various stages of their educational career.
- To understand the individual responsibilities and to adapt themselves with their environment and make them to become an efficient citizen of the society and nation.
- To help students make the best possible adjustments to the situations in the school as in the home.
- To develop all aspects of personality of the students.

Major areas of guidance

- **Educational Guidance:** Educational guidance is related to every aspect of education school/colleges, the curriculum, the methods of instruction, other curricular activities, disciplines etc.

- **Vocational Guidance:** Vocational guidance is a process of assisting the individual to choose an occupation, prepare for it, and enter upon it and progress in it. It is concerned primarily with helping individuals make decisions and choices involved in planning a future and building a career.

- **Avocational Guidance:** Avocational guidance helps the child to utilize the leisure time. Directions are needed in choosing hobbies, co-curricular activities, games and cultural programmes so that the out of classroom hours is also a means of development.

- **Social Guidance:** School/educational institution is a miniature society and pupil from different socio-economic status, linguistic and socio-cultural background reach there. Students some time may face problems in adjustment and social relationship. It is very important that the students are to be helped in acquiring the feeling of security and they must be accepted by the group in developing social relationship and in becoming tolerant towards others. Social guidance will help the students to attain intellectual and personality development through pragmatic opportunities provided to them.

- **Moral Guidance:** Moral guidance helps in bringing these students in to proper track and helps their all round development. The value system developed by the adolescent students will occur as a lifelong ethical code and it will be a base platform for their social as well as cultural development.

Major areas of counselling

- **Crisis Counselling:** Crisis Counselling focus on single or recurrent problems that is overwhelming or traumatic. If a trauma or crisis is not resolved in a healthy manner, the experience can lead to more lasting psychological, social and medical problems. Crisis counselling provides education, guidance and support. Crisis counsellor can help people face and move past distressing and traumatic events in their lives.

- **Facilitative Counselling:** Facilitative Counselling help students to correct mistakes and solve problems and plan for their future. It is used primarily to help the client deal with negative feelings that arise during implementation of plans.

- Counselling for the parents: A very important revelation is that the parents also need to be counselled. The student counsellor may provide counselling to the parents on the following issues:

  i. The necessity to accept the child as he is with his strengths and weaknesses.

  ii. The ill effects of undue pressure and stress on the child to excel academically.

  iii. The interests and aptitude of the child and his suitability and choice of career.

  iv. Learning disabilities of the child, if any and the coping strategies.

  v. The psychosocial problems of the child, if any and the coping strategies.

  vi. Removing the stigma attached to counselling.

Recommendations

Adolescence is usually a healthy period; several risk factors of adult diseases which begin in adolescence can be prevented with proper interventions. Parents have greater responsibility in guiding their children but due to cultural barriers they neglect to talk about physical and physiological change. Guidance helps the students to have a better self understanding and proper adjustment to self and society. Developing of proper motivation and clarification of goals and ideas to students in conformity with their basic potentialities and social tendencies are important. Educating parents and teachers to improve the quality of relationship with children to ensure a safe, secure and appropriate environment is needed. The educational institutions should come forward for equipping the children properly for cultivating life skills, moulding personality. The needs of each student will also be easily identified through guidance and counselling and individual responsive services must be planned.

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Predictors of Mental Health among Adolescents: A Review

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Abstract

The notion of mental health is as ancient as human beings. Mental health plays a vital role in the life of every human being. This term mainly comprises of two words ''Mental'' and ''Health''. Health refers to a state of being free from any illness. Mental health includes perceptions, behaviours and emotions that influence an individual's inclusive level of his own usefulness, contentment, achievement, and calibre to function as a human being (Choudhary2006). According to Bhatia (1982), mental health is the capability to stabilize aspirations, determination and emotions in an individual's existence. It may also be comprehended as behavioural distinctiveness of an individual. A mentally healthy individual exhibits a homogeneous organization of desirable characteristics like fundamental values, virtuous self-concept and technical observation of the humankind as a totality. Other definitions also involve rational, affectional and psychic growth, affirmative self-perception, thoughts of self-importance and physical health, and intrapersonal harmony (Bhugra et al 2013).The Mental Health concept comprises of subjective well-being, perceived self-efficacy, sovereignty and self-actualization of an individual's emotional and cognitive capability among others.Mental Health includes human being's capability to create constructive self-assessment to apprehend authenticity, to incorporate individuality, self-sufficiency, group-oriented attitudes and environmental proficiency (Jagdish&Srivastava 1983).

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Concept of Mental Health

Before the second half of 20th century, the mental health was described as lack of psychological ailments or mental disorder but now it specifies the psychological well being of an individual apart from only the absence of any mental illness. Mental Health is increasingly seen as important as Physical Health and thus needs to be addressed as a vital constituent of improving overall health and welfare of an individual (Purushothaman& Nagle 2012).Good mental health is said to be allied with good self-esteem that an individual hold of himself/herself. Higher self-esteem helps the individual to be more capable of dealing with life stressors (Sherina*et al* 2008).

According to the World Health Organization (WHO) (2007) "Mental health is a state of absolute physical, mental and social welfare of an individual and not merely the absence of disease. The Mental Health concept comprises of subjective well-being, perceived self-efficacy, sovereignty and self-actualization of an individual's emotional and cognitive capability among others".

Role of Mental Health in Adolescents

Adolescence is examined as the imperative transitional span of life, as adolescents confront vigorous chaos because of the biological, cognitive and social changes taking place in this span. Moreover, adolescence is a stage of intense risks with high rates of misery, suicides, drug, alcohol addiction and antisocial conduct.

Adolescence is also considered as a critical phase for emerging and sustaining societal and affectional practices crucial for psychological health. It includes accepting healthy sleep patterns, doing a frequent workout, trouble-solving, and interpersonal abilities; and discovering ways to cope with affections.Adolescents could pass through this transitional span with contentment, positivity, success and assurance without distress and uncertainty, but it could only be possible in one context i.e. with healthy mental health (Choudhary 2006).

From the past few decades, adolescent's mental and emotional health has become a great matter of concern for counsellors, psychologists, and health professionals. Similar to adults, children and adolescents can too have problems related to their mental health which can affect the way they think, act and feel. These problems can further cause academic failures, drug abuse, family conflicts and suicidal tendencies.

Aspects that may add up to anxiety through adolescence involves a longing for considerable self-sufficiency, stress to match up with fellows, the examination of a sexual character, and an extended approach to and utilization of technology. Studies show that at least one in five adolescents go through a prolonged stage of emotional turmoil and experience anxiety, stress, and may also show suicidal behaviour (Kaur& Kumar 2008). The majority of mental disorders first happen between the age group of 15-24 (Kessler *et al* 2005). Mental health difficulties in youthful adulthood are related to substance use, and poorer academics, jobs and other social outcomes later in life (Eisenberg *et al* 2007).

Predictors of Mental Health

Nanda (2000) examined the mental health of adolescents and revealed that female students had better psychological well-being in comparison to male students. He also concluded that factors like improved educational background, effective psychosocial surroundings, parental desires and healthy parent-child relationship in the family play a vital role in sound mental health.

The research entitled "Importance of teacher's mental health in promoting the mental health of their pupil" was done by Khan (2003). The results revealed that mentally healthy teachers enhance the mental health of pupil which further leads to a healthy society. Kasinath (2003) inspected the interactive cause of psychological well-being, school adjustment and socio-economic status on educational accomplishments of adolescents and concluded that adolescents with healthy psychological well-being performed better in all the subjects.

Tickoo (2004) conducted research entitled "Relationship between sense of deprivation and mental health among adolescentswith a sample of 600 boys. It was concluded that a sense of deprivation deteriorates mental health of school students. As a sense of deprivation increases, mental health decreases. The studyconducted by Kalil and Guest (2005) examines the links between the single mother's employment and mental health of adolescents.The results showed that adolescents whose mothers were in an unproductive occupation or lost their post without regaining employment showed a decline in self-esteem, emotional stability and tend to repeat grades or may become school dropouts.

Sex difference in adolescents' mental stress was assessed by Kaur and Kumar (2008). This study emphasized on assessing the mental strain level of 269 boys and girls college going students of distinct colleges of Jaipur. Results demonstrated that psychological strain level of college-going girls was much higher than the stress level of boys. Kang and Chawla (2009) conducted a study to investigate the mental health of rural adolescents. Results revealed that girls were on the improved side of the mental health as compared to boys who were found to be more lonely, uneasy, restless and angry. On the other hand, significant differences were found in somatic health status where males were having better somatic health as compared to the females, indicating that they suffer less from somatic problems such as acidity, fatigue, headache, sleeplessness etc. as compared to their female counterparts.

Effect of the family on mental health and anxiety of adolescents was assessed by Dixit and Sharma (2011). This study studies the comparative effect of favourable and unfavourable family climate on mental health and anxiety of 106 students belonging to different socio-economic strata of society. Findings illustrate that there was a significant difference in the scores of mental health and anxiety between students with favourable family climate and unfavourable family climate.

Kumari (2014) examines the influence of acceptance versus avoidance on the mental health of both male and female adolescents. Findings revealed that accepted adolescents had greater overall adjustment, emotional stability, autonomy and self-concept than avoided adolescents and gender positively affected few indices of mental health. It was also found that the interaction effect of acceptance versus avoidance and gender was notable on self concept-a component of mental health.

Narain and Singh (2014) investigated the mental health of police personnel as their well being is not restricted to them but also to the well being of the society as a whole. The results revealed that 26.6 per cent of the policepersonnel showed poor mental health while 40 per cent faired average and 33.3 per cent exhibited good mental health.

Kumar and Joshi (2014) examined the role of mental health, and depression in suicidal ideation among married professionals and revealed that its relationship was found to be positive and significant. It indicated that professionals with high mental health illness have high levels of suicidal ideation. A positive significant relationship was found between depression and suicidal ideation.

Kaur (2015) investigated the mental health of adolescents in relation to their thinking style. Results showed that male and female adolescents had a significant difference in their mental health. Male adolescents had improved mental health as compared to females. Urban adolescents had better mental health as compared to rural adolescents. There was a negative significant association of mental health of adolescents with different thinking styles namely progressive thinking style, monarchic thinking style, hierarchy thinking style, oligarchic thinking style and legislative thinking style.

Kumar *et al* (2017) studied mental health issues among call centre executives and concluded that a high number of call centre executives were found to suffer from moderate to severe level of mental health issues like depression and anxiety. The study highlighted the need for precautionary interventions for the group of such employees. Raju*et al* (2017) studied mental health among medical and paramedical professionals and observed significantdifferences across gender and nature of the job. It was found that group-orientedness dimension of mental health was found to be greater in paramedical professionals than medical professionals whereas medical

professionals scored better in environment mastery as compared to paramedical staff. Integration of personality and autonomy were found to be greater in females than in males.

Klaperski*et al* (2019) examined the influence of exercise environment on acute stress level and mental wellbeing. Results revealed that engagement in outdoor exercises did not lead to more beneficial changes than indoor exercises. However, outdoor exercise environments were perceived as more calming and calming environments were associated with more stress-reductive effects.

Vidourek and Burbage (2019) investigated positive mental health and mental health stigma to assess attitudes of college-going students. Students perceived stigma as a barrier to mental health treatment. Students felt increasing education and awareness, linking students to resources, and being compassionate and understanding to those experiencing mental health problems were important to reduce stigma-related attitudes.

Conclusion

There are several pieces of researchwhich studied the role of mental health among adolescents but still, the mental health of the adolescents is going neglected as not every child can express their feelings openly. Through this review of research, we can understand how mental health affects adolescents at various levels. There is a huge need to conduct more researches on this topic which will further be helpful for counsellors, psychologists, social workers, researchers and parents to understand the factors contributing towards mental health among adolescents.It will also help the government organizations, NGOs and professionals who are concerned with the welfare of adolescents.

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Role of ICT in Home Science: In Special Reference to Textile Manufacturing

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Abstract

The textile industry is the world's one of the most ancient industries and mainly constitutes those which are engaged in spinning and man-made fibers formation. In the present scenario of the world's economy, due to the increase in competitiveness, there is a need for implementation of ICT (Information and Communication Technology) in that field. ICT is used at various steps of design development including CAD and CAM. Various design proposals are developed, modelled and communicated through various resources using ICT and CAD and photoshop is used to create fabric designs. ICT can resolve the purpose of improving business, increases efficiency and also affect everyday life through the use of the internet. Each and every textile industry has an IT (Information Technology) department which helps in various purposes like: Increase the capacity of manufacturing and dispatching, it reduces acquisition time, information transfer from one place to another enables designs to be sent online to print manufacturer and saves time by computing data online. Thus, ICT is very important in shaping the textile industry into a new form.

Keywords: - *Spinning, CAD/CAM, Competitiveness, Manufacturer, ICT, Acquisition, textile industry*

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Introduction

When we talk about industrialization around the world, the textile industry is the oldest one. This is composed of those industries which are involved in the manufacturing of spinning material and man-made fibers, which are then used to fabricate clothes by weaving or knitting method. Technology has to boost up the growth of human society in various ways, right from the basic needs of foods, clothing, and shelter to advanced robotics and health care. Out of these, clothing is one of the basic necessities with regard to human civilization and it acts as a showcase for human culture. By clothing, one can understand the social status, cultural diversity, religious learning and professional status. There is a wide range of new textile and cloth production is now possible due to the implementation of ICT in that industry.

In textile industry automation has played a greater role in processes like manufacturing and marketing. Information and communication technology has a major role in developing countries to cope-up with the new era. ICT can serve the purpose of improving business tactics, the efficiency of production and competitiveness of the industry. ICT is a set of various technological tools which is used to identify and organised data and information. It includes telecommunication, telephone, television, video-conferencing and computer-mediated conferencing.

Without ICT, the manufacturing industry will be left behind in advancement and competition criteria. (Giwa, 2010) (Jiwa, 2010)

About ICT

ICT means Information and Communication Technology. ICT involves all the uses of digital technology which are used to help individuals, business and organisations. It involves those products which will store, retrieve, manipulate, transmit or receive information in digital form as in case of the personal computer, emails, robots, etc. ICT consist of hardware, software, network and media for collection, storage, processing, transmission and presentation of information. [8] It is a technological tool expected to create value in terms of productivity enhancement, cost reduction, and supplier relationships. ICT act as a tool forms an important channel for improving learning by acquiring new ideas, knowledge, idea and modifying and reinforcing existing knowledge, behaviour and skills of students.

Manufacturing of Textiles

It is one of the major industries based on the conversion of fibre into yarn and then into the fabric. These produced fabrics are then printed and developed into clothes or garments. There are various types of fibres which are used to produce yarn. Out of various fibres used, cotton is the most important natural fibre, gains a very high demand in the textile industry. Manufacturing of textiles is composed of various processes from spinning and fabric forming stages, followed with colouration processes to produce different types of products.

Speciality of Information and Communication Technology

The special features of ICT are the speed and capacity of work. It helps in gathering information with higher speed from various informative sources using search engines around the world. With the help of ICT, one can store and processed data including text, sounds and images to a greater extent.

Importance of Information and Communication Technology in the Textile Industry

One of the major common problems faced by managers of the textile industry is excess inventory, which results in poor sales, low price, less demand and ultimately results in customer dissatisfaction. When we talk about the traditional textile industry, the process of production is very slow. So, to increase the production trend, there is a vast need for the implementation of ICT in the textile industry. The textile industry faces various difficulties that involved processes like designing, getting approval and payment issues. Without sharing information with customers around the world, we cannot imagine the popularity of textile products around the globe.

Although, it is expected that, there is no direct need for the information technology department in the textile industry yet all textile manufacturing companies have an IT department which helps in various ways: -

- It increases the capacity of manufacturing and transportation.
- It facilitates the process of determining demand and supply.
- It reduces acquisition time.
- Helps in information transfer from one place to another.

- It helps in the matching of colours with the design and weighing of dyes
- It serves as a channel to send design online to print manufacturer.
- It facilitates the process of cutting, using an automated cutting table

Various IT tools and softwares used in the Textile industry

- CAD/CAM for pattern making
- Computerized cutting machine
- Online FIT approval
- Voice chatting
- Automated sewing machine
- Skype communication
- Preparation of reports

Economic benefits of Information and Communication Technology

Those textile industries which have the facilities of Computer Aided Designing (CAD) and Computer-Aided Manufacturing (CAM) are more stable in the global market. IT department in a textile industry helps in facing new challenges of competition in that industry according to changing trends of the market. ICT has various economic benefits like providing a path to a growing industry in its own right way. It provides new information highways to speed up electronic/ online data exchange. It gives an idea by which way ICT is changing how people communicate to become informed or to business. Moreover, ICT connects with various technological changes like openness, connectivity and accessibility. It serves as a medium to save the cost of transport, facilitate the business transaction across the border, generate self-employment opportunities.

Factors affecting Information and Communication Technology

There are various factors which influence the proper or smooth work progress of ICT in the textile industry. These factors will be either called as barriers or inhibitors. [3] Barriers are those factors which can hinder the implementation of ICT in the textile industry. These are as follows: -

- Poor data system
- Attitudes
- Environment
- Infrastructure
- Financial problems

On the other hand, inhibitors are those factors which cannot directly prevent implementation of ICT necessarily but they prevent advancement and hinder successful sustainability. These are as follows: -

- Technology
- Coordination
- User needs
- ICT policy

Conclusion

The most important and essential parameters in improving the growth, development and advancement in the textile industry is the use of Information and Communication Technology. Information and communication technology act as a catalyst in the restoration and development of the textile industry as well as education. From the above-stated article, it was concluded that ICT is very much helpful in shaping the textile industry in such a way that they can face the challenges of the modern era.

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Employability of Indian youth through Skill oriented Higher Education

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Abstract

The aim of higher education in India is to provide access, equity, and quality education at an affordable cost to all aspiring citizens with transparency and accountability to ensure sustainable economic development of the nation.All technical educational Institutes believe in providing a proper impetus for the institutions to generate competent employees for the future.The skill-related education, training and job guidance reflects current thinking and practice in Enterprise and Entrepreneurship Education.The greater challenge is, therefore, to prepare our larger lot of the educated graduates from the general education streams for the emerging skill needs of employable youth.The textile and apparel sector comprises a share of 13% in the overall exports of India. The skilled higher education in Fashion and textile India is being imparted by various government and private education bodies (technical Institutes and Universities).Enterprise Education is an excellent tool to prepare individuals for changing environments.A 'sector-wide approach' and shift in focus from quantity to quality is clearly visible in all recent government documents at all levels of education. Measures have been taken to address the issues of educational quality and employability skills by introducing various schemes at the Central government level in the field of apparel and textiles to strengthen up the Indian middle-class society catering to skill educated youth and investing in infrastructural development, teacher training, faculty and curriculum development.

Keywords*: Skill education, Training, Entrepreneurship development programs, Benefits from GOI (Government of India) Schemes.*

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Introduction

The demand for skilled employees in India is likely to remain high and robust in the coming years, both nationally and internationally. But this would demand skilled and qualified employees. The employability of Indian youth has emerged as a major concern in recent years. Ironically, it is not just the uneducated and untrained that lack skills but it is also the educated that consistently lie below the required standards.More robust demand for personnel in technical and professional services and a better employability index for the same sectors have probably led to skewed growth of the higher education sector. The greater challenge is, therefore, to prepare our larger lot of the educated graduates from the general education streams for the emerging skill needs of employable youth.

A Missing Element of Planning Skill Education

Educating for Evolving Professional Paradigms Few would contest that planning and its

professional practices and approaches have undergone a profound change in the past half-century. The field's focus has moved beyond basic education in common conventional streams. Recent changes to planners' roles, planning, and indeed social and economic conditions have been perceived significant enough to spur proposals for a revised 'core curriculum' in India. The aim of higher education in India is to provide access, equity, and quality education at an affordable cost to all aspiring citizens with transparency and accountability so as to ensure sustainable economic development of the nation. It is achieved through the creation, transmission, and dissemination of knowledge.

Overview of Indian textile and Apparel Sector:

Indian Industry in the textile and apparel sector plays a significant role in the Indian economy by contributing around 5% to the Indian economy.The textile and apparel sector comprises a share of 13% in the overall exports of India. India is the second-largest exporter of textile and apparel goods with a global trade share of approx.5%.The sector holds importance from the employment point of view as well.The skilled higher education in Fashion and textiles is being given by the various government and private education bodies (technical Institutes and Universities). The top Institutes in India of fashion, Apparel and textile are NIFT - DELHI, NID - AHMEDABAD, PEARL ACADEMY OF FASHION – Delhi, FDDI - NOIDA, SRISHTI - BANGALORE, NIIFT – MOHALI, IDC – IIT MUMBAI, SYMBIOSIS – PUNE, IICD – JAIPUR.

Training

The institutes and colleges provide training to the aspiring professionals to get trained, entry-level professionals to get advanced training, mid-level professionals to upgrade their skills, and at times also help professionals to re-enter the Industry. These training curriculums have been developed in consultation with reputed academicians and industry practitioners. These training programs are aimed at offering value-added skill future employees in the apparel and textile.

The value of Enterprise and Entrepreneurship Education:

Entrepreneurship Education and the development of entrepreneurial capacity is not simply linked to employment. Enterprise and Entrepreneurship Education provides interventions that are focused on supporting behavioral attributes provide competencies to lead a rewarding, self-determined professional life.Enterprise Education is an excellent tool to prepare individuals for changing environments. It provides enhanced impact through placements and activities that build links between academic institutions and external Industrial organizations. The key to the overall success of the sector may be achieved by teaching and learning; research and impact; and knowledge exchange and engagement

Benefits from Government of India (GOI)

GOI (Ministry of Textiles)

Power loom industry in India: Looking into the various socio-economic problems faced by the power loom weavers and the low technology level in the sector, the govt. has focused its attention on the development of the power loom sector through multi-pronged schemes and interventions.

1. Power Tex India - Comprehensive Scheme for power loom Sector. The Decentralised Power

loom sector is one of the most important segments of the textile industry. It provides employment to 62.72 lacs persons and contributes 60% to total cloth production in the country.

- In –situ up-gradation of plain power looms
- Yarn bank scheme
- Common facility Pradhan Mantri credit scheme for Power loom, weavers.
- Solar Energy scheme for power looms
- Facilitation,IT,awareness, market development and publicity for Power loom scheme
- Tex Venture   capital Fund
- Grant-aid and modernization & Up-gradation of Power loom   service centers
- ATUFS: Technology up-gradation Scheme

2. Integrated Skill Development Scheme – ISDS
3. Setting Up Integrated Textile Park - SITP
4. Trade Infrastructure for Export Scheme (TIES)
5. Technical Textile Scheme
6. Pradhan mantra credit scheme for power loom weavers:
7. Modified comprehensive power loom cluster development scheme (MCPCDS)
8. Universal Insurance Coverage Scheme

B. HANDLOOM (GOI SCHEMES)

1. National Handloom Development Program (NHDP).
2. Hathkargha Samvardhan Sahayta-WSC
3. Yarn Supply Scheme (YSS) – NHDC.
4. Handloom Weavers Comprehensive Welfare Scheme (Exhibition &Fair)- ACASH, NHDC, Dilli Haat (DCH).
5. Mahatma Gandhi Bunakar Bima Yojana (MGBBY) – LIC.
6. Health Insurance Scheme (HIS) – ICICI Lombard.
7. Handloom Mark Scheme (HMS) – Textile Committee.
8. National Awards Scheme for handloom weavers.
9. India Handloom Brand (IHB). (WSC & Tex. Committee)
10. Bunkar Mitra Helpline : 1800-208-9988 (WSC & NHDC)
11. India Handmade Bazaar.
12. Pradhan Mantri Bunkar Mudra Yojna.

Conclusion

The omnipotent fact is that "Knowledge is power" in today's scenario and this fundamental knowledge can be acquired only through the magic potion of education; hence, whatever we

desire or aim to achieve as a nation depends to a humongous extent on the sheer quality, strength and finesse of the seeds of education. Today India nurtures big dreams and aspirations to become a world power and is in a position to command respectful attention at a global stage of planning, leadership, and action.

There has been tremendous expansion and reasonable diversification in India's higher education but it is still largely state-owned. This has led to uncontrolled professionalization, which too is skewed in favor of only engineering and management. Newer specializations are like apparel and textiles coming up in the light of emerging job profiles but need to be standardized and controlled for quality.

The poor quality is getting reflected in the low employability of the Indian graduates both with professional and non-professional degrees and requires immediate interventions. Similarly, the participation of girls and other minority and weaker sections in professional education is quite low. Not that no efforts were made so far to make teaching more practice-oriented at the policy level. A 'sector-wide approach' and shift in focus from quantity to quality is clearly visible in all recent government documents at all levels of education. Measures have been taken to address the issues of educational quality and employability skills by introducing various schemes at Central government level in the field of apparel and textiles to strengthen up the Indian middle-class society catering to skill educated youth and investing in infrastructural development, teacher training, faculty and curriculum development. Specific efforts have been made to integrate elements of skills delivery right from elementary to a higher level of education.

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Role of NGO's in Women Empowerment

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Abstract

Women empowerment is an essential cog for the overall development of the nation. For achieving women empowerment, the prerequisite is to uplift the rural and urban economics as well as the social and political status of women in India. It is necessary to build our society into a self-sustainable society.NGO'splay a vital role in women empowerment by providing them education, vocational training, training for self-employment, legal aid and self-awareness. The main focus of NGO's isthe upliftment of women in the society. NGO's do not come under governmental agencies and usually operate without making any profit. NGO's take many steps towards self-employment of women and empower them to provide knowledge regarding legal awareness, property rights, fair trade, self-help groups, skill training, etc. NGO's raise various issues of gender inequality and inequity in order to stimulate responses. Their vision regarding women empowerment vary, four types of them have high impacts. They are Grass root women self-help NGO's, women rights advocacy NGO's, women's economic development NGO's and international women empowerment NGO's. They must continue their fights to secure women's rights in all walks of life (social, educational, economic, household). Women empowerment can only be achieved by a continuous process in which they promote women's knowledge with the collaboration of media NGOs achieved effective reach to the public for awareness- building. Continuous efforts of NGO's is helpful for women empowerment.

"To call woman the weaker sex is a libel; it is man's injustice to woman. If by strength is meant brute strength, then, indeed, is woman less brute than man. If by strength is meant moral power, then woman is immeasurably man's superior. Has she not greater intuition, is she not more self-sacrificing, has she not greater powers of endurance, has she not greater courage? Without her, man could not be. If nonviolence is the law of our being, the future is with woman. Who can make a more effective appeal to the heart than woman?"

-Mahatma Gandhi

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Introduction

About 48.5 percent of India's population is female. India has seen a steady growth of women in its workforce. Yet gender neutrality in pay, positions, promotional opportunities are non-existent. Serious salary gaps between men and women working on same or similar jobs, lack of career advancement opportunities of women workers, and the overall mentality of keeping women away from decision-making authority are all too common in both public and private sector organizations. While the government has either failed to protect women's rights or has been very slow in responding to the issues of violations against women's rights, fortunately, the non-governmental organizations (NGO) sector has made several inroads in promoting women's

rights and women empowerment through a variety of strategies and development platforms (Kumran,2014). The effect of women's empowerment creates a powerful influence on family, community norms, and values and finally the laws that govern these communities (Page &Czuba, 1999). Thus, women's empowerment is a vital strategy for development efforts. Although the notion of women's empowerment has long been legitimized by international development agencies (World Bank, 2001), what actually comprises empowerment and how it is measured is still being debated. Malhotra, Schuler, and Boender's (2002) excellent review of this debate highlights the many ways that empowerment can be measured and suggests that researchers pay attention to the process in which empowerment occurs. The frequently used Gender Empowerment Measure (GEM) is an aggregate index made up of two dimensions: economic participation and decision-making (measured by the percentage of female administrators and managers, and professional and technical employees), and political participation and decision-making (measured by the percentage of seats in parliament held by women). For our purposes, GEM is a macro concept and does not capture a multidimensional view of an individual woman's empowerment. Furthermore, several studies suggest that women may be empowered in one area of life and not others (Hashemi, Schuler, & Riley, 1996; Kabeer, 1999; Kishor, 2000; Malhotra & Mather, 1997).

Amin, Becker, and Bayes (1998) split the concept of women's empowerment into three components: the Inter-Spouse Consultation Index, which seeks to represent the extent to which husbands consult their wives in household affairs; the Personal Autonomy Index which represents women's self-reported autonomy of physical movement outside the house and in matters of spending money; and the Authority Index, which reports on actual decision-making power (which is traditionally in the hands of the patriarch of the family). These indices are similar to those used by Balk (1994). Comparable components of empowerment are included in the eight indicators by Hashemi et al. (1996): mobility, economic security, ability to make small purchases, ability to make larger purchases, involvement in major decisions, freedom from domination by the family, political and legal awareness, and involvement in political campaigning and protests. Hashemi et al. (1996), Amin et al. (1998), and Malhotra et al. (2002) as their work seem most relevant to the experiences of rural women in India. It has been argued that education is one of the most used indicators of empowerment. It has been used traditionally as a proxy for empowerment and is described as an enabling factor or source of empowerment (Chen, 1995; Kishor, 2000; Malhotra & Mather, 1997). Furthermore, empowerment includes cognitive and psychological elements, such as a women's understanding of her condition of subordination and the causes of such conditions. This requires an understanding of the self as well as cultural and social expectations. Education may play a role in increasing this understanding (Jejeebhoy, 2000; Stromquist, 1995). Hence, although we expect that education will facilitate empowerment and be positively related to the empowerment index, it may be mitigated by other factors. Women Economic Development NGOs strive to promote financial self-sufficiency of women through economic development. They provide direct social service, with missions to address the specific needs of women such as education, health care, and income generation within the broad development framework. Based on their needs, they design and implement projects that benefit women from underserved or unserved communities. Access to microloans and other opportunities offered by development NGOs have truly transformed the status of women in communities across the nation, especially in rural areas where women have Jong been excluded in income generation and family financial management (Kumran,2014).

Review of literature

(Kumran,2014) analyzed that the only GDP is not a factor for nations' growth, other factors also matter. For NGOs to have full efficacy they should have the organizational capacity to operate effectively and efficiently. They should have revenues from diversified sources. They should have active strategic planning and provide awareness on gender inequality and inequity in the society, networking among women welfare NGOs is the key to increase awareness on issues, address various causes and consequences of women's rights abuse, and promote overall women empowerment throughout the nation.

(Handy et al., 2006) researched different occupational females, supervisors, field workers, recipients with different data and found out that the Empowerment index depends only on the time spent by the female in NGOs.

Conclusion

According to one estimate, there are one million NGOs in the country (Jain, 1997).they are working on a multi-dimensional approach. Like to reach the grass-root level they developed the SHG for empowering the women. Nurturing the SHG by continuous monitoring and evaluation, so that the members should be trained according to their needs. Promoting the organization of the people is an effective strategy adopted by the NGOs especially towards women empowerment. Apart from SHGs NGOs do promote MahilaMandals, Yuvathimandals and various village based committees with adequate representation of women. NGOs have created a platform for women to enjoy freedom by forming organizations. NGOs can act as change agents or catalysts of various activities like microcredit, education, encouraging for political participation, etc. NGOs are powerful agencies in identifying the needs and designing projects for the welfare of the disadvantaged. They mobilize both internal and external resources. The experiences of many NGOs show that they could organize resources for the benefit of women both from the country and outside.

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Innovative Applications of Papaya Fibre

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Abstract

India is endowed with plenty of natural resources which may be conventional or non-conventional. The use of conventional natural fibres like cotton, wool, silk, and flax is very common. Few non-conventional plant fibres which were rarely utilized till the last few decades because of less knowledge about their processing and textile usage are ramie, pineapple, soya bean, sisal, papaya, and banana. But, now, advancement in technology and innovative solutions has led to an increased usage of these non-conventional fibres. One of the most noticeable non-conventional fibre crops is papaya which yields excellent fibre after the plant harvest. The aim of this paper is to explore innovative applications of papaya fibre. During fibre processing, the fibre is split into two qualities: bastos which is strong and coarse, hence, suitable for making household rugs and fibre which is very fine, so, can be used for making fabric. Compared to mechanical properties of other natural fibres, tensile strength, young's modulus and breaking strength of papaya fibres is average but their fibre density of 0.86 ± 0.07 g/cm³ is, in fact, one of the lowest fibre densities in the plant world which make these fibre more attractive for lightweight applications. Due to their potent antibacterial activity, papaya peels derived silver nanoparticles can be incorporated into fabrics which can be used to make textiles free from spoilage by microorganisms. Papaya fibre can be used for lightweight apparel and also can be utilized for making accessories like scarves.

Keywords: *Antibacterial, conventional, cradle to cradle, tensile strength, young's modulus.*

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Introduction

Natural fibresfall under renewable sources are well known for their biodegradability, non-carcinogenic and eco-friendly nature. They substitute synthetic fibres (Vastrad, 2012). Plant fibres offer many advantages over synthetic materials. They provide carbon neutrality when burnt which is a highly relevant solution to ecological problems (Faruk,2012). Additionally,natural plant fibres are absolutely safe for the skin and do not produce allergies (Netravali,2003).Plant fiber-reinforced composites are eco-friendliness, minimized cost, decreased weight and comparable mechanical properties when compared to conventional composites (Madhu,2017). Cellulosic fiber properties are influenced by the origin and age of the fiber extracted plant, part of plants from which it is being extracted and different types of extraction methods (Hyness,2017).

Papaya or *Caricapapaya* L. belonging to family Caricaceae is commonly known as papaya in English, *Papita* in Hindi and *Erandakarkati* in Sanskrit. The plant is native to tropical America and was introduced to India in the 16th century (Fischer, 1980). The plant is identified by its weak and soft stem. The plant grows rapidly and can reach up to 20m in height (Anjum, 2013). Papaya

plants may reach the age of 20 years and do usually do not branch (Lieberei, 2007). Lignified fibres occur in the bark (secondary phloem) (Kempe, 2014). The small number of fibres compared to the total weight of the stem makes these fibres fit for light-weight applications and structures.

Objective of the study

The papaya fibre has not been fully explored and only a few studies have been conducted on its properties. Many of its usesare also unidentified. The main aimis to aware people about its uses so that more research could be taken up in the near future. Keeping in mind these gap areas, the main objective of the paper is to explore innovative applications of papaya fibre.

Methodology

The relevant information about the study was collected from secondary sources like journals, books, encyclopedias and research papers. Content analysis was undertaken and interpretations were made accordingly.

Findings of the study

To explore the innovative uses of papaya fibre, data was collected from its cradle stage to the last one.The papaya trees trunks are taken for further processing.The stems are to be subjected to fibre extraction.The extraction of the fibers starts with retting, which is biological or chemical and is followed by mechanical beating and further textile processing.

Processing of papaya fibers

The trunks are first weighed and then grounded in a grinder to separate the constituent fibers from the other parts. The fibers are dried in the sun and then weighed again, after which further ground in a knife mill to obtain the uniform size. The yield of fibre is calculated by the following equation:

Percentage yield = $M_2/M_1 \times 100$

Where: M1= mass of trunks (kg), M2 = mass of dried fibers (kg).   (Viviane et al 2017)

During fibre processing, the fibre is split into two qualities-bastos and fibra. Bastos is short and discontinuous fibre strands and are responsible for the biggest share of successful applications. Fibra are fine fibres which can be utilized for making apparel.
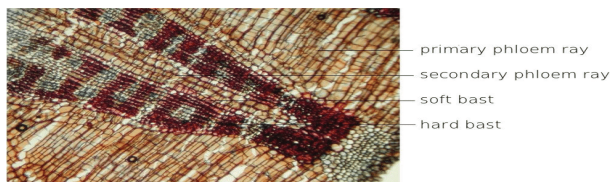
Fig: Papaya fibre bundles (Thea et al 2016)

Properties of the papaya fiber

Papaya fibers are hydrophilic due to the presence of hydroxyl groups (Silva, 2009). Hemicelluloses are responsible for water absorption by fibers, although non-crystalline cellulose and lignin also absorb water (Tita, 2002). The content of cellulose, lignin, and hemicelluloses concentrations are near those for other natural fibers, such as banana, ramie and coconut shell.

The surface morphology is similar to that of other natural fibers. The SEM image of papaya fibre shows more micro-holes and the molecules are not closely packed (Venkatachalam, 2016). Compared to mechanical properties with natural fibres, tensile strength, young's modulus and breaking strength of fibres is average but their fibre density of 0.86 ± 0.07 g/cm^3 is, in fact, one of the lowest fibre densities in the plant world which make these fibre more attractive for lightweight applications.

Uses of Papaya fibres

Due to the lack of awareness about papaya fibers, there use is generally limited to household applications. Fibres are used for cordage, ropes, canvas fabric etc. Fibres can also be used for the various types of apparel applications and accessories.

Innovative uses of papaya fibres

Innovative uses of papaya fibres include their new applications in different areas like green composites. Papaya fibres are characterized as low density, high moisture content, high tensile strength and they are very extensible compared to other natural fibres hence it's used for composites, whichare important for the production of light and stiff constructions.

Another innovative use is papaya peels derived silver nanoparticles on fabrics. The peel can be used for the synthesis of silver nanoparticles. Due to their potent antibacterial activity, papaya peels derived silver nanoparticles can be incorporated into fabrics and the manufacturers can make textiles free from spoilage by microorganisms.

Nowadays, the blending of the papaya fibers can alsodo with other natural and synthetic fibres. The blending of the papaya fibre with silk will reduce the cost of construction and will also make it economical. Whereas, the blending of papaya fibre with hydrophobic synthetic fibre will increase the water absorbency of the apparels.

Conclusion

The papaya fibre is a non-conventional and eco-friendly fibre. The uses of papaya fibres include making of cordage, ropes, canvas, and household utility items and can also be used for the various types of apparel applications.The innovative uses comprise of making green composite owing to their potent antibacterial activity. In addition, papaya peels derived silver nanoparticlescan further be incorporated into fabrics and thereby, can be protected from spoilage by microorganisms. Hence, papaya fibres can be used for innovative applications and more research endeavours are required to further explore its unique characteristics for varied applications.

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Role of ICT in the field of Home Science

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Abstract

Information Communication Technology (ICT) is enabling technologies that include both hardware and software necessary for delivering voice, audio, data and internet service. ICT provides a platform for innovative departures to enhance quality education in the field of Home Science. The educational applications of ICT facilities the learner with interactive digital whiteboards to apps filled smar tphones along with the widely implemented educational techniques/tools such as (Abdullahi,2014) audio and video conferencing, anti-plagiarism, and lecture-capturing software. More familiar technologies are video chat applications on our phones or learning from a YouTube video. A surge in usage of these technologies can be observed through their popularity across play store with the average rating being 4.5 and thousands of downloads

Keywords: *Technology, Home Science, ICT, Audio, software.*

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Introduction

ICT in home science has become integral to the teaching-learning interaction, through such approaches as replacing chalkboards with interactive digital whiteboards, using students' own smartphones or other devices for learning during learning time, and the "flipped classroom" model where students watch lectures at home on the computer. It also includes simulations, Data logging, Spreadsheets, Word processing, Virtual Learning Environment, Desktop Publication, etc. (UK Essays,2018).

The field of home science involves a lot of practical activities. It includes observing, measuring, communicating, discussing, investigating, handling, watching, monitoring and recording the results. On the other hand, science is equally a theoretical subject. It involves thinking, inferring and having good ideas, hypothesizing, theorising, simulating and modelling (UK Essays,2018).

Computer and internet access vary across countries, and also within countries has boosted the application of ICT in various fields of home science (Fraillon, 2014).

Digital literacy is being built through the incorporation of information and communication technology (ICT) into home science institutions. Some common educational applications of ICT include:

Google docs: Cloud tools like Google Docs are a perfect fit for students of home science because of their flexibility, but also because they allow for real-time collaboration with students and teachers located anywhere (Cortez, 2018).

Smartphones and Tablets: Tablets are small personal computers with a touch screen, allowing input without a keyboard or mouse. Inexpensive learning software ("apps") can be downloaded onto tablets, making them a versatile tool for learning. Commonly used home science apps are healthifyme, nutrition guide for clinicians etc for food and nutrition; strategic human resource management for human development; Textile dictionary for clothing and textile. E.g. commonly used learning tablets are of BYJU's, Mac's interactive system is of great help.

Interactive White Boards or Smart Boards: Interactive whiteboards allow projected computer images to be displayed, manipulated, dragged, clicked, or copied. Simultaneously, handwritten notes can be taken on the board and saved for later use. Interactive whiteboards are associated with whole-class instruction rather than student-centered activities.

Flipped Classrooms: The flipped classroom model, involving lecture and practice at home via computer-guided instruction and interactive learning activities in class, can allow for an expanded curriculum. It involves the use of electronic mails, Bluetooth sharing.

Online course learning: The government took various initiatives for providing online learning through sites like Shodhganga, IGNOU's egyankosh and Swayam, etc. One such platform for home science students is MOOC - A massive open online course aimed at unlimited participation and open access via the web.

Role of ICT in the field of Home Science: Promoting intellectual qualities through higher-order thinking, problem-solving, improved communication skills and deep understanding of the learning tools and concepts to be taught. Promoting a supportive, interactive teaching and learning environment by creating broader learning communication and therefore provide learning tools for persons especially those with special needs. Using computer-generated graphics to illustrate relationships of all kinds especially dynamics processes that cannot be illustrated by individual pictures. Improving attendance levels and enabling the creation of a new and more effective curriculum. Ensuring that a more effective interactive learning environment is created through the use of a learner-centered and activity-oriented teaching/learning approach (Abdullahi, 2014).

Material and method:

Secondary data collection method was used for study which includes Information collected through the study of the existing organizational document, forms and records from online sources. Other materials were accumulated through communication with Users/User staff of the system, Professional staff and Procedure manual and rulebook (Material and Methods; https://shodhganga.inflibnet.ac.in/.)

Result:

ICT has led to the development of intellectual qualities through a higher order of thinking, problem-solving, improved communication skills and a deep understanding of the learning tools and concepts to be taught. Computer mediates communication has increasingly become the fact of everyday life particularly for the field of home science.

Popularity of ICT can be proved by naming a few popular apps like healthyfyme app, an Editor choice app with over 10 million downloads; Nutrition guide for clinicians with 10 thousand downloads; Textile dictionary with rating 4.5 and hundreds of downloads; edx a popular learning app with rating 4.7 and millions of downloads (https://play.google.com/).

Conclusion

The shift from the teacher centric approach to the excessive utilization of ICT tools in the field of Higher Education shows the paradigmatic shift which has not only reduced burden on teachers and institute but also enhanced the quality of education. Learning can be done more effectively and efficiently if familiarity with equipment and its functions are known ultimately enhancing the knowledge, understanding, and skills (Pawar, 2012). Various technologies are being launched, with their varying uses in home science from usage of word processing package for the production of a worksheet to more specific science activities such as setting up a data logging system to using projectors in the smart class. This development contributes towards equipping pupils of home science to live effectively in the modern age of science and technology.

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Developing Skills among Parents and Caregivers with Regard to Safety of Preschoolers

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Abstract

Preschool age is vulnerable and tender in terms of all aspects of development, care and the hurdles it may be exposed to. The research paper is to sensitize on the need for developing skills in all the stakeholders. Related studies and experiences of the authors have been suitably incorporated to draw implications for all the stakeholders involved in the care of the tiny tots and home, school, and overall community. A well-designed training program from time to time in the skill-building of the caregivers can sensitize them on possible errors and breach of care and dignity to the vulnerable age group.

Keywords: *Vulnerable pre-schoolers, hurdles, development, skill-building, caregivers, care and dignity*

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Introduction

The pre-schoolers and the developmental readiness

Pre-schoolers (3-6 years)typically touchdevelopmental milestones (activities that most children of a certain age can do on their own) and learn skills such as naming colours, showing affection, or hopping on one foot. The milestones are seen in how they play, learn, speak, behave, and move (like crawling, walking, or jumping).As children grow into early childhood, their world begins to open up and provide opportunities for enhancement of their experiences about the world. They become more independent and begin to focus more on adults and children outside of the family and curious. Their interactions with their immediate ecosystem (family and those around them) helpin shaping their personality and their ways of thinking and moving around in their environment.

Objective

The research paper discusses the need for caring the tender preschoolers and the areas that need attention. It also draws attention to the related studies that highlight the functional methods of going about the safety of this age group in a school program, besides at home.

Mobility and locale wise risk factors

The active preschooler needs active and skilled supervisors who can make them aware of traffic/ crowds, strangers, physical features as lifts, escalators, water bodies, sharp and speedy

machines, etc. More independence with age brings the child closer to the outside world and to offer a hazard-free environment, physically and psychologically becomes imperative. There cannot be assumed safety in a given lifestyle.Teaching the child about how to be safe around strangers can save them from a major source of child abuse or maltreatment. Home is the first institution to impart knowledge and values to children on their way to development and entry into their ecosystem. The supervisors at home and at school need to use labels for things and features, such as discussing a swimming pool, an open drain, a wide bucket full of water. They need to talk about it and the precautions on what not to do about these or around these. One cannot let them fall and learn lessons. Cameras can help keep an eye on a larger scale in and around the building. The tiny tots grow to be physically, emotionally, and socially healthy individuals, and not abused and traumatized young adults, in later life.

Educating and skill-building on psychological vulnerability

There lies a key concern in ever-growing physical, sexual, emotional or psychological maltreatment of as early as preschoolers, even earlier than this. Neglect and insensitivity, especially by the parents or the caregiver, is a major public health problem. Maltreatment is seen to have adverse effects on the child's medical, developmental, legal or psychosocial conditions, primarily becoming the rationale for this study.Research has emerged to reflect more about the concern.

The earlier the parents show their involvement in their children's literacy practices, the more profound are the results and the longer-lasting the effects. Parents being the primary caregivers have a profound influence on their children in their early years and therefore, the lessons imparted by them can be said to have more effectiveness (Mullis et al., 2004). The Effective Provision of Pre-School Education (EPPE) study by Sylva et al. (2004), found that parents and caregivers imparting knowledge to their young children makes a real difference in their development and is more important than the socio-economic status or educational level of their parents. Parents' activities had a positive effect on their development and preparedness. Reading stories to the child, narrating poems and nursery rhymes, painting and drawing, playing with letters or numbers, visiting a library, taking children on visits and creating regular opportunities for them to play with their friends at home, were all associated with higher intellectual and social/behavioural scores. These were functionally 'protective' factors in reducing the possibility of special educational needs in lieu of ongoing home learning activities that reduced the risk of such needs.

Kenne and Wurtele (2010) recognized the potential perpetrators hidden in good people for pre-school children and examined whether they can be trained on a personal safety program by educating them on inappropriate touch requests. Children as small as 3 years old can become familiar with the inappropriateness of such demands in any event, when originating from "good" individuals, albeit multi, however, 3-year-olds had more trouble perceiving wrong touch demands on comparison with 4-and 5-year-old kids. Kenny, Wurtele, and Alonso (2012) conducted a comparative study on 78 children for a safety program. These children showed the enhanced ability to identify good or bad touches, acquired knowledge about correct terminology for genital areas, learned general safety rules and indicated a higher level of skills on personal safety than those in the control group. Wurtele, Kast, Miller-Perrin, and Kondrick (1989) observed the pre-schoolers on two educational approaches and compared the approaches for their effectiveness. The before and after training observations were made,and statements of parents taken. The

training modules were effective in making children understand about the appropriateness or inappropriateness of the touch.

Zhang et al. (2013) conducted a pilot study on children's knowledge and skills for sexual abuse prevention and found out that less than half of the total sample under study was aware of inappropriate touches. Less than 20% of children knew how to safeguard themselves from unsafe conditions. Preschool children lacked parent-child communication on the issue. The authors recommendedmodules for safety measures on abuse prevention be developed. Parents also need to be informed about abuse prevention and work on it. Altundag (2018) reported 98.4% of parents feel that sex education was beneficial for children. Children did not know about the actual names of their genitals. Knowledge about good touch and bad touch was developed among the parents and pre-schoolers alike through 'do not touch my body' awareness program. Thus, parents ought to be educated about sexual training and be in contact with their children to forestall sexual maltreatment. Through sexual training, the kid figures out how to regard their own body and the body of the opposite sex. This makes the child have a healthy association with their sex and the opposite sex in the later survival of the child.

Samuel and Ahmad (2011) appreciated the effectiveness of videos as a medium for improving the knowledge of young children about sexual abuse (Bandura's Social Cognitive Theory on children grasping the information with a positive effect of their behaviour). Sharma and Sharma (2018) endorsed attending sexual abuse prevention programs based on greater knowledgeamong the experimental group as compared to the control group on skills related to abuse prevention.

Implications for the school program and policy

The safety of the child should be of prime importance. Training of the caregivers needs to be done and reviewed frequently, including all the officials in the hierarchy, including the heads of the institutes and also helping staff, transportation staff, security staff, and also a parent and substitute caregivers at home. Their records of conduct should be of integrity, physical and mentally healthy. They should be trained to meet any crisis situation in first aid, dealing with any indignity attempted, networking with agencies such as the police, the psychologist, counsellor(s), paediatricians, community representatives among the parents, gynaecologist, social workers; liaison with district education and health officers, law and order officers, lawyers, human rights officers, developmental psychologists, and community members aware of cultural sensibilities. The state should fund awareness and educational programs for fundamental teams. Media can contribute much within these teams and independently as well.

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Optimization of Dye Extraction Conditions of Ratanjot (*Onosmaechiodes*) Natural Dye by using Ultrasonic Waves

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Abstract

Ratanjot is a plant belonging to the borage family. Traditionally, it was used as medicinal plants to cure eye disease, bronchitis, abdominal pains, etc.The study was carried out to optimize the dye extraction conditions of natural dye obtained fromthe roots of ratanjot plant (Onosmaechioides) by using ultrasonic waves.The results showed that optimum dye extraction conditions of ratanjot dye were dye extraction pH of 7, dye extraction time of 60 min and dye extraction temperature of 60°C. Therefore, it was recommended that the dye extraction using ultrasonic waves reduced energy consumption as compared to the traditional dye extraction method.

Keywords: *Naturaldye,Ratanjot, Ultrasonic waves, dye extraction, traditional dye extraction*

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Introduction

Traditionally, textile artisans used material from natural sources for the purpose of colouring fabric before the synthetic dyes were invented and commercialized. The demand for the textile product escalated with the change in the time period. Therefore,the manufacturer faced a hard time fulfilling the need of customers.Because of the easy availability of different types of synthetic dye, the textile dyers/ manufacturers moved towards the use of synthetic dye andproduced a wide variety of shades. It had shorter as well as simplified dyeing process and the cost was minimal as compared to natural dyes.

Since synthetic dyes are synthesized from petroleum by-products, they produce toxic or carcinogenic amines. Both, the human as well as animals are affected by the use of these chemicals, which resulted in the usage of the natural dyes owing to its health-promoting as well as eco-friendly properties (Samanta and Konar, 2011). With the adverse impact of synthetic dyes, thehuman mentality is shifting towards organic products, protecting environmental degradation, promoting the use and production of natural dye in textile industries. Therefore, it provides an opportunity to reintroduce the use of natural dyes for dyeing purposes.

Ratanjot is the local name for plants belonging to the borage family (including Alkannatinctoria or alkannet).Traditionally, it was used for colouring textiles, food (such as rogan josh), vegetable oils, wines, medicines, cosmetics, and varnishes. It is also used to cure eye diseases, bronchitis,

abdominal pains, etc. It is a historical natural dye and also holds immense importance in the field of pharmaceutical, cosmetics, and food colorants. It is a red dye obtained from the roots of various Boraginaceous plant species (Mishra and Butola, 2013). Dark red, purple and browns are the most typical colours achieved. The major constituents of Ratanjot extracts are naphthoquinones. Plant dyes rich in naphthoquinones such as lawsone from henna, juglone from walnut and lapachol from alkanet are reported to show antibacterial and antifungal activities (Singh *et al.,* 2005; Joshi *et al.,*2009).

Due to the high demand for textile materials in the market, there is needed to develop an effective extraction technique for natural dyes from plant materials. The application of ultrasonic waves is gaining popularity in the textile sector. Application of Ultrasonic waves holds a promising future in the field of the textile industry. Ultrasound has numerous advantages such as energy-saving by dyeing at a lower temperature or shortens the process; lower the consumption of the auxiliary chemical, lesser processing costs, which lead to an increase in the competitiveness among the industry, process improvement by controlling thecolour shade (Udresu*et al*., 2014). Kamel*et al*., (2011) used ultrasonic cleaner for the extraction of natural dye obtained from Cochineal dye. They reported that the application of ultrasonic waves improved dyeability as well as color fastness properties of the dyed fabric.

Many research related to the traditional dye extraction of natural dye was reported but dye extraction with ultrasound waves is a novel concept that gave positive benefits on the colour yield, reduce energy and time requirement. In this study, the ultrasonic cleaner approach was used in the dye extraction process. Ultrasonic cleaner produced uniform and wider waves as compared to the ultrasonic probe. As a result, the main objective of the study is to optimize the dye extraction conditions ofratanjot using ultrasonic waves.

Materials and Methods

Materials:

A. Raw Materials:

The roots of Ratanjot plant(*Onosmaechiodes*) were collected from the Herbal garden of Botany Department, PAU, Ludhiana, and Punjab. The roots were dried under the sun, then ground and stored at room temperature before use.

B. Chemicals:

Acetic acid and sodium carbonate were used for regulating pH. These chemicals were supplied by Thames chemicals, Ludhiana. All the chemicals used were of laboratory grade.

Methods:

A. Ultrasonic Dye Extraction Method

Dye material of 1g was weighed and placed in the beaker along with the 50ml of deionized water. The beaker was then placed into the ultrasonic cleaner for the extraction process. Parameters optimized were dye extraction pH (4-8), extraction time (15, 30, 45 and 60 min) and temperature (30, 45 and 60°C). The extracted dye solution was then strained through the filter paper. Dye solution of 0.2 ml each were taken out from dye bath and diluted 100 times. The diluted dye solution was then centrifuged at 3000 rpm for 20 min. The diluted dye solution was poured in the cuvette to measure the optical density of the dye solution.

B. Chemical Analysis

The optical density of the extracted sample was measured using Labindia UV spectrophotometerat the wavelength range from 400 to 600nm. The sample showing the maximum optical density was considered as an optimized value.

Results and discussion

Various parameters namely, dye extraction pH, dye extraction time; dye extraction temperature has been discussed:

A. Optimization of dye extraction pH for Ratanjot dye

The optical density of the dye solution was measured at different wavelengths using a UV spectrophotometer. The optical density of the dye solution decreased with an increase in the wavelength up to a certain level as shown in Table 1. Beyond that, the optical density started increasing. The optical density was increased with an increase in pH from 4 to 7. This trend was studied for the pH values ranging from 4 to 8. It was found that the optical density was maximum at pH 7 and wavelength 540 (nm).

Table 1 : Optimization of dye extraction pH for Ratanjot dye					
Wavelength(nm)	pH media				
	4	5	6	7	8
400	0.329	0.417	0.546	0.761	0.528
410	0.297	0.376	0.456	0.693	0.449
420	0.297	0.366	0.422	0.630	0.433
430	0.295	0.339	0.424	0.623	0.452
440	0.294	0.337	0.401	0.596	0.448
450	0.259	0.296	0.360	0.531	0.388
460	0.173	0.227	0.256	0.433	0.307
470	0.180	0.223	0.256	0.426	0.299
480	0.250	0.296	0.298	0.477	0.368
490	0.252	0.307	0.313	0.478	0.383
500	0.253	0.297	0.304	0.461	0.365
510	0.241	0.290	0.286	0.444	0.363
520	0.232	0.274	0.269	0.408	0.339
530	0.213	0.251	0.241	0.389	0.352
540	0.814	0.830	0.833	0.992	0.908
550	0.791	0.808	0.806	0.960	0.883
560	0.771	0.787	0.781	0.931	0.858
570	0.749	0.765	0.757	0.900	0.836
580	0.728	0.741	0.730	0.870	0.809
590	0.705	0.716	0.702	0.838	0.783
600	0.684	0.695	0.678	0.810	0.759

B. Optimization of Dye Extraction Time

The optical density of extracted dye gradually increased with an increase in extraction time of dye as shown in Table 2. It was observed that the optical density was higher at dye extraction time of 60 min. Therefore, 60 min is the optimum dye extraction time.

Table 2: Optimization of dye extraction time for Ratanjot dye	
Time (min)	**Optical density**
15	0.808
30	0.904
45	0.943
60	**0.985**

C. Optimization of Dye Extraction Temperature

The optical density of the dye solution increased with an increase in extraction time as shown in Table 3. It was observed that the optical density was maximum at 60°C. Manimozhi and Kanakarajan (2017) also found that the maximum dye exhaustion percentage at dye extraction temperature of 60°C for dyeing cotton and silk yarn with *Acalyphawilkesiana* (copper red colour dye) by using ultrasonic dye extraction method.

Table 3: Optimization of dye extraction temperature for Ratanjot dye	
Temperature (°C)	**Optical density**
30	0.909
45	0.982
60	**0.990**

D. Comparison of Traditional and Ultrasonic Dye Extraction Methods of Ratanjot Natural Dye

The optimum dye extraction conditions of ratanjot using the traditional methodwere dye extraction time of 60 min, dye extraction pH of 7 andtemperature of 100°C. (Bains*et al*., 2005). The optimum dye extraction time and pHarethe same with the application of ultrasonic waves but there is a reduction in the temperature (60°C) in the ultrasonic extraction method, thus saving the energy.The application of ultrasonic waves improved the extraction of dyes from different parts of various plant resources.The improvement could be due to better discharges of natural dyes materials from cell wall membranes of plants and mass transfer to solvent assisted by cavitation provided by ultrasonic waves.

Conclusion

Due to the high demand for textile materials in the market, there is needed to develop an effective dyeing technique for extracting the dye from natural sources.The application of ultrasonic waves is gaining popularity in the textile sector because of the lower consumption of energy or shortens the process. The optimum dye extraction conditions of ratanjot dye were dye extraction pH of 7, dye extraction time of 60 min and dye extraction temperature of 60°C. Therefore, it is recommended that the dye extraction using ultrasonic waves reduced the energy consumption compared to the traditional dye extraction method.

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Designing Upcycled Fashion: Upcycling of Used Jeans to Create Different Products

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Abstract

In the present scenario, the increasing environmental awareness results in the invention of a new concept: "Upcycling". Upcycling, also known as creative reuse, is the process of transforming by-product into new materials or products of better quality for better environmental value. In contrast to reusing or recycling, upcycling uses existing materials to improve upon the original ones. The present study entitled, "Designing Upcycled Fashion: Upcycling of Used Jeans to Create Different Products", focuses on the concept of upcycling. In the past few decades, Jeans turned out to be a classic fashion. Jeans made out of denim is the most popular fabric; in fact, no other fabric can withstand its popularity. Denim industry has experienced immense growth in the past few years that alternatively generates a large amount of denim waste. Through the proper processing of these wastes, various products can be created. Thus in the following research, ten designs for upcycled products were developed from used or discarded jeans by the investigator. A structural interview schedule was conducted to investigate the awareness about upcycling, upcycling behavior and evaluating the acceptability for prepared products. All the products were found to be acceptable among the consumers and the work was appreciated by all of them.

Keywords: *Upcycling, Designing, Jeans Fashion, Acceptance*

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Introduction

India is one of the fastest-growing economies in the world. The textile and apparel industry is one of the oldest industries in India. The textile sector has evolved through the small scale industries to one of the largest in the world with massive production.The industry currently estimated at around the US $ 108 Billion, is expected to reach the US $ 141 Billion by 2021(Annual Report 2014-15, Ministry of Textiles, Govt of India). The fashion industry is growing very rapidly in recent times. Fast fashion offers vast choices and due to its low prices, it is affordable for the majority of the population. Joseph (2001) reported that piles of unsuitable, unfashionable clothing, not yet worn out but no longer wearable and further wasted. Due to high demands and consumptions, a large amount of waste is disposed of in landfills every year. Rissanen (2013) stated that as a result of production and manufacturing clothes or after consumption that 73% of clothes are thrown away end up in landfills for that fast fashion movement is accused as a not sustainable habit.

Denim is one of the world's oldest fabrics, yet it remains eternally young. The tough, durable and the most popular fabric has been ruling the hearts of the people ever since its origin (denim

manufacturers association). In India, the denim market is exhibiting vast growth over the years. It has undergone constant evolution to remain sustainable in fast-changing fashion. According to Clariant, adjectives that define denim are "comfortable", "relaxing", "glamorous", "attractive", "fashionable"," "smart", "casual", "funny", "dynamic", "energetic", "practical", "creative" and "universal". Jeans sustained the top position among apparel varieties, because of its long life span.

Some facts about denim production are listed below:-

• 20,000 tons of indigo is produced annually for the purpose of dyeing of jeans.

• The oldest pair of Levi's jeans was found in 1897 and was 100 years old.(www. historyofjeans.com)

• Due to vast choices available jeans were bought more in rural areas (as per 2009 report submitted by National household survey, Ministry of Textiles).

• Approximately 124 Million denim jeans are sold every year (Wallander, 2012)

Along with the widespread movement of 3 R's (Reduce, Reuse, Recycle) the idea of upcycling originated. As a result of awareness of environmental issues, the concept of upcycling has gained much importance in recent times. In the book "Cradle To Cradle", by the architect and chemist duo, William Mc Donough and Michael Braungart (2002) suggested that when all kinds of waste end up in landfills clothes, old furniture, carpets, televisions, shoes, paper, food wastes and much more, some of these things could be decomposed, other recycled and some even upcycled. Upcycling involves the process of recreating the used or discarded materials into something new with a better outlook. It transforms useless products into new products with better environmental values. As Murray (2002), suggested upcycling textiles, "is not merely conserving the resources that went into the productions of a particular material but adding the value embodied in them by the application of knowledge in the course of their recirculation". In contrast to reusing or recycling, upcycling uses existing materials to improve upon the original ones. So if one can add value – economic, intellectual, emotional material – to a product through the process of reuse, it can be called 'upcycled' (Modi, 2013).

THE UPCYCLING PROCESS

COLLECTION OF USED/DISCARDED PRODUCTS ➤ DESIGNING NEW PRODUCTS OF BETTER VALUE ➤ CONSTRUCTION OF UPCYCLED PRODUCTS

Denim is a highly durable fabric with excellent strength and appealing aesthetics. It is considered as one of the most simple, enduring and versatile garment in the modern community because it is acceptable by all classes, sexes and age groups. Duringthe 1960's from bell-bottom and hip-hugging patterns to permanently pressed well-fitted jeans with stretching capacity and after that distressed or worn looking jeans become a popular fashion. Due to the versatility of the fabric in the form of old jeans is an inexpensive item to explore creativity.(Kaur J, 2016)

Objectives

- To conduct the present study the following objectives are framed:-
- To upcycle jeans for creative reuse.
- To develop different products from used or discarded jeans.
- To assess consumer acceptance for the prepared products.

Methodology

This section presents the methodology used for the present study. In the initial phase of research, information was collected regarding the upcyclingof used jeans and ten innovative upcycled products were created. The upcycled products constructed by the investigator include- **backpack, coaster, cushion cover, doormat, earrings, holder, phone holder, placemat, purse and tote bag.** The next phase was the evaluation of the prepared products through a self-made questionnaire. The questions were focused on the following points:-

- To check the basic knowledge regarding upcycling
- To find out the methods opted by the respondents to handle used apparel waste
- To study the acceptance for prepared products
- To evaluate the prepared products

The total sample of 100 college going girls between the age group of 18-22 yrs were selected purposively as they were more receptive towards new trends in fashion.

Results and discussion

Used jeans were collected to develop ten new upcycled products. These ten designs were decorated through embroidery, buttons, stitching of fabric scraps as flowers and laces. Innovative patterns were created using each part of jeans like a pocket, side seam; zip and unique color combination were made out of different shades of blue colored jeans. Upcycled products were evaluated for their acceptability amongst the consumer and the results obtained are shown below:

3.1 Awareness regarding upcycling:

When the respondents were asked about their awareness regarding the upcycling of textile products, only 29% of them were aware, whereas maximum percentages i.e. 71% of respondents were unaware.

(n=100)

	YES	NO
■ RURAL	14	40
■ URBAN	18	28
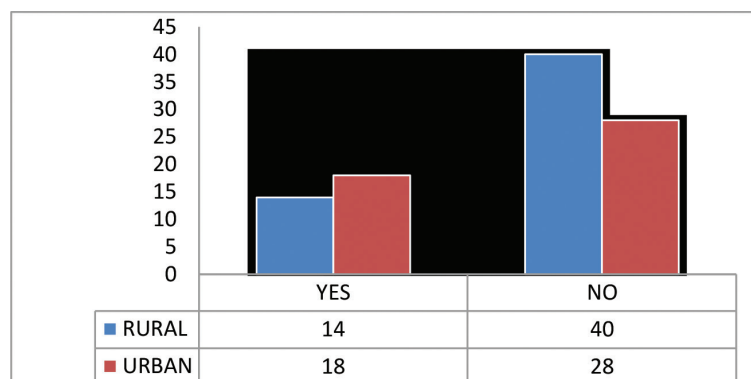
3.2 Upcycling of used or discarded clothes:

(n=100)

	10,000-50,000	50,000-1,00,000
■ YES	55%	5%
■ NO	19%	21%
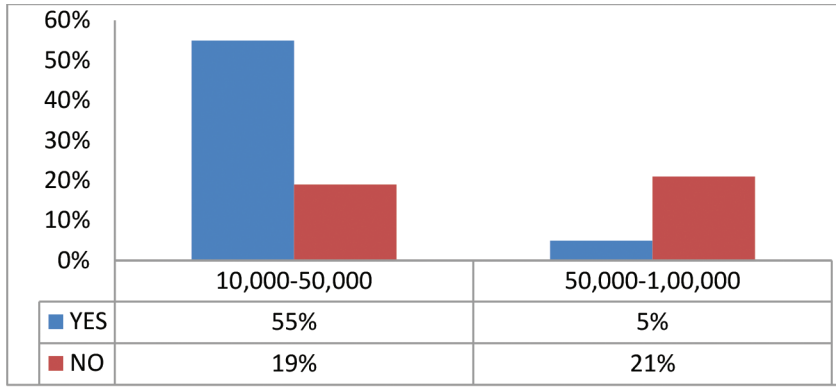
    The respondents were asked about their preference for upcycling, the results revealed that majority of the respondents preferred to upcycle their old clothes. Upcycling of old clothes was more common in respondents belonging to the income group of 10,000-50,000.

Developed Upcycled Products

Product No. 1- Cushion Cover	Product No.2-Placemat
Product No. 3- Purse	Product No.4-Coaster
Product No. 5- Holder	Product No. 6-Doormat

Product No. 7- Phone Holder	Product No.8-Tote bag
Product No. 9- Earrings	Product No. 10- Backpack

3.3 Willingness of the respondents to buy these products:

(n=100)

	10,000-50,000	50,000-1,00,000
■ YES	56%	24%
■ NO	10%	10%
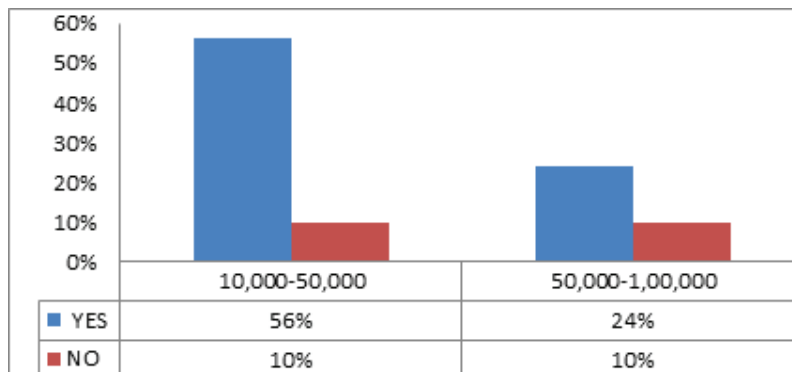
The results indicated that the majority of the respondents were willing to purchase the prepared products.Comparable results were also found in a study conducted by Kushwaha(2016) in which most of the people were willing to buy the creative upcycled leather fashion accessories.

3.4 Responses regarding price point considered by the respondents

(n=100)
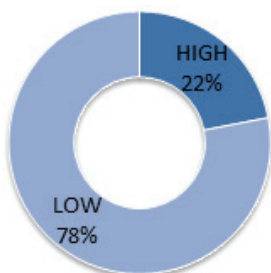
The respondents were asked about their expectations for the price of the prepared products. The results indicated that 78.04% of the respondent preferred low prices for these products as they believed upcycled products should be affordable whereas 21.95% of the respondents recognized the hard work associated with the products and believed that the price should be high.

3.5 Preferences of the respondents regarding developed upcycled products:

Item	n=100 data in () indicates percentage			
Preference on the basis of different parameters	Design	Purse(26)	Tote bag(14)	Cushion cover(12)
	Utility	Doormat(21)	Coaster(15)	Phone holder(13)
	Overall impact	Cushion cover(22)	Purse(16)	Tote bag(14)
	Functional stability	Doormat(18)	Phone holder(15)	Coaster(12)

The majority of the respondents liked the patterns and appreciated the hard workassociated with all the upcycled products.Most of the people agreed that upcycling helps to reduce waste and save our environment.

Conclusion

Upcycling is a way to create the best out of waste. A popular term "recycling", is the process of "downcycling" (waste reduction) into reusable products while on the other hand, "upcycling", a particular form of recycling, involves changing waste materials or unwanted products into a better quality product (Kim et.al 2014). The products obtained after the process were custom-made and cost-effective. The products created in this project were appreciated by everyone because of its unique and interesting styles. The products created in this upcycling project would provide entrepreneurs a unique idea for making use of different designs to start with very low investment. It can easily create a market of upcycled products and reduce the amount of fabric waste generated every year thus sequentially make the environment less polluting and hazardous. (Kushwaha, 2016).

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Consumer Clothing Disposal Behaviour: A Comparative Study among Urban and Rural Women (30-50 yrs) in Jammu

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Abstract

With the growing population and improvement of living standards, the consumption of textile has subsequently increased and the overconsumption of clothing has had a significant environmental impact on society. Clothing consumption can be regarded as an aspect of sustainability issues, in which consumers feel responsible to contribute to sustainable consumption by disposing of their used clothing in the right way. Hence, there is a need to understand how consumers can dispose of their unwanted or used textile products. The survey was conducted among a hundred women, fifty each from rural and urban areas, randomly selected from tehsil Jammu. The data was analyzed using descriptive statistics percentage, chi-square, t-test, and co-relation. According to the results, almost half of the respondents of the survey in Tehsil Jammu would like to dispose of their clothes sustainably by donating to charities/servants and by giving them to friends/relatives. Most of the respondents preferred their used or unwanted clothes for reutilization. Reutilization is one of the better ways of reducing post-consumer textile waste. The respondents considered a lack of time and knowledge as the most important factors for non reutilization of textile products. All most all of the respondents were aware of the environmental issues caused by the clothing disposal, which was little, more in urban respondents. Environmental awareness and socio personal profile of the respondents had a great effect on clothing disposal behaviour.This study contributes to the literature by revealing new insights about consumer disposal behaviour.

Keywords: *sustainable consumption, Reutilization, Clothing Disposal Behaviour,   Awareness of the Environment.*

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Introduction

Textile and Apparel industry is one of the most essential consumer goods industries. However, the textile industry is also accused of being one of the most polluting industries. Not only production but consumption of textiles and apparel also produce waste (Kushwaha, 2016) In the apparel industries, disposal of clothing is of great interest because the amount of textile waste produced annually is on the rise (Claudio, 2007). In apparel consumption, the term disposal refers to whether a garment is simply thrown away, resold, reused, or recycled (Shim, 1995). Due to fast fashion trends,the majority of consumers perceive the lifetime of clothing to be shorter than ever before (Morley *et al*., 2006) that led to a large amount of clothingbeing disposed of or destroyed.

Textile waste poses a threat to public health and the environment if it is not stored, collected, and disposed of properly.Conserving resources for future generations through sustainable consumption presents both, a unique challenge and opportunity for individuals in contemporary society. According to the Oxford Commission, " sustainable consumption is consumption that supports the ability of current and future generations to meet their material and other needs without causing irreversible damage to the environment or loss of function in natural systems". The present investigation focuses on the consumer disposal behavior of textile products among rural and urban women of Jammu Tehsil.

Objectives of the study

- To examine the disposal behaviour of clothing among women in Jammu Tehsil.
- To study the consumer decision to purchase reutilized clothes.
- To study consumer awareness regarding environmental issues caused by the disposal of clothes.

Methodology

The study was conducted in Jammu Tehsil. The study is mainly based on primary data which is collected by issuing a well-structured questionnaire to obtain information pertaining to the disposal behavior of textile products. The sample of the present study was selectedby using a random sampling technique. A list of 10 (5 urban and 5 rural) areas were randomly picked from the list of rural and urban areas in Jammu tehsil.The total sample size of the study was 100 women (30-50 yrs) respondents. This included fifty respondents from urban and fifty from rural areas. The data collected from respondents were statistically analyzed using percentage, mean score, chi-square, co-relation and t-test.

Findings of the study

1. **Socio-Economic Profile of the Respondents**

- It was found that the majority of the urban respondents belonged to the age group of between 30-40yrs however the majority of rural respondents belonged to 40-50 years of age. 41% of both rural and urban respondents were graduates, with urban respondents educated to a higher level. The majority of sample women respondents were homemakers. The percentage of respondents who were in a job was more in urban areas. The family monthly income of sample women in both groups was in the range of Rs 25,000-50,000.

2. **Clothing disposal behaviour among urban and rural women**

Fig. 2.1 Money spend on clothing in a month

	1000-2000	2000-4000	4000-5000	More than 5000	Don't keep track
URBAN	20%	22%	32%	18%	8%
RURAL	12%	30%	10%	4%	44%
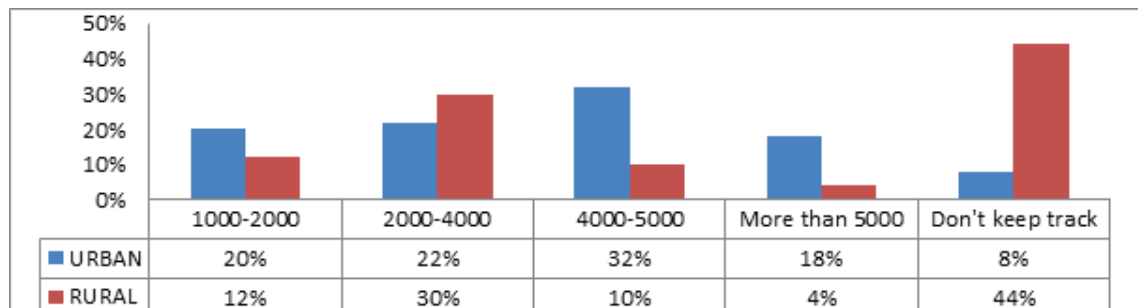
Chisquare static is 24.29   p-valuee is-.00007

significant at p<.05

The presented figure 2.1 indicated that 50% of the urban women respondents in Jammuspend above Rs 4000 in a month on their clothes as compared to 14% of rural women respondents, whereas 42% of rural respondents spend less than Rs 4000/ month. Statistically, significant association was observed between urban and rural women respondents.

Table 2.1:   Disposal methods of textile products

#Multiple Response

Disposal Methods	Urban Respondents N=50(%)	Rural Respondents N=50(%)	Total N=100=%
Resell	--	--	--
Donate to charities/servants	22 (44)	6 (12)	28
Reutilize (Reuse)	15 (30)	28 (56)	43
Given to friends/ relatives	10 (30)	12 (24)	22
Trash (burn/throw away	20 (40)	15 (30)	35

It was found that most (43%) of the women respondents prefer to reutilize their textileproducts rather than dispose off, though it was more (56%) in rural respondents.In urban areas 44% of the women respondents dispose their clothes by donating it to charities and servants, whereas in rural areas only 12% of women used this method for disposal of clothes.

Fig 2.2 Reason for non- reutilization of textile products

	Lack ofawareness	Not interested	Shortage of time
URBAN	11.40%	17.10%	71.40%
RURAL	72.70%	9.09%	18.10%
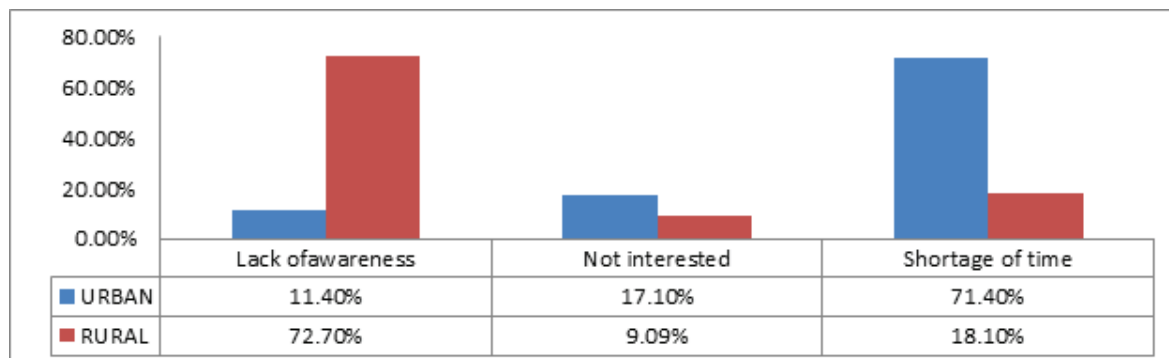
Multiple Responses

In urban areas, the majority (71.4%) of the women respondents did not reutilize their textile products because of the shortage of time. But in the rural areas majority (72.7%) of the women respondents were not engage in reutilization practices of clothes due to lack of awareness on reutilization.

Table 2.2: Expectance and reason for a higher or lower price of reutilized products.

Expectance of price N=50(%)	Reason N=50(%)	Urban N=100	Rural	Total
High		13 (26)	4 (8)	17
Skill required	7 (14)	1 (2)	8	
Hard work	8 (16)	5 (10)	13	
Low		37 (74)	46 (92)	83
Used	35 (70)	44 (88)	79	

It was found that the Majority (83%) of the urban and rural women respondents stated that the price of reused products should be low. Very few (17%) of the sample women respondents believed that the price of products should be high because reutilization requires a particular skill and hard work.

3. Consumer awareness regarding environmental issues caused by the disposal of clothes.

Table 3.1: t-test for awareness of environment on clothing disposal across urban and   rural women respondents

Awareness of environment on clothing disposal	Urban respondents N=50	Rural respondents n=50	Total Mean	t-value U-R
Reselling, donating, reusing of clothes are good ideas	1.16 +.468	1.08 + .274	2.24+ .715	1.043 (0.32)
Reutilization saves money	1.20 + .404	1.36 + .485	2.56+ .889	1.793 (.001)
Everyone should do effort to reduce waste problems	1.12 + .328	1.08 + .340	2.2+ .668	.598 (.278)
Reutilization is better option for management of textile waste	1.44 + .675	1.72 + .809	3.16+ 1.489	1.879 (.046)
By reutilization of old clothes environmental quality will improve	1.54 + .646	1.48 + .707	3.02+ 1.353	.443 (.608)
It helps to reduce land filing	1.76 + .591	1.46 +.503	3.22+ 1.094	2.732 (.825)

Willing to reutilize old clothes in future	1.18 + .438	1.14 + .351	2.32+ .789	.505 (.282)
Total	Mean=9.42 S.D=3.623	Mean=9.3 S.D=3.36	Mean=18.72 S.D=3.36	.400

Both urban and rural respondents were highly aware of the ill effects of clothing waste on the environment. Statistically,the non-significant difference was observed between urban and rural women respondents regarding awareness of the environment on clothing disposal methods. With a mean score of urban women little higher than rural women.

4. Effect of awareness and selected social personal traits of the respondents on clothes disposal behaviour.

The results regarding the effect of awareness and personal traits of the respondents on disposal behaviour show that the maximum sustainable disposal of textile products was done by the homemakers, graduates and the respondents belonging to lower-income groups.

Table 4.1: Correlation between environmental awareness and aspects of clothing disposal behaviour

	Sustainable disposal	Unsustainable disposal
Environmental Awareness	.23*	-.01

*p<.05

Spearman correlation analyses showed that environmental awareness had a significant and positive correlation (r=.23) with sustainable disposal behaviour. A positive correlation suggested that sustainable clothing disposal behaviour of women respondents increases with an increase in environmental awareness among them. Environmentally conscious respondents who were sensitive to environmental issues dispose of their clothes more sustainably than those who were not.

Conclusion

Due to high demand and consumption, a large amount of waste is disposed of in landfills each year. This causes economic and environmental problems in the world and a waste of resources. To safeguard our environment consumers can make a sustainable responsible decision at the time of clothing disposal. According to results almost half of the respondents would like to dispose of their clothes sustainably by donating to charities/servants and by giving them to friends/ relatives. Most of the respondents preferred their used or unwanted clothes for reutilization. Reutilization helps to reduce the amount of textile waste that is dumped in landfills. According to new data buying a used clothing item extends its life by an average of 2.2 years and reduced its environmental impact by 73% (Anon, 2018). Awareness of consumers to reduce overconsumption and increase awareness ofthe reutilization of textiles is very essential in the world of fast-fashion.

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Impact of Natural Thickening Agents on Printing of Silk with Marigold Flower Dye

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Abstract

"Ecofriendly doings bring ecofriendly rewards. Join the eco-friendly revolution". Printing with natural dye is still in its primary stage due to the problem of dye extraction, requirement of mordants, light shades, fastness properties and uneven prints. Whereas printing with Natural Thickening agent still needs to focus on due to the reason of environmental pollution from the effluent and waste from the synthetic thickening and binding agents. Keeping in view the importance of eco-textiles and their increasing demand in the national and international market this study was made to get even prints with bright shades using block printing by both the Premordanting and simultaneous mordanting techniques along with five natural thickening agents – (Guar gum, Gum tragacanth, Gum arabic, Wheatflour and Cornflour). Aluminum potassium sulphate and ferrous sulphate mordants were used during the preparation of printing paste for the colour variation. Visual evaluation of the printed samples on the basis of prints and evaluation of colourfastness properties were also carried out. Very good to excellent block prints were obtained with guar gum as a thickening agent. Colour fastness results related to sunlight, washing, crocking, pressing and perspiration showed very good results.

Keywords*: Natural Dyes, Natural Thickening agents, Block Printing.*

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Introduction

Clothing has been one of the most important necessities of man. It is human nature to adore him with beautiful things; the art of textile ornamentation has been one of the ways to accomplish this task which has been in practice from the pre-historic era. The primitive man went on to beautify his surroundings to satisfy the burning desire for introducing grace and elegance into an ordinary object of everyday life through colour and form. He was not contented to just live comfortably; he also wished to live graciously. Man's urge to decorate his immediate surrounding has remained constant and has enchanted him through ages. In every civilization from remote ages to the present day, the art of dyeing and printing has played an important part in adding beauty to the world and makes an important contribution to fabric decoration. Dyeing and printing are the names given to the processes by which a comparatively permanent colour is imparted to certain bodies of which the most important are the textile fiber.

India has rich biodiversity and there is no doubt that the plant kingdom is a treasure house of diverse natural products. One such product from nature is the dye. With the increasing awareness

of consumers for eco textiles and need to preserve the environment has lead to the revival of the old practice of colouration with natural dyestuff. Due to the carcinogenic nature of some synthetic dyes and their intermediates, natural dyes are being looked at as an "eco solution" to the ill effects of synthetic dyes.

Printing with natural dyes contributes to the added value of textiles and also responses to the increasing demand for compatibility with the environment. Printed textiles are fabrics on which a pattern is produced subsequent to the weaving of cloth by the application of dyestuff or pigment to the surface of the fabric so as to obtain various designs. Printed fabric can be produced by a wide variety of methods like stencil printing, block-printing, screen printing, roller printing, resist printing, etc. textile printing has evolved itself over the course of last century in a very systematic and scientific way.

Natural thickening agents produced from vegetable raw materials. For textile printing, the thickeners used must be soluble in water. Guar gum, Gum Arabic, Gum tragancanth, Cereals, Gum Karaya, Locust bean gum, Alginates are natural thickening agents. The main function of thickener is to hold the dye particles in the desired place on the fabric until the transfer of dye into the fabric and its fixation are complete.

The need of the study originated due to the fact that the most of the printing is done by synthetic pigments and synthetic thickening agents that leave lots of effluents and pollute the water bodies, soil and create lots of environmental pollution. Thus natural dyes and natural thickening agents have been used in the study to print the fabric. As people are consciously concerned with their health and global environment, so they feel the necessity for using safe and eco-friendly products. This Ecofriendly trend has led to more and more processing units making the use of natural dyes, to appeal the "Green Minded" consumer. This is, therefore an earnest thought to revive natural dyes is a paramount need today. The study entitled "Impact of natural thickening agents on printing of Silk with Marigold Flower dye" was carried out with the following aims & objectives.

- Selection of raw material for the extraction of natural dye.

- Preparation of the printing paste with different natural thickening agents.

- Printing of silk fabric using Block.

- Evaluation of the printed fabric.

Methodology

- Extraction of dye from selected raw material

    Marigold flowers were selected for the study and it was collected from temples and marriage halls and dye was extracted using the standardized parameters (Agarwal, 2007).

Dye material concentration	6%
Extraction time	45ml
Dye concentration	7.5 ml

- Preparation of fabric

    Silk fabrics were soaked overnight in detergent and mild detergent respectively. Then they were washed thoroughly with water and dried in shade.

- Selection of suitable Mordants and Mordanting Techniques

  Aluminium Potassium Sulphate and Ferrous Sulphate were taken for the study due to non-toxic in nature and provide safe and ecofriendly printing. Pre-mordanting and Simultaneous mordanting techniques were used.

- Selection of Thickening agents

  Five natural thickening agents were selected for the study (i.e., Gum Tragacanth, Gum Arabic, Guar Gum, Wheatflour and Cornflour).

- Preparation of printing paste

  To attain the suitable paste, the thickening agent was poured into the dye slowly and mixed well to produce a uniform printing paste.

- Printing of Fabric Samples

  Block Printing techniques were used for printing.

- Visual Evaluation Test

  All the samples were visually evaluated on the quality of print i.e. sharpness of lines, uniformity of prints and clarity of background irrespective of mordants, mordanting techniques and printing techniques for silk fabric.

- Testing of the physical properties of the printed samples

Physical properties	ISI No.
Fabric Thickness	ISI (IS: 7702 - 1975)
Crease Recovery	ISI (IS: 4681 - 1968)
Bending Length	ISI (IS: 6490 - 1971)

- Evaluation of colorfastness of printed samples-

Colourfastness Tests	IS No.
Colorfastness to sunlight	IS: 686-1985
Colorfastness to washing	IS: 3361-1979
Colorfastness to Crocking	IS: 766 – 1988
Colorfastness to Pressing	IS: 106 – C 10.2006
Colourfastness to artificial perspiration	IS: 971 – 1983

SAMPLES PRINTED WITH GUAR GUM

FABRIC	MORDANT	BLOCK PRINTED
Silk	Aluminium Potassium Sulphate	

	Ferrous Sulphate	

SAMPLES PRINTED WITH GUM ARABIC

FABRIC	MORDANT	BLOCK PRINTED
Silk	Aluminium Potassium Sulphate	
	Ferrous Sulphate	

SAMPLES PRINTED WITH GUM TRAGACANTH

FABRIC	MORDANT	BLOCK PRINTED
Silk	Aluminium Potassium Sulphate	
	Ferrous Sulphate	

SAMPLES PRINTED WITH WHEAT FLOUR

FABRIC	MORDANT	BLOCK PRINTED
Silk	Aluminium Potassium Sulphate	
	Ferrous Sulphate	

SAMPLES PRINTED WITH CORN FLOUR

FABRIC	MORDANT	BLOCK PRINTED
Silk	Aluminium Potassium Sulphate	
	Ferrous Sulphate	

RESULTS AND DISCUSSION

- Optimized concentration of Thickening agent

The following quantities of the thickening agents were found to be optimum for preparing printing paste.

Optimized concentration of Thickening agent

Thickening agents	Concentration in a dye solution
Guar Gum	8 gm/100 ml
Gum Tragacanth	6 gm/100 ml
Gum Arabic	12 gm/100 ml
Cornflour	7 gm/100 ml
Wheatflour	7 gm/100 ml

- Results of Visual Evaluation Test

    i. Guar gum as thickening agent showed very good to excellent print quality.

    ii. Gum arabic as thickening agent showed good print quality.

    iii. Gum tragacanth as thickening agent showed moderate to good print quality.

    iv. Wheatflour as thickening agent showed good print quality.

    v. Cornflour as thickening agent showed good print quality.

- Results of Colourfastness tests

Colourfastness Tests	Thickening Agents	Colourfastness	Colour change	Staining
Colourfastness to Sunlight	Guar Gum	Excellent	no change in colour	No staining
Colourfastness to Washing	Guar Gum	Excellent	No change in colour	No staining
Colorfastness to Crocking (Dry)	Guar Gum	very good to excellent	No change in colour	No staining
(Wet)			Slight change in colour	Slight staining
Colorfastness to pressing (Dry)		very good to excellent	No change in colour	No staining
(Wet)	Guar Gum		No change in colour	Slight staining
Colourfastness to artificial perspiration (Acidic)	Guar Gum	very good to excellent	Slight change in colour	Slight staining
(Alkaline)			Slight change in colour	Slight staining

- Physical properties of silk fabric Screen printed with Marigold dye

Printed Samples with different thickening agents	Average Thickness (mm)	% increase in Thickness	Crease Recovery (^{o})		Fabric Stiffness (cm)	
			Warp	Weft	Warp	Weft
Controlled Sample	0.09		120	115	1.5	1.1
GG	0.107	18.88%	105 *	106 *	1.7	1.5
GA	0.094 *	4.44% *	103	105	1.7 *	1.4*
GT	0.101	12.22%	100	101	1.8	1.5
WF	0.102	13.33%	101	104	1.7	1.6
CF	0.112	24.44%	105 *	106 *	1.7	1.5

GG- Guar gum, GA- Gum Arabic, GT- Gum Tragacanth, WF- Wheatflour, CF- Cornflour

*   Minimum increase in thickness and bending length leads to better crease recovery and make the fabric comfortable to wear.

Conclusion

From the present study, it can be concluded that Guar gum as a thickening agent with Marigold flower extracts can be used successfully for the printing of silk fabric. The colourfastness and physical properties of the samples with all the parameters were good to excellent.

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Creation of Dupattas using Santhal Art with Hand-Painting--A Step towards Skill Development

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Abstract

"Art is long but life is short" as it expresses the feelings, thoughts, observations and act like a strong weapon which helps to deliver the message to masses. Most of the women artists promote their ideas and raising the demand of textiles through creative activity which requires special skills, results in drawing, sculpting and painting. Art always serve the traditions and the customs of religions through its various dimensions-Tribal, rock, folk and classical forms of that are now-a-days well flourished all over the world. The present study "Designing and Creation of dupattas using santhal art with hand-painting focuses to serve and preserve the tribal traditions of santhal people as well as it helps the women to be get empowered and succeed in their desired field. This type study shows the skill worthy contribution of a female artist towards the art. This study includes the collection of santhal scenes from santhal art and using it artistically for the creation of dupattas and later, the collected santhal scenes were painted in abstract and border designs. This highlights the aims of the study, how to create a new thing with some creativity and interest that can help the women to earn for their livelihood

Keywords: *Creative, Skils, Designing, Painting, Tribal art.*

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Introduction

India has always been known for its traditional culture worldwide. The creativeness of this tradition is continued from generation to generation in all dimensions; Tribal, rock, folk and classical forms of art. Nowadays skills and creativity has a huge scope in our day to day lives whereas, it can be put to anything in order to create or to produce something new from the old one. The tribes have always being an influencing and inspiring factor for the upcoming generations to serve their livelihood and dynamic patterns of life in different ways. For example: textile decorations and interior decorations in clothing and item respectively.

In today's scenario clothing is a necessity for all. It always reflects an individual culture and personality. People are very conscious of clothing and for enhancing their personal appearance through various styles and designs. A dupatta part of women's clothing is usually taken for covering head which is a custom in India. It is also worn over the shoulders sometimes. It serves respect as well as a decorative part of the entire attire. The study shows how a dupatta can be designed from the collected scenes and by placing those collected scenes in abstract and border designs of a particular Santhal art- a tribal art, the tribes of Bengal-Bihar region.

The idea of making dupatta from the scenes of Santhal art is a great way to preserve the rich tribal traditions of India, when the world is moving towards modernisation. The study aims to show that how creative skills help women to gain knowledge. Furthermore, how it can be converted into an income generating textile product which results in skill development.

The main aim of this study was to promote women skills by making hand-painted dupattas from the collected scenes of Santhal art, which helps to revitalize the tribal traditions of India. This type of study will serve creativity and skills of women by using santhal tribal art. It would definitely serve many purposes and ideas to the women painters, designers and to the young generation that how we can create from our old traditions through various techniques of printing and painting into the new trends of clothing.

Methodology

The present study, "Designing and creation of dupattas using santhal art with hand-painting" was undertaken with the aims to serve women skills and to explore the tribal arts that could be converted into clothing to create something new and useful with a little bit designing and creativity.

The study involved the following steps:-

• Promoting skills- To give women an economic opportunity to earn for their livelihood.

• Study the history of santhal art and collection of scenes:- Books and websites were reviewed to study the history and the collection of scenes of santhal art. Research work by referring various libraries (A.C. Joshi library of Panjab University, library of NIFT (National Institute of Fashion Technology), Central state library, Sector-17 Chandigarh and Govt. Home Science College, sector-10, Chandigarh.

• A market survey was conducted for the selection of the suitable article for the Santhal art by analyzing the collected data (dupatta) was finalized as an article.

• Sourcing and evaluation of the fabric was done. According to the judges preference paper and tussar silk were selected for dupattas.

• Evaluation of the 8 background colours for dupattas was done and the top four pantone colours- frosted almond, lettuce green, island paradise, cherry blossom were selected by judges.

• Sketching and evaluation of designs: 10 abstract and 10 border categories were designed on paper. The top two preferred designs from each category were decided to be developed on dupattas.

• Development and creation of designs on dupattas was done by using the collected scenes of Santhal art and by placing the scenes into the selected designs.

Results and discussion

The purpose of results and discussion is to present the result in organized tables and figures for analysis. The main objective of the study "Designing and creation of dupattas use santhal art with hand-painting" is to encourage the women to show their skills and to raise the demand such creativeness towards textile products.

The results of the study are presented as follow:-

1. **Study of Santhal art:** The history began from the 18th Centuary when santhals were settling down in Chotanagpur and in the neighbouring districts of Midnapore and Birbhum of India. According to Skrefsrud (1887) opinion Santhals entered from the north-west and first settled in Punjab and then made their own way to Chotanagar plateau.

   At the present time, Santhals have a wide spread distribution in the north-east area of India and mainly found in the states of West-Bengal, Bihar, Jharkhand, Orissa and Assam. Santhal were not allied to follow a fixed occupation, probably they were hunters before becoming agriculturists.

2. **Collection of scenes from Santhal art:** 20 collected scenes were categorized based on the kind of motifs.

   1. Dancing scenes:

   2. Wedding scenes:

   3. Crop- cultivation scenes:

4. Hunting and Gathering scenes:

3. **Selection of the most suitable art for Santhal art:** Articles namely- Saree, Dupatta, Kurti, Bedsheet, Cushion cover, Scarf, File folder, Wall panels, Table cloth were choosen for the evaluation, according to judges preference (dupatta) got the first rank as for the final article of santhal art.

4. **Sourcing and evaluation of the most suitable fabric for dupatta:** Sourcing and evaluation was done to find the suitable fabric for dupatta and these were (Muslin, Paper silk, Tussar silk, Raw silk, Chanderi, Kota-Doria) with same motif was painted on all six fabrics. From which Paper and Tussar silk were selected as the final fabrics as per the rankings.

Muslin	Paper silk	Tussar silk
Raw silk	Chanderi	Kota- doria
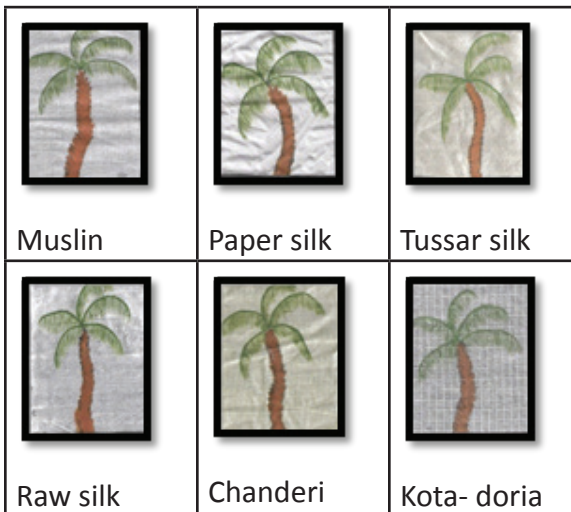
5. **Evaluation of background colours on dupattas:** For the background colours on dupattas, eight pantone shades of 2018 were selected and then these dyed shades were evaluated, namely as Frosted almond, Orchid hush, Lettuce green, Island paradise, Citrus, Peach bud, Peach Beidge and Cherry blossom with same human figure of santhal art was painted on all samples. From which the top four background colours were taken for further developing namely as- sample 1,3,4,8 according to the evaluation.

Sample. 1	Sample. 2	Sample. 3	Sample. 4

Sample. 5	Sample. 6	Sample. 7	Sample. 8
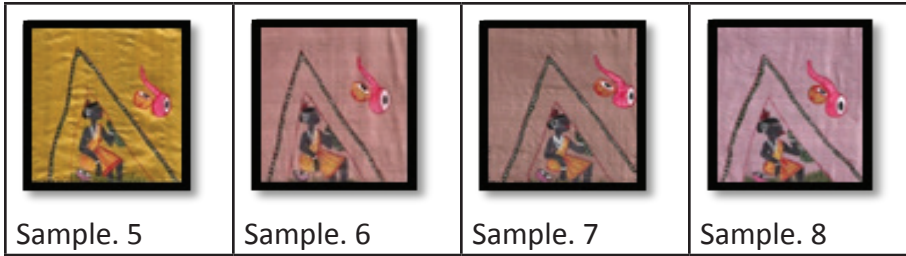
6. **Development of designs:**

Figure No.1 selection of the most preferred designs from (placement -1) abstract design-
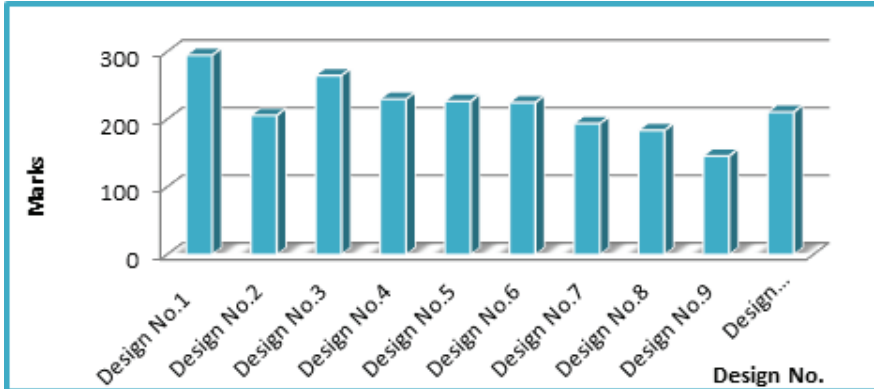
Firstly, the designs of dupattas were made on ivory sheet by taking a standard size (110"X 44") which was reduced using 1/10 reduction scale. and total 20 designs were made from two categories, two categories were selected (abstract and border designs) 10 designs were made from each category. Figure no. 1 shows that design no.1 & 3 got highest ranks and selected for further development according to judges preference from placement-1(abstract designs).

Figure No. 2 selection of most preferred designs from placement-2 (border designs)
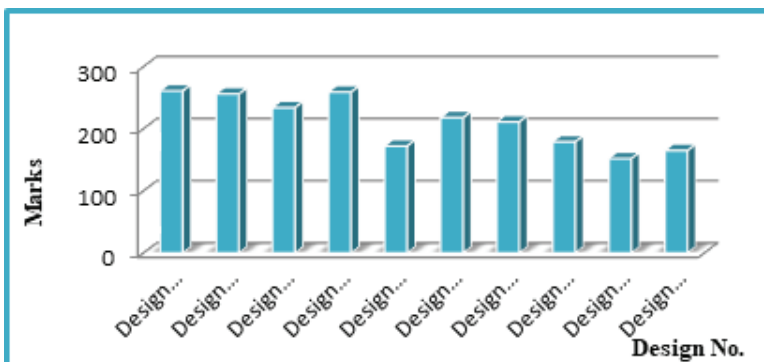
Figure no.2 shows that design no. 1& 4 got highest ranks and selected for development from placement-2 (border designs). Designs no.4th to 10th ranks were in decreasing order bagged by design no. 3, 6, 7, 8, 5, 10, 9.

7. **Designing and creation of designs on dupattas-** Top four designs were selected, design no.1 was developed first, design no.3 was developed second from category-1 (abstract designs) and design no.11 was developed third and design no. 14 was developed fourth from category-2 (border designs) on most preferred background colors for dupattas.

1. Article	2. Article

8. DEVELOPED ARTICLES

3. Article	4. Article

9. IDENTIFYING THE BUYERS/TAKERS OF THE DUPATTAS

As a result of consumer and market survey, it was possible to identify the buyers/takers of the dupattas. Dupattas were highly appreciable and commendable according to the consumers preference or willingness to buy. They were identified as follows:-

- The prospective shops were those that specialized in hand-painted articles.

- High-end stores, affluent customers tended to show more interest in buying these dupattas.

consumer preference of dupattas
(ranked high to low)
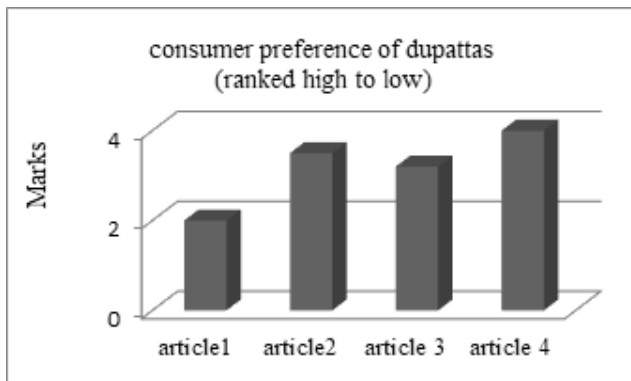
Conclusion

The present study "Designing and creation of dupatta using Santhal art with hand-painting" shows the ability of a woman to idealize and to present an object which conveys the experience of past generation through the collaboration of emotions and the desired feelings. The study has proved to be a successful endeavour both from the consumers as well as the market view. The study aims women to adapt studies like this which will help them to show their hidden skills and this is how it helps the other designers especially women as well as the painters to create something new and how the tribal art can be bring into clothing and textiles with little creativity.

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The Impact of Internet Addiction on the Overall Well-Being of Adolescents

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Abstract

Adolescence is the most unstructured and volatile stage in which youngsters seeks distinct identities, emotional and social interactions, academic careers and entertainment opportunities. Furthermore, the easy accessibility of the internet, psychological and environmental variables in the lives of adolescents make them disproportionately susceptible to internet addiction. Young people visiting hospitals due to internet addiction have doubled in the last two years. Keeping in view the above consideration, the study was planned with the objective of studying the prevalence of this clinical disorder, symptoms and health consequences due to extensive use of the internet. For this purpose, various researches and literature from the last 20 years were reviewed. The review of the literature suggested that the regular interaction of humans with the internet is found to have adverse consequences on their health, behaviors, and emotions developing severe behavioural and psychiatric problems. Lack of parental supervision and inconsistencies in discipline also contribute to this disorder. There is a need to create an awakening to the problems arising due to internet addiction to take immediate preventive actions to foster the public on healthy use of the internet.

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Introduction

Adolescence is a transitional state which constitutes the developmental changes from childhood to adulthood. It is a period in which a child transits from the state of dependent behaviour to independent behaviour and this transition is considered as one of the most important attributes of the personality of an individual. Adolescence is a developmental, sensitive and formative time. It is a vital period for the development of emotional and social patterns crucial for mental health. These consist of embracing healthy behaviour, developing interpersonal and rational skills and learning to handle stress and emotions. It is also the most unstructured and volatile stage in which they seek and experience distinct identities, emotional and social interactions, academic careers and entertainment opportunities. Furthermore, the accessibility of the internet on mobile devices and laptops/computers makes it very easy for them to access the internet and thus there is a possibility of addiction to the internet. The onset of wifi technology, 4G smartphones, unlimited data at cheaper rates and enthusiasm of Indian government such as Bharat-Net heightened the use ofthe internet by the general population. A common report by IBM and Kalaari approximated that the figure of internet users will be greater than 850 million by 2022 which is 450 million presently. The evident consequence of such initiatives is an accelerated

hike in internet users in India. While this dynamism is excellent for the commercial and social benefits of the country, there are other imputations too from the aspects of public health. Principally India has the maximum number of internet users in the world, with approximately 699 million users. When compared to the general population, many researchers showed adolescents to be the leaden users and early adopters of the internet. UNICEF approximated that one-third of users of the internet universally are adolescents. Young (1998) defined internet addiction as an impulse control disorder. He added that excessive and dependent use of the internet results in declined societal, intellectual and professional activeness of humans. Irresistible internet use can be described as compelling behaviour by its users to avoid the day-to-day struggles and holiness of his surroundings by getting hooked on the internet. A coercive need to use the internet is seen in people spending most of their time on the internet. The uncontrolled amount of time spent by people on social websites established the debate on internet addiction as a clinical disorder (Columbia Broadcasting System 2008). Recently, Internet Gaming Disorder was recognized as a mental health condition by the World Health Organization. The regular interaction of humans with the internet is found to have adverse consequences on the behaviours and emotions of human beings.It was also termed as "electronic opium" in China.

The use of the internet may be self-enhancing and improving for some, relying upon the personality traits of an individual based on his or her body image, mental health and self-concept. Gradually, the individual may get introduced to a definite response, then to a chronic response, and finally to a kind of obsessive response. At this stage, not using the internet becomes painful hence discovering anxiety, depression, stress and other medical and pathological disorders (Chouhan & Golwalkar 2008). Keeping insight that an approximated 850 million people may be using the internet (International Business Machines Corporation 2018) and as one-third of the internet users are youngsters, there is an immediate need to investigate the communal health imputations of unhealthy and addictive use of internet among young people.

Behavioural changes

Meenakshi and Dhaliwal (2016) inferred that the internet and social websites adversely affect the living styles, mental and physical health, safety, peace and privacy of the youngsters. It was also found that negative behavioural changes in youngsters were associated with excessive use of these sites. Numerous studies have explained that playing aggressive and violent video games by using the internet tends to increase aggression and hostility. Many studies concluded that playing video games that contain violent content on the internet leads to an increase in negative learning and affects the behavior. The impact of video gaming and the internet on psychological health in regard to aggression was investigated by Sharma and Garg (2011). The findings of the study demonstrated that violent games on the internet result in immediate aggressive thoughts and behaviour which adversely affect psychological health.

Physical and Social consequences

Rosan and Larry (2015) examined the addictive nature of social networking sites. An increased risk for Carpal Tunnel Syndrome and eye and back strain was noticed among the addicts of networking sites. The physical symptoms also includea weakened immune system owing to insufficient sleep and lack of physical activities and exercise. Arora (2014) inferred that most of the students agreed upon the fact that when they start using any social site before going to sleep, it tends to disrupt the sleeping behavior which causes deprived sleep and makes them feel dizzy

during morning hours. Nowadays youngsters allocate most of their time on these social websites reducing Real Human Contact. This weakens their communication and social skills. Study patterns have changed resulting in no longer use of making notes and using cut and paste technologies without marking any references to the study material derived from libraries. These types of habits have a bad consequence on their performance level. This decreases their research and learning capabilities.

Brain function consequences

Zhou *et al* (2011) indicated a lower volume of gray matter in the brains of internet addicts resulting in structural changes of their brains. Various researchers confirmed similar results in their research. Youngsters who were addicted had a reduced quantity of gray matter in the left orbitofrontal cortex, left prefrontal medial cortex, bilateral insula, left rear cingulate cortex, and left the additional motor area.

Psychological consequences

The probability of depressive manifestations is 2.5 times more prevalent in moderate to severe internet addicts than non-addicts. Ho *et al* (2014) combined different researches related to internet addiction. Findings gave direct evidence of an alliance between uncontrolled internet use and anxiety, alcohol abuse, desolation, attention deficit hyperactivity disorder (ADHD) and depression. Carli *et al* (2011) marked that nervousness and anxiety are proportionally related to pathological use of the internet.Further, the latest literature suggested that excessive use of the internet may also lead to psychological and mental health issues, like depression, sleeplessness, socially phobic and attention deficit and hyperactivity (Gundogar*et al* 2012). An article in The New Indian Express (2018) reported the impact of porn addiction on children and youngsters. It gave the findings that from an adolescent to a senior citizen anybody can get introduced to pornographic content free on the internet. It was revealed that not only boys but 1 in 3 girls were also vulnerable to such content. The youngsters are becoming addicted to this obscene content which is leading to many mental health problems and viewers eventually become depressed, restless and even end up hurting themselves.

Conclusion

In the evolving era, youngsters have been subjected to the Internet more than ever before. Evidence leads to the conclusion that unskilled or excessive use of the Internet can have a negative effect on the physical, psychological and social dimensions, as well as on certain elements of adolescent's material and developmental well-being. The Troubles include lack of attention or concentration, difficulties in processing real-time information, anxiety, and mood swings. It leads to uneven sleeping patterns, which may trigger other health issues. These types of studies are vital in helping policy inventors to comprehend the seriousness of the situation and also the immediate need of taking preventive actions to foster the public on healthy use of the internet. Many of the issues of Problematic Internet use are due to lack of parental supervision and discipline inconsistencies. Parents should, therefore, oversee the activities of adolescents and should also participate with them in other pleasant activities. They should also encourage their kids to improve their social interaction in the actual globe rather than spend time in the virtual world.

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New Product Development-
A Step towards Skill Development
and Capacity Building in Home Science

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Abstract

Product development has been a major activity in the food industry and gradually it has developed as a strategic business area and an advance technology. It involves more than just creating the perfect recipe. Companies must plan extensively, work hard and research for an extended period of time in order to produce new food products. For a new product development knowledge of raw materials, processing, products qualities, consumer or product reactions, marketing and the general environment is needed. The fruit Prunus Persica are found in abundance throughout the mid hill Himalayan regions but, no attempt has been made to utilize the fruit for developing and processing value added product. The study, therefore was conducted to develop value added product from Prunus Persica and evaluate their quality. The Prunus Persica was found to be good source of vitamin C and phenols. The recipe and method of preparation of whole fruit jam has been standardized. The study revealed that wild peach can be utilized successfully for jam preparation with good chemical and sensory attributes.

Keywords: *Product development, Prunus Persica, Value product, Standardized, Jam.*

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Introduction

Himachal Pradesh is a predominately a horticulture state of India specially known for apples. The productivity of horticulture crops/fruits is largely influenced by geographical and environmental diversity prevailing in different zones of Himachal Pradesh. In addition to major fruits, the various underutilized fruits are widely grown in different zones of Himachal Pradesh, which are being used by the local inhabitant. These fruits were an important source of food for mankind before dawn of civilization and domestication of present day fruits. Cavemen in forests also depended on these fruits and passed on valuable information on utility and choice of wild species of fruits from generation to generation. These fruits are growing throughout the Himalayas and contributed directly to cultural heritage of India. Even today, these fruits are eaten in plenty by local people, as they are commonly available in abundance in their habitats. Underutilized fruits are those which are neither cultivated in an organized farming system nor processed by established commercial processing methods. These crops have many advantages in terms of easiness to grow, hardy in nature and production of good crop even under adverse conditions. Most of these fruits are

rich sources of vitamins, minerals and other nutrients. A large proportion of rural population depends on locally available fruits to meet their dietary requirement. Most of these fruits have an exotic flavour and attractive colour. These fruit crops have their own history of consumption. Local people are well aware of their nutritional and medicinal properties. The popularity of these fruits varies from fruit to fruit and locality to locality which can be enhanced to a greater extent through publicity. The utilization of these fruits not only enhance the components of our food basket but also helpful in increasing the beneficial effect of such fruits.

The fruit has tremendous medicinal value and is used in curing various diseases/disorders. So, there is a great scope for the processed product from the fruit not only because of their exotic flavor but also due to their nutraceutical importance and therapeutic value. Processing of underutilized fruit into value added product results in a wide variety of exotically flavored product with better nutritional and sensory qualities that may also unveil new markets for export.

Materials and methods

The methodology section describes actions to be taken to investigate a research problem and mode or method of collecting information for any study undertaken. The research methodology and procedures to achieve the foregoing objectives have been described under the following heads:

1. Standardization/preparation/development/formulation of value added product.
2. Determination of economics of prepared product.
   1. Preparation/ formulation/development of value added product

      The value added product jam was prepared from the selected wild peach. The prepared product was analyzed for microbiological analysis, sensory scores at fresh, 3 and 6 months for shelf life.

2. Quality evaluation of value added product

2.1 Organoleptic evaluation

Sensory evaluation depends upon the responses by different sense organs as eyes, taste buds of tongue and olfactory lobes of the nostrils. The prepared product was evaluated for sensory scores at fresh, quarterly, half yearly of storage interval. The 9-point Hedonic scale **(Larmond,1977)** was employed for the sensory evaluation of prepared product.

2.2 Microbiological analysis (Gould, 1978)

The product prepared from the selected underutilized fruit with and without blending was analyzed for microbiological analysis for different storage intervals at fresh, quarterly, half-yearly. The standard plate count (SPC) was recorded. Results were reported as log CFU × dilution /ml of the solution.

3. Economics of the prepared product.

The cost of production is an important parameter for the assessment of acceptability of the new product to be consumed/ market. Cost of the product was determined by taking into consideration the cost of raw materials and overhead charges for the preparation of different value added product.

Results and discussion

Fruit Prunus Persica was used for the preparation of value added product. The prepared product was evaluated for quality characteristics and organoleptic evaluation in relation to different storage intervals.

1. Quality evaluation of jam

Table 1 represents effect of blending and storage on nutritional parameters of wild peach jam blended with cultivated peach in varying proportions.

Table 1 Effect of blending and storage on nutritional parameters of wild peach based jam

Parameters	Blends WP:CP	Storage(months)			
		Fresh	3	6	Mean
TSS(^{o}B)	100:00	68.03	68.03	68.27	68.11
50:50 Mean	75:25	68.07	68.13	68.43	68.21
	68.33	68.33	68.57	68.41	
	68.14	68.16	68.42		
pH	100:00	3.00	2.96	2.93	2.96
50:50 Mean	75:25	3.08	3.02	2.98	3.02
	3.17	3.13	3.07	3.12	
	3.08	3.03	2.99		
Acidity (% Malic acid)	100:00	1.21	1.25	1.29	1.25
50:50 Mean	75:25	1.13	1.19	1.24	1.18
	1.07	1.13	1.21	1.13	
	1.13	1.19	1.24		
Ascorbic acid (mg/100 g)	100:00	2.32	2.00	1.73	2.01
50:50 Mean	75:25	3.45	3.16	2.61	3.07
	5.97	5.50	4.85	5.44	
	3.91	3.55	3.06		
Reducing sugars (%)	100:00	20.26	21.06	22.45	21.2
50:50 Mean	75:25	20.71	21.67	22.85	21.74
	21.30	22.05	23.25	22.2	
	20.75	21.59	22.85		
Total sugars (%)	100:00	60.51	58.61	55.98	58.36

50:50 Mean	75:25	61.44	60.50	57.71	59.88
	63.43	61.47	60.51	61.80	
	61.79	60.19	58.0		
Non-reducing sugars (%)	100:00	38.22	35.67	31.84	35.24
50:50 Mean	75:25	38.75	36.8	35.51	37.02
	40.49	37.35	35.37	37.73	
	39.15	36.60	34.24		

2. Organoleptic evaluation

Data with respect to effect of blending and storage on organoleptic scores of wild peach jam blended with cultivated peach are given in table 2.

Table 2 Effect of blending and storage on organoleptic scores (9 point Hedonic Scale) of wild peach based jam

Parameters	Blends (WP:CP)	Storage(months)			
		fresh	3	6	Mean
Colour	100:00	8.00	8.00	8.00	8.00
	75:25	8.00	8.00	8.00	8.00
	50:50	8.20	8.20	8.00	8.1
	Mean	8.06	8.06	8	
Taste	100:00	7.20	7.00	6.60	6.9
	75:25	7.50	7.10	6.90	7.1
	50:50	8.00	7.60	7.10	7.5
	Mean	7.56	7.23	6.86	
Flavour	100:00	6.90	6.70	6.30	6.63
	75:25	7.60	7.20	6.80	7.2
	50:50	7.90	7.50	7.20	7.5
	Mean	7.46	7.13	6.76	
Consistency	100:00	8.80	8.80	8.70	8.76
	75:25	8.60	8.60	8.70	8.63
	50:50	8.60	8.60	8.50	8.53
	Mean	8.66	8.66	8.63	
Overall Acceptability	100:00	7.72	7.62	7.40	7.58
	75:25	7.92	7.80	7.60	7.77
	50:50	8.17	8.00	7.70	7.95
	Mean	7.93	7.80	7.56	

3. Microbial count of Jam- Total bacterial count (log CFU/ml) in product is as follows-

Product	Storage(months)		
	Fresh	3	6
Jam	-	-	1.02

4. Economics of the product- The economics of the prepared product viz. jam is as follows-

Product	Cost per product/kg
Jam	25.34

Conclusion

The present study entitled "new product development- a step towards skill development and capacity building in Home Science" was undertaken as research endeavor to explore the post harvest potential of underutilized fruit for the development of value added product and also to test quality characteristics of underutilized fruit viz. Prunus Persica. By looking at its noteworthy remedial affluence an attempt has been made to develop various develop value added product from wild peach. The prepared product was assessed for their storage stability with respect to nutritional parameters, microbiological analysis at different storage intervals. Conventional knowledge of Indian jam preparation was successfully applied with required modifications for the preparation of good quality Himalayan Prunus Persica jam. Thus skill development and capacity building as a part of higher education provides a successful launch pad for students to explore their research potentials and engage in vocational and income generating activities.

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Dynamics of Innovative Food Processing for Nurturing Entrepreneurship

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Abstract

Skilled command over the core area is utmost essential for laying the foundation of any venture. Innovation in the processing of the food in order to provide the nutritious and functional food is the need of the globe. Moreover, in the field of entrepreneurship, the bridge between the academic interest and practical field has occupied the profound attention. Among the technologies, the emerging technique of cold preservation with the minimal loses of nutritive compounds is in high demand. In addition, the food industry is interested in the novel food products processed with innovative processing so that it can result in economical and improved quality products. Thereby, in the coming 21st century, the practical entrepreneurial approaches are highly needed in order to develop the potential strategies to achieve the desired success.

Keywords: *Innovation, Food processing, Novel food product, Entrepreneurial approaches*

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Introduction

Consumption of fruit or vegetable-based nutrient enriched processed products is an instant medium of getting intake of natural bioactive compounds and thereby, they render health benefit properties. The type of processing has great influence on the quality of functional food products. Thermal processing of food products has been the commonly used processing method as it confers extended shelf-life and stability to food products but deteriorates their quality in terms of vitamin content, polyphenol content, pH and color. Therefore, the need of innovative food processing techniques is on the high demand and the entrepreneurship skills are potentially required in order to acquire the global acknowledgement for the same.

The critical focus of the food processing industries is on innovative and emerging food technologies that can deliver consumer accepted products. Therefore, the challenges are consumer acceptance, purchasing power, and novelty-based healthy food product. The type of processing and the type of nutrients present   affect the purchasing choices of the consumers.

Among the food technologies/treatments that evoked the greatest concern were genetic engineering (rank= 1), the addition of bacteriocins, irradiation, and pulsed X-rays. Whereas, lesser concern were such technologies as UV-light, pulsed electric fields, and oscillating magnetic fields. Other innovative and emerging technologies evoked still lower concern, e.g. hydrostatic pressure, radiofrequency heating and electrical resistance heating, while the techniques with least concern are traditional processes of "thermal energy" and "heat pasteurization".

Approaches for entrepreneurial success in the area of food science

- The choices of the processed food product vary from country to country as per their geographical area. Therefore, for developing the entrepreneurial criteria, the location approach in terms of geographical area also matters. Therefore, the location can be stated as nearness and accessibility of the firm to raw materials, infrastructures, how busy the location is? How accessible the location is to the customers etc? Furthermore, it also includes the building of industrial site or pack, industrial estate etc in order to facilitate entrepreneurial development and equally improve the performance of the entrepreneurs. Therefore, location entrepreneurial approach means the use of location to develop and nurture entrepreneurship development.

- The role of youth is the key focus for sustaining the venture. It is imperative to realize that youths are the future generation and proper youth development leads to better nation in the future. However, so far, a critical observation would indicate that there is no proper or concrete evidence on how to develop the entrepreneurial skills and knowhow among the youths. Therefore, with the strong bridge of academic and practical-based interest and knowledge we can result in successful ventures and thereby, can play critical role

- Socio-cultural approach also influences the development of skilled entrepreneurship in the area of food processing. It further refers to the spirit of openness, conformity, trust, authenticity, proactively, creativity, innovation, collaboration, experimentation and conformity. The socio-cultural components of the general environment includes; demographic factors, general behavior, attitudes and as well as the beliefs of the people in the society.

- Effective communication: Lack of knowledge among consumers regarding innovative and emerging food technologies can serve as a major impediment to their acceptance. Thus, effective communication regarding details of the technologies and their benefits become essential for successful marketing of these products.

Growing industrialization of food production, globalization and trade of food supply make food safety and extended shelf-life products perhaps the most important issues for food and equipment manufacturers, retailers and consumers around the globe. More than two decades ago, novel food processing technologies that were based on high tech or cutting edge advances started to emerge to address productivity issues, extending product shelf life without affecting the nutritional content, organoleptic attributes and product specifications.

Innovative techniques of food processing

- *High pressure processing:* The emergence of HPP involving the application of high pressure becomes the potential technique that can induce new aspects in food applications. . It effectively inactivates vegetative bacteria, yeast and moulds using pressures up to 600 MPa at ambient temperature and can inactivate spores when combined with high temperature (High Pressure Thermal Processing (HPTP)). HPP retains most of the sensory and nutritional quality of a liquid or solid, or chilled products.

- *Atmospheric cold plasma processing:* Atmospheric cold plasma (ACP) is an emerging technology for food processing. ACP has been documented for its biocidal effect on microflora. ACP processing is also known to render stimulating effect on the bioactive compounds of food items.

- *Ultraviolet light:* It produces a non-ionizing radiation with germicidal properties at wavelengths in the range of 200– 280 nm. It can be used for surface treatment and as a non-thermal alternative for fluid foods and ingredients.

- *Infrared heating:* The heating of materials by electromagnetic radiation having a wavelength of 1.3 to 4.0 μm (infrared radiation). It is based on the ability of materials to absorb a certain part of the spectrum of such radiation. Deep or superficial heating of the irradiated body, as well as local drying without heating the entire object, may be accomplished with appropriate selection of the emission spectrum of infrared radiation.

- *Electrolysed water:* It is known as electrolysed oxidising water, electro-activated water or electro-chemically activated water solution) which is produced by electrolysing a weak salt solution. This produces sodium hypochlorite, a disinfectant. Acidic electrolysed water also exists and can be more efficient. This water can be used to clean food preparation surfaces or decontaminate fruit and vegetables.

- *Ultrasound processing:* It is a versatile technique using high power sound waves at low frequency (about 20 kHz). Its various uses include emulsification, homogenisation, viscosity and texture modification, crystallisation seeding, microbial decontamination, cleaning and extraction. It is mainly used in fluids and fluids containing particles.

Discussion

The technologies with the most commercial importance and socio-economic approach need to be converted to a potential food product that can cater the food needs of the masses over the globe. The technologies can render the optimum shelf-life as per the treatment, minimum degradation of the vital nutrients; sustain the sensory quality in terms of odor, flavor, appearance and taste. In addition, they can claim for cost-effective business and safety of the food product. Furthermore, the potential implementation of the technologies of interest can be assessed for different industries: meat and poultry, dairy, fresh produces (including fruits and vegetables), drinks and beverages and fish and sea products. These categories comprise both non-ready-to-eat and prepared meals where they apply.

Conclusion

There is a strong need for developing food industries by adopting the food technologies that involve minimal processing and which can improve the safety issues of the food product as well as render shelf-life to it. We can only build skilled entrepreneurs when they are trained well with the cutting edge fields. The field of home science can create successful entrepreneurs with possessing the capability of establishing fruitful ventures in the area of food science and nutrition.

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Information, Communication and Technology - Technological Innovation in Health Sector

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Abstract

Information Communication Technology (ICT) has an important role to play in changing and modernizing educational systems and ways of learning. IT can enhance the quality of education in several ways, by increasing learner motivation and engagement, by facilitating the acquisition of basic skills, and by enhancing teacher training. In recent years there has been increasing interest in, and use of, innovative information and communication technology in the delivery of health and nutrition programmes. Examples of this technology include mobile phones, tablets, internet, email, global positioning systems (GPS) etc. and their use has coined the terms electronic health (eHealth) and mobile health (mHealth).Various ICT interventions involved in health sector such as electronic learning, health information systems and software, surveys and surveillance/data collection tools, mobile applications, cash and voucher transfers. It incorporates electronic technologies and techniques used to manage information and knowledge, including information-handling tools used to produce, store, process, distribute and exchange information. Also can generate important contributions to public health, from education to surveillance. It enabled learning in many rural villages. It has also developed educational institutes in the world. It has enabled children to learn with more curiosity. It has also developed and made education easy for students and for teachers to teach. A number of ICTs have been used in education and training such as decision support, single and multiple interaction systems, IFFCO Kisan Sanchar Ltd., Baby Center India and direct contribution to agricultural production. It was concluded that ICT is an obvious choice to contribute information timely. The gap between the agricultural researchers and farmers can be reduced that will lead to highly developed agriculture, contributing to community health and nutrition status.

Keywords: ICT, eHealth, Technology, Training, Gadgets.

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Introduction

Technology is not inherently good or bad, the outcome depends on how it is used. It is essential for human development. From the printing press to the computer, people have devised tools for facilitating learning and communication. Information Communication Technology (ICT) plays a major role in human activities in everyday living in order to cope and adopt to the demand of the environment. As it could be seen ICT is changing every aspect of human life, trade, manufacturing communications service, culture, entertainment, education, research, defense and global security, holds out the opportunity to expand access to quality education and improve the management of education. Computer mediate communication is increasingly becoming the fact of everyday life

particularly in the developed and some developing countries. It is quite over wheeling to stress that ICT gadgets simplify methods and strategies of acquisition of knowledge. It is a diverse set of technological tools and resources used to communicate, and manage information [1].

Role of Information and communications technology- It is accepted that telecommunication is a basic infrastructure necessary for economic and social development of a country. Information and communications technology may be described as the support of the central nervous system of complex societies, transmitting and processing information and commands among the various parts of such societies. Internet also plays a fundamental function in their role. In recent years there has been increasing interest in, and use of, innovative information and communication technology in the delivery of health and nutrition programmes. Examples of this technology include mobile phones, tablets, internet, email, global positioning systems (GPS) etc. and their use has coined the terms electronic health (eHealth) and mobile health (mHealth).

- eHealth is the use of ICT to provide health services and information, such as electronic health information systems or a digital map of all health facilities in a particular area.

- mHealth is a subset of this, which focuses on many of the same services, but accessed primarily on mobile devices, such as tablets, smartphones or basic mobile phones.

- The World Health Organisation (WHO) defines mHealth as "medical and public health practice supported by mobile devices, such as mobile phones, patient monitoring devices, personal digital assistants (PDAs), and other wireless devices".

The smartphone can make you a healthier- Its use is not texting, emailing and playing games. It's actually a supercomputer with the power to help to change behavior and become fitter, healthier and happier. There are several ways to monitor, motivate and influence healthy outcomes. **Cognitive behavior therapy (**psychotherapeutic approach to help patients to understand the thoughts and feelings that influence behaviours), reminders, social networks,

gamification, behavioural economics, behavioural science, monitoring, self-monitoring, feedback, biofeedback, information/dashboards and hypnosis[2]. **ICT tools include** Printed media (Newspaper, books, journal magazines), Computers, Telephones, Communication Network, E-mail, Electronic media (Radio, television, videos films), Telex, Satellite, Internet.

Types of ICT interventions in health sector

1. **Electronic learning (e-learning):** Educational technology electronically supports teaching or learning and encompasses a number of electronic formats (videos, CDs and computer and web-based programmes). They are easy to use, interactive whiteboard for easy collaboration, audio-video-text communication, unlimited attendees, recording and playback.

2. **Health information systems and software:** One of the challenges in managing health and nutritional programme is that of generating complete, timely and accurate reporting from the sites where the programme is being implemented. Manual method of data collection and compilation, used traditionally, is very tedious and inefficient and there is greater possibility of yielding inaccurate data. Health Management Information Systems (HMIS) is a tool which is being used in Indiafor collection, validation, analysis and presentation of aggregate and transactional datafor integrated health information management activities.

   - **Health:** Clinical studies assist in the understanding of medical terminology, clinical procedures and database processes.

- **Management:** Their principles enhanced by finance, law and planning which help to administer the health care enterprise.

- **Information systems:** The ability to analyze systems and to design and implement advanced computer applications make the transfer of patient information efficient and effective.

3. **Surveys and surveillance/data collection tools:** Effective nutrition monitoring systems are crucial for governments and other agencies to capture under-nutrition. However, it is expensive and often non-existent in resource-poor countries. Recently there has been increasing enthusiasm for the potential of ICT to facilitate faster and less work-intensive nutrition monitoring through quicker data collection, transfer and analysis, which can inform decision-making in a timely manner.ICT tools such as Magpi (formerly Episurveyor) and mFieldwork, organizations in Somalia, India, and Nigeria which have been deployed to assist in the area of information gathering.

   Rapid SMS is also an effective type of surveillance tool. In 2009, UNICEF Malawi deployed RapidSMS to address serious constraints within the national Integrated Nutrition and Food Security Surveillance (INFSS) System, which was facing slow data transmission, incomplete and poor quality data sets, high operational costs.

4. **Mobile applications:** Most rapidly expanding form of ICT which are really in practice. The rapid expansion of mobile phones and networks with lower prices for handsets, airtime and data packages in low and middle income countries to strengthen delivery of their health programmes.

   Mobile applications for community and facility-based health workers

   - **mHealth technology:** support health workers in the treatment and follow up of individual malnourished children at both health centre and community level, ranging from SMS technology to more complicated applications.

   - IMCI is a standardized strategy developed by WHO and UNICEF to treat sick children up to five years of age, thereby reducing childhood mortality and morbidity.

   Information for health workers: "mHealth Education" (mHealthEd) is an emerging new set of applications of mobile devices to the training, testing, support and supervision of healthcare workers, as well as applications that provide health information to individuals. **Remote mentoring:**Reminders about guidelines were sent via SMS to health workers on treatment of malaria showed an improvement of 31% immediately post-intervention and 29% six months later.

   Other initiatives providing mobile education tools specifically for use on phones

   - **Digital Campus** provides standalone health applications regarding HEAT (Health Education and Training) network. They currently developed seven modules including maternal health, nutrition and immunization and supporting Johns Hopkins University Centre for several communications programme. **JHU CCP** have been implementing Project Ujjwal for the last few years to support improved family planning and reproductive health services in India, focusing on the Bihar and Odissaregions and created slightly customized version of the OppiaMobile app (GyanJyoti App), to upload videos for counseling sessions.

- **Manthan Project's mSakhi tool** was developed in 2013, used by Accredited Social Health Activists (ASHAs) in India, to provide Maternal Child Health services to their community. Mobile Academy, developed by BBC Media Action to expand and refresh CHWs' knowledge of life-saving health behaviours and to enhance their communication skills.

- **The Mobile Alliance for Maternal Action (MAMA):** launched in May 2011 by founding partners USAID and Johnson & Johnson. It is a public-private partnership began in Bangladesh, South Africa and India, supporting United Nations Foundation. BabyCenter and the mHealthcome under this.

5. **Cash and voucher transfer:** The Better than Cash Alliance, launched in 2012 by WFP, helping world's most indigent populations and the organizations to delivers assistance in the form of cash and electronic vouchers to buy food from local markets.

   Digital Food Project: In developing nations, there is a lack of regular access to banks. WFP jointly with MasterCard created "Digital Food Project" to distribute food vouchers through mobile phones and banking cards. It can be used at local markets, thereby bolstering local economies.

ICT tools in india

- **Health Management Information Systems (HMIS):** This integrated, national web-based reporting system for the Ministry of Health and Family Welfare was launched in October 2008 to facilitate district level data capturing and preparation of analytical reports.

- **Data collection and community feedback systems:** A community feedback initiative, Lokavani project (e-governance)in Sitapur district of Uttar Pradesh was launched in 2004, by the district administration and National Informatics Centre with a Hindi website and an online public grievance redressal service through which all complaints were registered and reached to the District Magistrate.

ICT in education and training

A number of ICTs have been used in education and training such as access devices (computers and mobile devices), networking and communication technologies (internet), storage devices ande-learning platforms (websites, bulletin boards and videoconferencing).

- **Decision support:** Frontline health workers and trained medical practitioners use various job-aids, flow-charts and checklists to adhere to correct protocols, during counselling, diagnosis and treatment provision.

- **Single interaction systems:** A same message is sent to many recipients enrolled with a provider. Other examples are sending referrals to service delivery points (saadhan HIV-AIDS helpline, Dimpa clinics helpline, etc.).

- **Multiple interaction systems:** It has an extensive body of evidence showing its effectiveness in improving health status, behavior modification and increased adherence. E.g. Online weight loss programmes.

- **IFFCO Kisan Sanchar Limited (IKSL):** IFFCO and Airtel jointly launched in November 2007 to provide inputs and information to farmers to improve their farming activities.Information on the weather, crops and animal husbandry advisories, market prices, fertilizer availability,

electricity timings and government schemes are provided. Farmers can also call a helpline to ask questions on farming.

- **BabyCenter India:** It has launched a phone-based platform, combining daily SMS messages and prerecorded voice content, accessed through an Interactive Voice Response system.Users receive customized emails from pregnancy till the child is 3 years of age. Messages focus on maternal and child health issues such as nutrition, iron folic acid tablets and danger signs during pregnancy.

- **Direct contribution of ICT to agricultural production:** ICT supports farmers to track and react to weather condition changes on daily basis.

ICT in rural India

- **Warana Wired Village Project:** It has been jointly implemented through National Informatics Centre, Government of Maharashtra and Warana Co-operative Society and serves the information on crop cultivation practices, pest and disease control, marketing, dairy and sugarcane processing to the farmers.

- **The Information Villages Project:** Implemented by the MS Swaminathan Research Foundation in collaboration with International Development Research Centre, aimed at bringing the benefits of modern information on health, crops, weather and fishing conditions and communication technologies to rural families in Pondicherry.

Conclusion

It was concluded that ICT is an obvious choice to contribute information timely. Health practitioners and experts should engage with these new interventions and educate themselves on their potential applicability.The monitoring and evaluation and information technology providers and experts need to continue to become more knowledgeable about the realities of using ICTs in remote locations and about the health systems and programmes. The gap between the agricultural researchers and farmers can be reduced that will lead to highly developed agriculture, contributing to community health and nutrition status.

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Sensory Evaluation of Chia Seeds: Incorporated in Recipes

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Abstract

Non communicable diseases are dramatically rising all over the world. Globally, almost two-thirds of total deaths occur due to NCDs. The global burden of NCDs is increasing rapidly as a result of number of factors, one of them being poor dietary habits (increase in the intake of foods high in fat, salt and sugar).

Diet is considered as a major modifiable risk factor for the management of various non-communicable diseases. There is a global trend towards using natural health products before their pharmaceutical alternatives. They are seen as safer, more natural and healthier. A lot of research has know led to the belief that consumption of certain foods or the physiologically active components associated with them may be associated with reduction in the risk of various chronic diseases. Chia seed is one such functional food that is said to be beneficial in managing various clinical conditions. To date, however available evidence supporting their inclusion into the diet is scarce and inconsistent. So, the present study was planned to develop 10 eqicarbohydrate recipes incorporating chia seeds and sensory evaluation of the developed recipes. Ten equicarbohydrate recipes namely, Poha, Methi Thepla, Muthiya, Vegetable Cutlet, Handvo, Upma, Sindhi Koki Roti, BesanChilla, Peas Kebab and Khichri were developed and incorporated with chia seeds at three different levels i.e. 4g, 8g and 12g. These recipes were then subjected to sensory evaluation by 30 semi trained panelists. Sensory attributes like colour, aroma, texture, taste etc were evaluated using a 9 point hedonic rating scale, to analyze the acceptability of traditional Indian recipes incorporated with chia seeds. Sensory evaluation revealed that chia seeds can be effectively incorporated in traditional Indian recipes with good acceptability at all levels of incorporation. It may be concluded from the present study that incorporation of chia seed in traditional Indian recipes is feasible and acceptable.

Introduction

Chia belong to the family Lamiaceae; Genera *Salvia*; Specie *hispanica*. It is commonly known as Chia, Spanish sage, Mexican chia and Black chia (Hentry et al, 1990).It contains high proportions of the essential fatty acids such as α-linolenic, which is associated with a number of physiological functions. The seed consists of significant concentrations of number of natural antioxidants, such as chlorogenic acid, caffeic acid, myricetin, quercetin, and kaempferol. One of the prime properties possessed by this seed is that 75% of the total oil content of chia is represented by omega 3. It also has a significant amount of dietary fiber, which is present in greater proportions as compared with other fruits and seeds. It has been observed that chia seeds exude a mucilaginous polysaccharide, when the seed is placed in an aqueous medium and has been found be a nutritious food source. Furthermore, the seed contains more protein in relation to any other grains and is gluten-free, without the presence of any toxic components. Also, it is an important source of vitamins and minerals (Munoz LA et al, 2013).Chia seeds contain between 34 and 40 g

of dietary fibre per 100 g. The defatted flour possesses 40 % fibre, 5–10 % of which is soluble and forms part of the mucilage (Mohd Ali N et al, 2012). Chia seeds have been shown to exhibit a number of therapeutic properties and range of health benefits including cardiovascular diseases, diabetes etc. Animal studies have shown that chia seeds can beneficially affect cholesterol levels, weight loss and increased satiety (de SouzaFerreira C et al, 2015). Chia makes a great laxative, boosts vision and immunity and can even relieve mood disorders like anxiety and depression (Ullah R et al, 2016). Chia seeds are purported to be helpful in the management of various clinical conditions. To date, however, available evidence supporting their inclusion into the diet is scarce and inconsistent. Chia offers a great future perspective for food, medicine, pharmaceutical and nutraceutical sectors. Thus, the study wasplanned to develop recipes incorporating chia seeds at three different levels and to carry out the sensory evaluation of the developed recipes.

Objectives

To develop 10 equicarbohydrate recipes incorporating chia seeds at three different levels 4g, 8g and 12g.

To carry out sensory evaluation of the developed recipes.

Methods and materials

Chia seeds have been reported to possess various health benefits. Chia seeds are a potential source of antioxidants with the presence of chlorogenic acid, caffeic acid, myricetin, quercetin, and kaempferol which are believed to have various health promoting effects. Therefore, incorporating chia seeds in commonly consumed recipes may bring about positive health benefits. Ten recipes namely Poha, Methi Thepla, Muthiya, Vegetable Cutlet, Handvo, Upma, Sindhi Koki Roti, BesanChilla, Peas Kebab and Khichri were developed. All the recipes had the same carbohydrate content (50g) i.e. they were equicarbohydrate. Chia seeds were incorporated at three different levels i.e. 4g, 8g, and 12g. Standardized recipes and procedures were adopted for the preparation of the recipes.

1. **Procurement of Chia seeds**

Chia seeds were procured from a local grocery store in Vadodara, Gujarat.

2. **Location of the study**

The study was conducted in the department of Foods and Nutrition, Faculty of Family and Community Sciences at The Maharaja Sayajirao University of Baroda, Gujarat.

3. **Data collection**

To analyze the acceptability of chia seeds incorporation in various traditional Indian recipes, sensory evaluation of the developed recipes was carried out. It assessed changes in various sensory attributes of the recipe, if any, when chia seeds are incorporated in them and the amount of chia seeds most acceptable in a particular recipe. For this purpose, 30 semi-trained panelists were enrolled, who gave their consent to be a part of the study and carry out the sensory evaluation (Figure 1.1).

For sensory evaluation, specific characteristics of a product were rated separately based on a 9-point hedonic rating scale, ranging from 'like extremely' to 'dislike extremely' with 'neither like nor dislike' as a mid-score. The resulting total scores for different attributes were compared and analyzed for each sample.

The following attributes were analyzed for each recipe:

1. Colour and appearance
2. Aroma
3. Texture
4. After taste
5. Taste
6. Mouthfeel
7. Overall acceptability

Figure 1.1: Experimental design for sensory evaluation

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│ 10 recipes incorporating chia seeds at three different levels.    │
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                               ⬇
┌─────────────────────────────────────────────────────────────────┐
│ Sensory evaluation (9 point hedonic rating scale)                 │
└─────────────────────────────────────────────────────────────────┘
                               ⬇
┌─────────────────────────────────────────────────────────────────┐
│ Attributes (Colour and appearance, aroma, texture, taste, after   │
│ taste, mouth feel and overall acceptability)                      │
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                               ⬇
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│ Semi trained panelists (30)                                       │
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                               ⬇
┌─────────────────────────────────────────────────────────────────┐
│ Statistical analysis (Mean, SD, F-test)                           │
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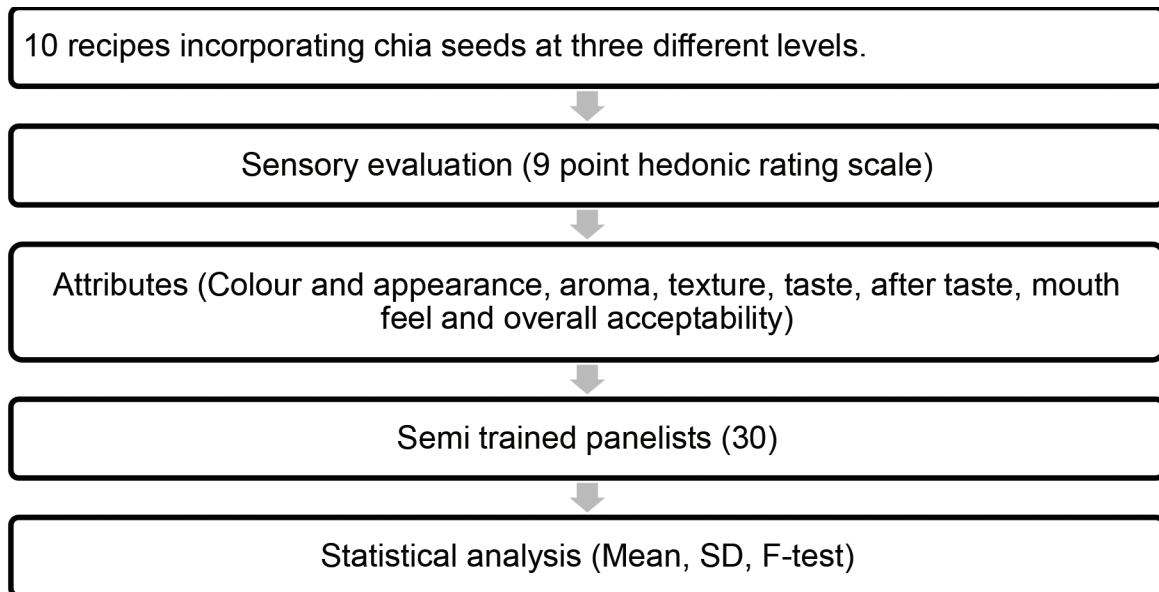
4. Statistical analysis

The data obtained was entered in Microsoft excel spread sheets, verified and was subjected to statistical analysis for the following calculations:

- Mean and standard deviation
- Percentages
- F test and students 't' tests were used to find out statistical significance between or within groups.

A result was considered significant only if p- value of any analysis was found to be less than 0.05.

Results and discussion

Ten equicarbohydrate recipes namely Poha, BesanChilla, Sindhi Koki Roti, Upma, Handvo, Cutlet, Muthiya, Khichri, Methi Thepla and Peas Kebab were incorporated with chia seeds. Chia seeds were incorporated at three different levels i.e. 4g, 8g, 12g and its incorporation in traditional Indian recipes was found to be feasible.

Sensory evaluation of the developed recipes.

Sensory evaluation of ten chia seeds incorporated recipes namely Poha,BesanChilla, Sindhi Koki Roti, Upma, Handvo, Cutlet, Muthiya, Khichri, Methi Thepla and Peas Kebab was carried out using a 9 point hedonic rating scalefrom like extremely to dislike extremely.Four samples were prepared for each recipe and coded as A, B, C and D. Out of these four coded samples, three samples contained different amounts of chia seeds, while one sample acted as a control sample. Codes were randomly assigned to each sample. Thirty semi-trained panelists were asked to rate the various attributes of each recipe.

Poha

With respect to most of the attributes, no significant difference was found among the Poha samples. Sample with 4g of chia seed incorporation (CSI) scored significantly higher for the colour and appearance attribute. Based on overall acceptability and total scores, the sample with 4g CSI was found to be the most acceptable (Table 1.1).

Table 1.1 Sensory evaluation scores for poha (MEAN ± SD)

Attributes	Sample A (Control sample)	Sample B (4g CSI)	Sample C (8g CSI)	Sample D (12g CSI)	F Value
Colour and appearance	2.5 ± 1.31	2.37 ± 2.38	3.17 ± 1.44	3.23 ± 1.38	3.54*
Aroma	2.73 ± 1.36	2.73 ± 2.76	3.13 ± 1.31	3.5 ± 1.6	2.1
Texture	2.67 ± 1.03	2.30 ± 2.31	2.77 ± 1.22	3.03 ± 1.54	1.91
After taste	2.97 ± 1.03	2.23 ± 2.21	2.87 ± 1.38	3.03 ± 1.83	1.9
Taste	2.77 ± 1.5	2.17 ± 2.14	2.73 ± 1.41	2.77 ± 1.43	1.49
Mouthfeel	2.7 ± 1.34	2.37 ± 2.38	3 ± 1.41	2.93 ± 1.48	1.29
Overall acceptability	2.63 ± 1.22	2.37 ± 2.38	2.93 ± 1.36	3.10 ± 1.54	1.92
Total	18.96 ± 9.27	16.53 ± 16.55	20.6 ± 9.54	21.6 ± 10.84	2.37

't' values for various attributes

Attribute	Sample A v/s B	Sample A v/s C	Sample A v/s D	Sample B v/s C	Sample B v/s D	Sample C v/s D
Colour and appearance	0.43	1.87	2.11*	2.47*	2.75**	0.18

*significantly different at $p < 0.05$

**significantly different at $p < 0.01$

BesanChilla

Similar to the Poha samples, the BesanChilla samples did not differ significantly from each other for all the attributes except the colour and appearance attribute in which the 12g CSI recipe scored the highest. Based on total scores, the 12g CSI recipe was the most acceptable (Table 1.2).

Sindhi Koki Roti

Chia seeds incorporation brought about no significant changes in various attributes of Sindhi Koki Roti. All the samples received similar scores. Among the chia seeds incorporated recipes, sample C, containing 8g of chia seeds was found to be the most acceptable recipe based on overall acceptability and total scores (Table 1.3).

Upma

As depicted in Table 1.4 chia seed incorporation did not bring about significant changes in various sensory attributes of Upma. However, sample B, containing 4g of chia seeds showed the highest acceptability among all the chia seeds incorporated recipes for all the attributes.

Handva

Incorporation of chia seeds in Handva did not result in any significant changes in its sensory attributes. Sample D with 12g of CSI scored the highest among all the samples for most of the attributes (Table 1.5).

Cutlet

Among all the chia seed incorporated samples, sample D containing 12g of chia seeds was found to be most acceptable. Barring taste, most of the attributes did not significantly differ between the samples (Table 1.6).

Muthiya

As depicted in Table 1.7, sensory attributes did not differ significantly between the Muthiya samples. Sample B containing 4 g of chia seeds was found to be most acceptable among all the recipes.

Table 1.2: Sensory evaluation scores for besan chilla (Mean ± SD)

Attributes	Sample A (Control sample)	Sample B (4g CSI)	Sample C (8g CSI)	Sample D (12g CSI)	F Value
Colour and appearance	3 ± 1.05	3.17 ± 1.02	3.63 ± 1.27	2.87 ± 1.11	2.69*
Aroma	3.33 ± 1.37	3.43 ± 1.19	3.6 ± 1.54	3.07 ± 1.26	0.82
Texture	2.93 ± 1.34	3.27 ± 1.41	3.2 ± 1.21	2.8 ± 1.16	0.88
After taste	3.37 ± 1.56	3.53 ± 1.59	3.7 ± 1.53	3.13 ± 1.43	0.74
Taste	3.43 ± 1.76	3.77 ± 1.55	3.7 ± 1.6	2.77 ± 1.22	2.5
Mouthfeel	3.2 ± 1.37	3.73 ± 1.39	3.4 ± 1.30	2.97 ± 1.07	1.9
Overall acceptability	3.3 ± 1.62	3.67 ± 1.45	3.63 ± 1.47	2.97 ± 1.30	1.5
Total	22.56 ±10.07	24.56 ± 9.59	24.86 ± 9.98	20.56 ± 8.54	1.62

't' values for various attributes

Attribute	Sample A v/s B	Sample A v/s C	Sample A v/s D	Sample B v/s C	Sample B v/s D	Sample C v/s D
Colour and appearance	1.87	2.10*	0.47	1.5	1.09	2.49***

*significantly different at $p<0.05$

***significantly different at $p<0.001$

Table 1.3 Sensory evaluation scores for sindhi koki ROTI (Mean ± SD)

Attributes	Sample A (Control sample)	Sample B (4g CSI)	Sample C (8g CSI)	Sample D (12g CSI)	F Value
Colour and appearance	3.87 ± 1.98	3.83 ± 1.76	3.6 ± 1.79	3.87 ± 2	0.13
Aroma	3.33 ± 1.37	3.47 ± 1.33	3.33 ± 1.35	3.27 ± 1.46	0.11
Texture	4.17 ± 1.78	3.9 ± 1.71	3.67 ± 1.56	3.8 ± 1.88	0.44
After taste	3.63 ± 1.92	3.6 ± 1.54	3.7 ± 1.60	3.5 ± 1.93	0.06
Taste	3.6 ± 1.59	3.57 ± 1.72	3.57 ± 1.52	3.53 ± 2.10	0.007
Mouthfeel	4.03 ± 1.65	3.7 ± 1.60	3.53 ± 1.48	3.67 ± 2.17	0.44
Overall acceptability	4.07 ± 1.62	3.8 ± 1.69	3.6 ± 1.43	3.7 ± 2.18	0.39
TOTAL	26.7 ± 11.91	25.86 ± 11.35	25 ± 10.73	25.33 ± 13.71	0.14

Table 1.4 Sensory evaluation scores for upma (mean ± sd)

Attributes	Sample A (Control sample)	Sample B (4g CSI)	Sample C (8g CSI)	Sample D (12g CSI)	F Value
Colour and appearance	3.2 ± 1.13	3.03 ± 1.22	3.2 ± 1.21	3.33 ± 1.30	0.3
Aroma	3.67 ± 1.30	3.2 ± 1.16	3.57 ± 1.36	3.4 ± 1.63	0.66
Texture	3.63 ± 1.03	3.13 ± 1.25	3.20 ± 1.13	3.1 ± 1.30	1.32
After taste	3.93 ± 1.39	3.27 ± 1.44	3.73 ± 1.74	3.47 ± 1.74	1.02
Taste	3.9 ± 1.47	3.17 ± 1.34	3.53 ± 1.63	3.4 ± 1.67	1.19
Mouthfeel	3.8 ± 1.30	3.17 ± 1.37	3.53 ± 1.57	3.53 ± 1.78	0.88
Overall acceptability	3.97 ± 1.22	3.2 ± 1.21	3.53 ± 1.53	3.47 ± 1.57	1.56
Total	26.1 ± 8.82	22.16 ± 8.98	24.3 ± 10.16	23.7 ± 10.97	1.06

TABLE 1.5 Sensory evaluation scores for handva (MEAN ± SD)

Attributes	Sample A (control sample)	Sample B (4g CSI)	Sample C (8g CSI)	Sample D (12g CSI)	F Value
Colour and appearance	2.7 ± 0.84	2.97 ± 0.96	2.7 ± 1.34	2.5 ± 1.01	1.56
Aroma	2.73 ± 0.74	3 ± 0.83	2.67 ± 1.18	2.73 ± 0.87	0.77
Texture	2.77 ± 0.94	3 ± 1.11	2.7 ± 1.18	2.57 ± 0.97	0.88
After taste	2.73 ± 0.98	2.83 ± 0.99	2.93 ± 1.39	2.67 ± 1.06	0.32
Taste	2.67 ± 0.92	2.77 ± 1.01	2.8 ± 1.47	2.63 ± 1.03	0.14
Mouthfeel	2.87 ± 1.04	2.83 ± 1.02	2.73 ± 1.39	2.63 ± 0.93	0.27
Overall acceptability	2.67 ± 0.88	2.87 ± 0.97	2.87 ± 1.36	2.63 ± 0.96	0.42
Total	19.13 ± 6.33	20.16 ± 6.89	19.4 ± 9.31	18.36 ± 6.83	0.44

TABLE 1.6 Sensory evaluation scores for cutlet (MEAN ± SD)

Attributes	Sample A (Control sample)	Sample B (4g CSI)	Sample C (8g CSI)	Sample D (12g CSI)	F Value
Colour and appearance	3.2 ± 1.54	3.07 ± 1.31	3.43 ± 1.41	3.3 ± 1.56	0.34
Aroma	2.97 ± 1.38	3.2 ± 1.19	3.23 ± 1.33	3.13 ± 1.68	0.21
Texture	2.97 ± 1.47	3.13 ± 1.14	3.23 ± 1.45	2.7 ± 1.39	0.79
After taste	2.93 ± 1.48	3.03 ± 1.16	3.53 ± 1.68	2.97 ± 1.63	1.05
Taste	2.63 ± 1.27	2.77 ± 1.41	3.73 ± 1.74	2.8 ± 1.56	3.37*
Mouthfeel	2.83 ± 1.60	3.03 ± 1.16	3.73 ± 1.66	2.83 ± 1.60	2.37
Overall acceptability	2.9 ± 1.24	2.97 ± 1.13	3.7 ± 1.56	2.93 ± 1.51	2.35
Total	20.43 ± 9.98	21.2 ± 8.75	24.6 ± 10.82	20.66 ± 10.9	1.44

't' values for various attributes

Attribute	Sample A v/s B	Sample A v/s C	Sample A v/s D	Sample B v/s C	Sample B v/s D	Sample C v/s D
Taste	0.38	2.79**	0.45	2.36*	0.08	2.18*

*significantly different at $p < 0.05$

** significantly different at $p < 0.01$

TABLE 1.7 Sensory evaluation scores for muthiya (MEAN ± SD)

Attributes	Sample A (Control sample)	Sample B (4g CSI)	Sample C (8g CSI)	Sample D (12g CSI)	F Value
Colour and appearance	2.9 ± 1.40	2.87 ± 1.17	2.97 ± 1.19	3 ± 1.53	0.06
Aroma	3.1 ± 1.35	3.13 ± 1.33	3.07 ± 1.17	3.3 ± 1.42	0.18
Texture	2.97 ± 1.43	2.87 ± 1.14	3.17 ± 1.12	3.37 ± 1.47	0.87
After taste	3.3 ± 1.56	3.23 ± 0.94	3.17 ± 1.44	3.4 ± 1.69	0.14
Taste	3.2 ± 1.52	3.1 ± 1.06	3.13 ± 1.41	3.27 ± 1.78	0.07
Mouthfeel	3.33 ± 1.56	3.5 ± 1.07	3.27 ± 1.31	3.23 ± 1.7	0.2
Overall acceptability	3.27 ± 1.41	3.23 ± 0.82	3.2 ± 1.45	3.4 ± 1.81	0.11
Total	22.06 ± 10.22	21.93 ± 7.52	21.96 ± 9.08	22.96 ± 11.40	0.10

Khichri

For chia seed incorporated Khichri samples, sample B with 4g CSI received higher scores for all the attributes and was found to be the most acceptable. Scores for the aroma and texture attributes were significantly higher for the 4g chia seed incorporated recipe (Table 1.8).

Methi Thepla

The sensory attributes of chia seed incorporated Methi Thepla samples did not differ significantly from those of the control sample. Amongst all the Methi Thepla samples, sample B with 4g of chia seeds was found to be the most acceptable (Table 1.9).

Peas Kebab

There was no significant difference for the sensory attributes of chia incorporated samples when compared to the control sample. Results indicated that forPeas Kebab, the highest level of chia seeds incorporation i.e. 12g was found to be most acceptable (Table 1.10).

Results from the sensory evaluation phase revealed that all the chia seed incorporated recipes were well accepted by the panelists and were found comparable to the control samples. Chia seed incorporation was found to be acceptable at all levels of incorporation.

TABLE 1.8 Sensory evaluation scores for khichri

(MEAN ± SD)

Attributes	Sample A (Control sample)	Sample B (4g CSI)	Sample C (8g CSI)	Sample D (12g CSI)	F Value
Colour and appearance	2.93 ± 1.34	3.17 ± 1.21	3.63 ± 1.83	4.87 ± 1.98	8.48

Aroma	2.97 ± 1.38	3.07 ± 1.36	3.6 ± 1.89	4.63 ± 2.22	5.71**
Texture	3 ± 1.34	3.33 ± 1.49	3.53 ± 1.70	4.7 ± 1.99	6.04***
After taste	2.9 ± 1.27	2.93 ± 1.41	3.6 ± 1.81	5.27 ± 2.07	13.22
Taste	2.93 ± 1.20	2.97 ± 1.35	3.53 ± 1.89	5.4 ± 1.90	15.4
Mouthfeel	2.8 ± 1.06	3.3 ± 1.49	3.67 ± 1.83	4.97 ± 1.92	9.93
Overall acceptability	2.97 ± 1.35	3.2 ± 1.19	3.53 ± 1.63	5.2 ± 1.95	12.5
Total	20.5 ± 8.93	21.96 ± 9.5	25.1 ± 12.57	35.03 ±14.03	11.5

't' values for various attributes

Attribute	Sample A v/s B	Sample A v/s C	Sample A v/s D	Sample B v/s C	Sample B v/s D	Sample C v/s D
Aroma	0.28	1.48	3.49***	1.25	3.2**	1.94
Texture	0.91	1.35	3.88	0.48	3.01**	2.44*
Total	0.68	1.76	5.20	1.17	4.6	3.1**

*significantly different at $p < 0.05$

**significantly different at $p < 0.01$

***significantly different at $p < 0.001$

TABLE 1.9 Sensory evaluation scores for methi thepla

(MEAN ± SD)

Attributes	Sample A (Control sample)	Sample B (4g CSI)	Sample C (8g CSI)	Sample D (12g CSI)	F Value
Colour and appearance	4.37 ± 1.92	4.43 ± 1.89	4.37 ± 1.90	4.7 ± 2	0.2
Aroma	3.93 ± 1.64	4.07 ± 1.31	4.07 ± 1.57	4.17 ± 1.72	0.11
Texture	5.13 ± 1.91	5.07 ± 1.87	5.1 ± 2.06	5.27 ± 1.87	0.06
After taste	4.53 ± 1.80	4.57 ± 1.94	4.67 ± 2.32	5.03 ± 2.34	0.35
Taste	5 ± 2	4.5 ± 1.87	4.47 ± 2.22	4.9 ± 2.02	0.54
Mouthfeel	5.47 ± 2.11	4.9 ± 2.02	5.13 ± 2.16	5.2 ± 2.11	0.36
Overall acceptability	5.1 ± 2.09	4.77 ± 1.96	5.07 ± 2.12	5.1 ± 2.02	0.18
Total	33.53 ± 13.46	32.3 ± 12.86	32.86 ± 14.35	34.36 ± 14.09	0.15

TABLE 1.10 Sensory evaluation scores for peas kebab
(MEAN ± SD)

Attributes	Sample A (Control sample)	Sample B (4g CSI)	Sample C (8g CSI)	Sample D (12g CSI)	F Value
Colour and appearance	3.43 ± 1.63	3.47 ± 1.41	3.7 ± 1.44	3.2 ± 1.37	0.58
Aroma	3.1 ± 1.27	3.27 ± 1.28	3.43 ± 1.45	3.27 ± 1.48	0.29
Texture	3.27 ± 1.36	3.77 ± 1.01	3.83 ± 1.23	3.3 ± 1.29	1.78
After taste	2.96 ± 1.43	3.73 ± 1.51	3.7 ± 1.60	3.33 ± 1.60	1.64
Taste	2.8 ± 1.24	3.63 ± 1.22	3.5 ± 1.41	3.2 ± 1.81	1.98
Mouthfeel	3.13 ± 1.28	3.87 ± 1.17	3.63 ± 1.30	3.37 ± 1.40	1.83
Overall acceptability	3.1 ± 1.27	3.73 ± 1.11	3.6 ± 1.33	3.33 ± 1.63	1.31
Total	21.83 ± 9.49	25.46 ± 8.70	25.4 ± 9.76	23 ± 10.58	1.52

Conclusion

Chia seeds have been reported to possess various health benefits. To date, however, available evidence supporting their inclusion into the diet is scarce and inconsistent. Incorporation of chia seeds in the selected traditional Indian recipes was found to be feasible and acceptable.

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Evolutionary Development in the Women Status through Home Science

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Abstract

The article is based on the changing condition of women through development of home science and effect of nutrition education in home science on nutritional knowledge, hemoglobin level and dietary intake of anemic women. Home science has given recognition to the work of women. In all agricultural universities the name of this degree programme has changed from home science to community science to extend its visibility in wider perspective since academic session 2017. Women are the most vulnerable group of the society due to physiological conditions like menstruation, pregnancy and lactation. In Asia, anemia is the second highest cause of maternal mortality. Even mild and moderate anemia increases the risk of death in pregnant women. Hence the major deficiency faced by them is iron deficiency anemia due to iron and other micronutrient lose through blood. Home science has given its big contribution in the development of programmmes designed to reduce the prevalence and severity of anemia. In this review the intervension measures to combat anemia has been discussed. Therefore, a home scientist can make women to take control of their health, access to resources, participate in decision making contributing to better livelihood of women, family and the society.

Key words: *Home Science, anemia, iron rich foods, nutrition education, women empowerment.*

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Preamble

Home Science is related to the fields concerned with home, health and happiness of the people living in home. It is an interdisciplinary field that prepares the individual for home and family as well as for career or vocation in life. In today's world women along with men shares the responsibility of home and family equally. They both needs to make equal amount of preparation in making the best use of resources to make their life comfortable (Anonymous. 2019). Women are considered the nucleus of the family, especially in rural India. She not only does the common house hold work but also plays a significant role in preserving the culture, grooming the culture and shaping their destiny. Home Science is the only discipline which trains the individual for two goals in life: Caring for home and Family and Shaping up a bright career (Khatri *et al.,* 2017). In a study some conservatives argued that the introduction of home science in schools and universities would lead to more efficient homes, solve the domestic problem and would provide a cure for various domestic ills (Nolan, 2001). Home science have basic five fields of education human development, foods and nutrition, extension education , textile science, family and community resource management. Inspite of this, aspiring home scientists are

given opportunity in the fields like Journalism and mass communication. For this students are offered courses in Radio and Television journalism, Photo Journalism and advertisement, Public relations and social marketing, Public relations etc (Anonymous., 2019). In early 20th century home science was not offered as a discipline but was more a subject of study. It was tough in the selected schools aiming at preparing future house wives for aristocratic families. Today home science has become multipurpose programme, taken up by both boys and girls. Hence home science has evolved as imperative tool for empowering women at household and community level as professional in different fields. The field of foods and nutrition in home science covers areas such as human nutrition, Public health nutrition, Community Nutrition, Clinical Nutrition, diet therapy and nutrition counseling, Food Chemistry, Food Standards and Quality control and Food Service Management (Raghuvanshi, 2018). As soon as women empowerment is concerned, the highest prevalence of anaemia world wide is observed among women especially in India, Nutritional anaemia in pregnant and Iron deficiency anemia in young women. Anaemia is a condition in which the number and size of red blood cells, or the haemoglobin concentration, falls below an established cut-off value, consequently impairing the capacity of the blood to transport oxygen around the body. Anaemia is an indicator of both poor nutrition and poor health (WHO, 2016). Anaemia is a condition in Mother Health status that adversely affects the development of children. The population group that with the greatest number of individuals affected is non pregnant women amounting to 468.4 million. Public health facilities are optimised to reach children, their mothers and young women as they constitute most vulnerable group. Private and public school are involved for both preventive and essential strategies and implementation of action plan to reach children and adolescents. Parents and the teachers should work directly with communities in the domains of sanitation, environmental health, hygiene and infectious disease control programs. Agriculture extension and food security programmes should be encouraged to increase production and consumption of food rich in iron and other micro nutrients (Durrani, 2018).

The most effective public health approaches to prevent and control iron deficiency and iron deficiency anaemia is integrated strategy to address iron deficiency and iron deficiency anaemia. WIFS programmes implemented on a large scale in few countries demonstrated a high compliance of supplement ranging from 42% to 94% and a reduction in anaemia prevalence of 9.3% to 56.8%in a period of 6-12 months of intervention (Vir, 2011).

Integrated strategy to address iron deficiency and iron deficiency anemia

Food based approaches	Supplementation	Public health intervention	Social measures
Food fortification, Marriage and	Oral weakly dose of iron	Treatment of hookworm infestation	
Diet diversification, Conception	Folic acid supplements (WIFS)	Infection control, malaria control,	
Genetic engineering, 18 years		Water and sanitation facility	below
Biotechnological intervention			

A home science qualification enabled the women to perform pioneering work in the fields of nutrition and education, to open avenues for other aspiring women professionals and to work for the improvement of social and economic conditions in wider society (Heap *et al.,* 1999).

Women represent only 50% of total population; they contribute 75% while men contribute 25% to the development of the society. Unfortunately, in spite of their valuable role which cannot be replaced by men or a machine is often neglected for generation (Khatri *et al.,* 2017).

A study on awareness among rural girls for role of home science education in economic empowerment showed that none of the target group had any knowledge of scope of home science in industry, freelancing, self-help groups, profit generation networks and agencies like NGO's. Few girls had knowledge of consultancy services, home based industry and self-employment therefore there is urgent need to start awareness campaign at primary level, especially at the entry level to higher education (Sandhu *et al.,* 2017).

A nutrition intervention education based study on 300 adolescent girls whose hemoglobin levels were below 12mg/100ml brought about a drastic change in Knowledge, Attitude and Practices scores of the subjects (Kamalaja *et al*., 2018).

A study on knowledge, attitude and practices regarding anemia, iron rich foods, iron supplementation of pregnant women showed that 25.7 % of participants did not have toilet facility at home prone to hookworm infestation. The study also revealed that only 39.8% of the participants were aware and understands the term anemia. Only 32.6 % agreed that pregnant women should take iron supplementation in spite of taking healthy diet. Only 44.62% of the participants were aware of their hemoglobin level in current pregnancy (Ghosh *et al.,* 2015).

The Adolescent Girls Anaemia Control Programme in India provides a good example of how a knowledge-based approach can successfully guide the scale-up of evidence-based interventions in public health nutrition. The Government of India launched in 2012 the national Weekly Iron and Folic Acid Supplementation (WIFS) programme to universalize the benefits of anemia control to the overall population of Indian adolescents (Aguayo *et al*., 2012).

Out of 115 pregnant women enrolled, 107 completed the study (Intervention: 53; Control: 54). At the end of the nutrition education intervention and iron rich food-based diet plan, the change in hemoglobin level was found to be high in the intervention over control group. The change in the maternal nutritional knowledge score on anemia and iron rich foods was significantly high in the intervention over control group (Sunuwar *et al*., 2019).

Conclusion

In the present study it is concluded that as the perception of home science education has changed the health status of the women has also changed accordingly with change of time. A home scientist can bring about appreciable change in the knowledge, attitude and practices of women regarding iron deficiency anemia and iron rich diet through nutrition education. It can be possible by inclusion of various health and nutrition education programmes at school and college levels and public health approaches planned by government and non- government agencies. Continued approaches to combat anemia will definitely have a positive effect on health, nutritional status of women and hence their children and families. Therefore initiatives taken by the Home science has made the women empowered physically, mentally and socially.

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Women Empowerment through Skill Development in Home Science

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Abstract

The paper investigates the role of women and skill development in India.Skill development in home science not only creates employment opportunities but also empowers them. The aim of skill development, in the case of women, is not just simply preparing them for jobs; but also to boost their performance by improving the quality of work in which they are involved. This paper highlights the impact of skill development through Home Science on women empowerment. The basic need for empowering women is to instillthe required skills and abilities in order to shape up their overall personality and raise their status within society.

Keywords*: Home Science, Women empowerment, Skills, Entrepreneur.*

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Introduction

Home science is an applied and integrated science that aims at improving the quality of life for the individual, the family, and the community. Women constitute about 48% of the total population of the country. The word Home Science can be interpreted as systematic education for organized home living which shall include the ever-changing technological advancement and behavioural modifications of the members living in the home and influencing communities.

Since, Home Science education provides knowledge regarding every aspect of life like health, nutrition, food, body physiology, time management, money management, budgeting, banking, family planning, child-rearing, clothing, entrepreneurship, communication and many more, a home scientist woman has knowledge of every aspect of life. And this knowledge enables her to make decisions independently regarding her personal life, family and other social affairs. Furthermore, Home Science education provides a holistic approach to women's health and gives special attention to the needs of the women throughout their lives, including in terms of nutrition and basic services during infancy, childhood, adolescence, reproductive years and old age. This knowledge can enrich their own as well as their family's nutritional status and nutritional morbidity and mortality can also be reduced.

All forms of violence against women, physical and mental, whether at domestic or societal levels, particularly, sexual abuse and violence, including through resources to customs, traditions, and practices can be eliminated by Home Science Education. It enables the woman to be aware regarding various rules and rights related to women protection, domestic violence, sexual harassment, etc. for example, Protection of Women from Domestic Violence Act, 2005, The Dowry Prohibition Act, 1961, The Hindu Marriage Act, 1955, The Maternity Benefits Act, 1961,

The Muslim Women (Protection of Rights on Divorce) Act, 1986, The Child Marriage Restraint Act, 1929, The Consumer Protection Act, 1986, Act of Sexual Harassment, etc.

As per the 2011 census, the percentage of women agricultural labourer is 55.21 and the percentage of the male agricultural labourer is 18.56. One of the major characteristics of these women agricultural labour is that most of them being marginal workers i.e., they work for less than 6 months a year. They do not get regular employment. The majority of them are employed on a seasonal and often a casual or temporary basis. Most of these women workers do not receive any form of social security or unemployment benefit. The solution to this is Home Science education, most Indian women are uneducated,and through education, we can instillconfidence to women from economically backward families and help them to achieve economic and social independence.

Empowerment of women through Home Science

A. Economic Empowerment

Home Science is the only discipline which trains the students for two important goals in life:

I.   Caring for home and family

II. Shaping up a bright career- Home Science education provides a wide variety of employment in both wage and employment and self-employment.

Thus Home Science education can enrich the women economically and can make them independent as well as self-reliant.

B. Social Empowerment

- Elimination of Violence Against Women: Home Science enables the woman to be aware of various rules and rights related to women's protection, domestic violence, sexual harassment etc.

- Ending Discrimination Against Women: Recognizing the equal entitlement of women and men to human rights and fundamental freedom in all spheres, political, economic, social, cultural, civil etc., home scientists will never allow the discrimination in law or practice against women.

C. Personal Empowerment

- Decision Making: Since Home Science education provides knowledge regarding every aspect of life like health, nutrition, food, body physiology, time management, money management, budgeting, banking, family planning, child-rearing, clothing, entrepreneurship, communication and many more, a home scientist woman has knowledge of every aspect of life which enables her to make decisions easily.

- Education: Home science education enables women to be knowledgeable and do the basic chores of life smoothly.

- Health: Home Science education provides women to be independent of their health status by providing them with appropriate knowledge about the human body.

D. Political/Societal Empowerment: Home Science education enables women to play a major role in community development. Many home scientist women participate in gram sabhas and work for the development of the community.

S. no.	Vocational areas	Skills	Job opportunities
1.	Food and Nutrition	Development of nutritious recipes, Modifying and improving recipes, designing processes and machinery for the production of recipes on a large scale	Food technician, dietary assistant, dietician, food technologist, caterer, nutritionist, chef, specialty cook
2.	Interior designing	Designing the areas, Spatial Awareness, Creativity, Computer Skills	Window display designer, photo stylist, furnishings buyer, showroom assistant
3.	Fashion designing	3D designing skills, detailed garment study	Fashion illustrator, textile technician, fashion buyer, costume assistant
4.	Human development and education	Different Moods and behavioural aspects of children, Family care, human behaviour study, geriatrics.	Child daycare supervisor, pre-school teacher, Community worker, special needs caseworker, elder care worker.
5.	Extension education	Understanding of the social problems, develop a sense of responsibility towards society, education of rural citizens.	Extension workers, Counsellor, professor

Discussion

1. Namrata G. Khatri concluded that Home Science education has proved that women along with being homemaker, she can be a teacher, researcher, entrepreneur, and administrator. Thus, it utilizes and proves the woman's potentials in every field of life.

2. Dr. Shailendra Kumar Gupta concluded that Women are willing to take up business and contribute to the nation's growth. Their role is being recognized and steps are taken to promote women entrepreneurship. The resurgence of entrepreneurship is the need of the hour. Women entrepreneurs must be moulded properly with entrepreneurial traits and skills to meet changing trends and challenging global markets, and also be competent enough to sustain and strive in the local economic arena. Skill development will be the key factor for empowering women.

3. Esther Dufflo said that Women's empowerment and economic development are closely interrelated. While development itself will bring about women's empowerment, empowering women will bring about changes in decision-making, which will have a direct impact on

development. Contrary to what is claimed by some of the more optimistic policymakers, it is, however, not clear that a one-time impulsion of women's rights will spark a virtuous circle, with women's empowerment and development mutually reinforcing each other and women eventually being equal partners in richer societies.

4. K. Ramakrishna and Dr. A. Sudhakar concluded that looking at theimportance of the role women play in the development of a nation and the current progress the countryis witnessing under the said women empowerment process, one can sense that there is a long way to goin that direction. Everyone needs to understand the essence of what Swami Vivekananda said about women -There is no chance for the welfare of the world unless the condition of women is improved. It is not possible for a bird to fly on one wing.

Conclusion

In spite of the huge task ahead, with many intrinsic skill development landscape in India at present, it is believed that the Government of India has taken many initiatives to nurture the skills of women as per world standards. Home Science education provides complete and equal access to factors such as empowerment, particularly, health, education, information, life-long learning for self-development, vocational skills, employment, and income-earning opportunities.In addition to matrimony, inheritance, family planning, and women's rights, Home Science education has provided an adequate platform for women to excel in the outside world.

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Role of Polypropylene in Shaping the Future Economy of Packaging Textiles

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Abstract

A study on manufacturing units of Packaging Textiles was taken up to obtain information regarding various aspects of packaging textiles such as products covered under packaging textiles, setup of units, raw materials, manufacturing process, distribution and marketing, problems faced by unit owners and remedial measures.Information and data obtained from various units as per the set interview schedule were coded, tabulated and analyzed.Packaging Textiles include various products such as Flexible Intermediate Bulk Container (FIBC), leno bags, Polyolefin woven sacks, tea bags, and coffee filters; wrapping fabric; soft luggage products; jute hessian and sacks. The study was limited to the products manufactured from Polypropylene (synthetic fibers) only.

Keywords: *Technical Textiles, Packaging Textiles, Polypropylene*

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Introduction

The Textile industry is initially considered as an industry that fulfills the demand like climate protection, an increase in the aesthetic sense, overall apparel need. However, due to an increase in human demands, textile has been molded with new technology for specific use and this sector is known as Technical textiles. Textile products manufactured primarily for their technical performance and functional properties comes under technical textiles.

Packaging Textiles is one of the most important areas in technical textile applications. It includes all significant innovations in the packing, covering and transportation of goods. Thus, it is used to contain, carry, store, and secure goods. The natural fibers used for Packaging Textiles are cotton, flax, and jute and are available in India in large quantities at a cheaper rate. They are durable and biodegradable. Polyamide, polyolefin, and polypropylene are the synthetic fibers used for making packaging products.

Polypropylene bags are stronger and withstand much higher impact loads. These sacks are easy to clean and resist fungal attack. These are quite competitive in price and have a good appearance. Thus, it finds an extensive variety of uses from sacking and large industrial bags to high tech medical applications. These bags require less energy to manufacture than paper or jute bags. These bags are reusable. The raw material and process used for manufacturing these

packaging textiles have a low impact on both energy consumption and on the environment.

Objectives

- To study various types of packaging textiles and the units involved in the manufacturing of these textiles.
- To find out the raw materials used and steps involved in the manufacturing of these textiles.
- To acquire knowledge about the distribution and marketing of pack-tech textiles.
- To examine the problems faced by the unit owners and remedial measures.

Methodology

Keeping the objectives in mind, the study was carried out in two phases.

Phase 1- Exploratory phase

The locale of data, sample design, method selection, and development of research tools and collection of data were the different steps taken in an exploratory phase. For this study interview schedule,the cum observation method was used.

Phase 2 – compilation and analysis of data.

Average and Percentage techniques were used to summarize the data.

Results and discussion

Raw Material used- PP granules were used for making woven and non woven fabric, PP woven fabric was used for making sacks, FIBC, leno bags and wrapping fabric. PP non-woven fabric was used for making shopping bags and tea bags. PP woven and non woven fabric were sandwiched with plastic or metal film in order to make BOPP bags or wraps. PP granules of different grades were used in the manufacturing of PP woven or Non-woven fabric. These grades were given according to quality.
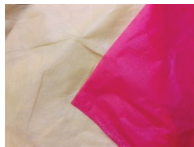
All the units were certified by ISO 9001:2015-food grade certification and Hazard Analysis and Critical Control Point (HACCP).

Table-1 Specifications of the PP granules

Grade	MFI(12)	Product
1030 RG	3	Woven sacks and wraps
1020 RU	2	FIBC
1030 FG or 1030 FGP	3	BOPP bags
3250 EG	25	Extrusion coating
350	35	PP non-woven fabric

Table-2Distribution of the units based onthe form of raw material used (n=15)*

Plate No.	Form of raw material	Image	Frequency	Percentage (%)
4.1	PP Granules		10	67
4.2	PP Woven fabric		5	33
4.3	PP non-woven fabric		5	33
4.4	Plastic film		7	47
4.5	Metal film		5	33

*multiple responses

Survey Statistics- (n=15)

Frequency of buying raw material

- Monthly 67%
- As per demand 33%

Mode of purchase of raw material

- Cash 33%
- Credit 13%
- Both 54%
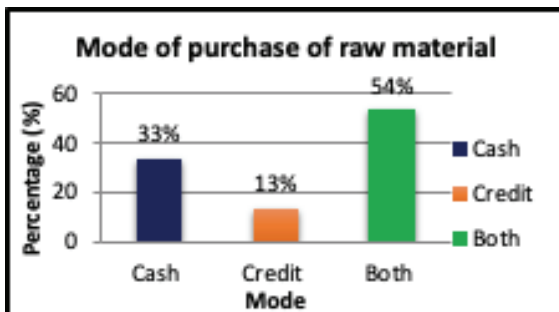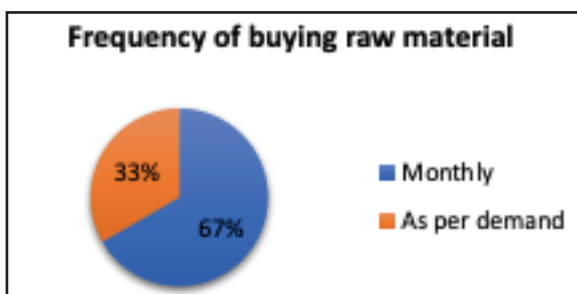
The above figure represents that most of the units i.e. 67% were buying raw material monthly and the remaining 33% of units were buying raw material as per requirement. The raw material PP granules was purchased from Reliance, IOCL, Exxon. Mobil. whereas PP woven and non woven fabric was purchased from Delhi, UP, Panipat and Kala Amb.

The data reveals that a maximum number of the units i.e. 54% bought raw material through cash as well as credit, only 13% of units use credit mode to purchase raw material and 33% of the units bought raw material through cash.

(n=15)
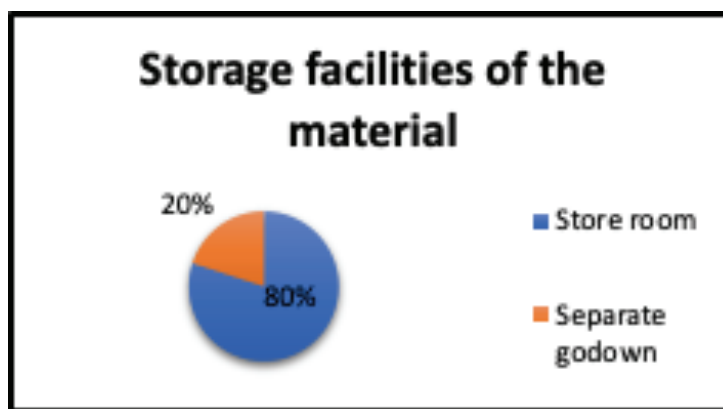
The above figure indicates that the raw materials were stored in a storeroom or in the separate godown. 80% of the units stored raw material in storeroom whereas the remaining 20% of the units had separate godowns for the storage.

Table-3 Machines used in Packaging Textiles

Name of the machine	Mode	Purpose
PP/HDPE tape plant	Automatic	Extrusion of PP granules in the form of yarns
Non woven fabric making machine	Automatic	Manufacture PP non woven fabric.
Circular weaving looms	Automatic	Manufacture of PP woven fabric and leno bags.
Laminating machine	Automatic	Used to laminate the fabric
Flexo printing machine	Automatic	Used for printing PP woven and non-woven fabric
9 roller or 8 roller printing machine	Automatic	Used for printing plastic films
Cutting machines	Manual, semi automatic and automatic	Used to cut the fabric
Sewing machines	Semi-automatic	Used to stitch the fabric
Tubor	Automatic	Used to make BOPP bags

Inspecting machine	Semi-automatic	Used to inspect the printing defects
Special packing and bale pressing machine	Semi automatic	Used to press the and pack the bundles
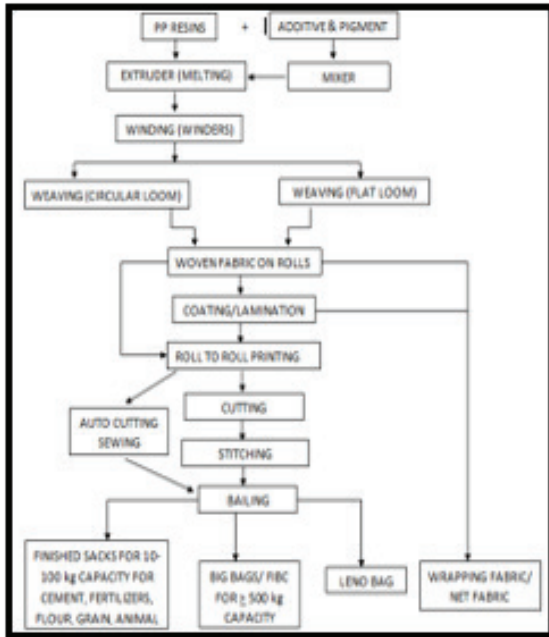
Fig. 1- Manufacturing Process of PP woven fabric and sacks
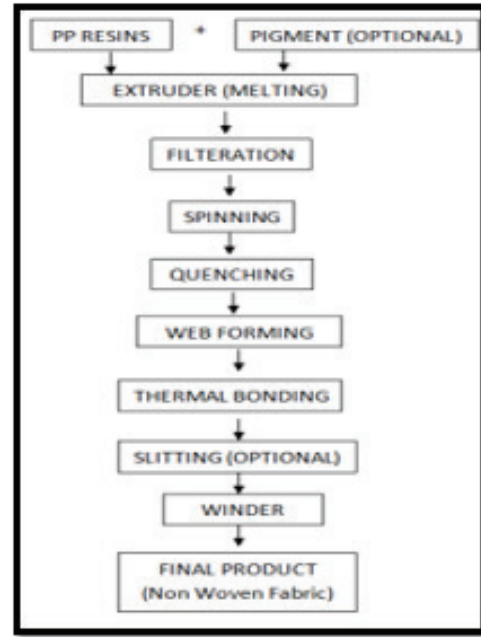
fig.2-manufacturing process of pp non-Woven fabric and sacks
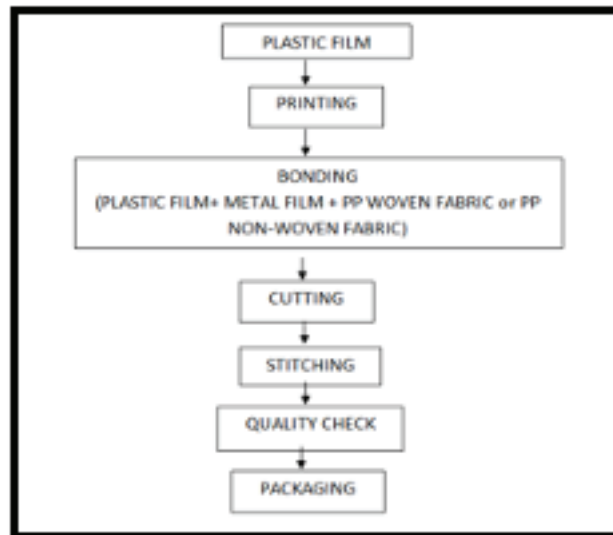
Fig 3- Manufacturing Process of Biaxillary Oriented Polypropylene Bags

Problems faced by the units

Problems keep arising in all units which were difficult to specify distinctly. Common problems faced by all the unit owners were the availability of permanent labour, quality, and price of raw material, maintenance, and repair of machines.

Non-availability of permanent labour affect the work process, as beginners required training to make them skillful. The respondents were trying to solve the labour problem by advertising the demand forlabour.

The high demand for raw material leads to an increase in price and hence affect the quality of raw material. The respondents were exploring different markets so that they got a better quality of raw material and more qualitative products could be manufactured.

As most of the machines were imported, so the maintenance and repair cost was a little expensive and hence affect the profit margin.

Changes in the industries over the years

Though this industry was not very old, some changes had taken place in terms of machinery and marketing.

Earlier cutting and stitching were done manually which was replaced by automatic cutting and sewing machines.

Change in the process of taking the order was also seen. Earlier, the representative or dealer took orders whereas in recent times applications in phones and the internet were the main source. An increase in exports and marketing through the internet helps in widen the sale.

All the above changes had taken place due to the advancement of technology and tough competition among unit owners.

Future plans

The size of the market for packaging textile was growing. All the respondents were satisfied with their business and some of them were planning to increase their production to cater to the growing market demand of packaging textiles.

Conclusion

Packaging textiles form the largest segment and hold forty-two% of the market share of Technical textiles in India. PP Woven sacks (excluding FIBC) represent around half of the technical textiles utilization under Packaging textiles. Woven polypropylene fabric is used for making sacks, FIBCs, BOPP, leno bags nd (un)laminated wrapping fabric whereas polypropylene nonwoven fabric is used in the manufacturing of shopping bags, BOPP bags, tea bags and (un)laminated wrapping fabric. PP nonwoven fabric manufacturing units were small scale units using a non-woven fabric making machine whereas PP woven fabric manufacturing units were medium scale units using PP/HDPE tape plant and Circular weaving loom. Packaging textile industry manufacturing PP woven and the non-woven fabric was a combination of textiles and plastic industry. The automatic cutting and sewing machines aided with computer numerical control can produce a huge quantity of bags with variation in size; with tremendous speed and efficiency in a short period. A common testing facility center should be setup by the Government for manufacturing units to provide necessary testing and certification to meet international demand. The increasing demand for

these products ensured a bright future for this industry which had plans to expand and compete in the international market.

The demand for packing material is directly proportional to economic growth, industrial production and trade as goods are produced and then distributed both locally and internationally. The growing environmental need for reusable packages and containers are opening new doors for textile products in this market.

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Unfolding Textile Industryas An Environmental Hazard and Benefits of Textile Waste Management

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Abstract

There are three basic needs that a man has food, clothing, and shelter. The textile and clothing industry is bound to be humungous, as it fulfils the second basic need of man. But the sad part is that human greed to wear glamorous clothes has ended up causing harm to the environment. The textile industry is one of the most pollution creating industries and has a large share in terms of air, water and effluents. With the population growing globally along with the rising standards of people, it has caused a tremendous increase in the textile demands. With the demand so high, the textile industry is moving in a fast direction and hence generating a lot of waste as well. Abundant textile waste has various adverse effects on the environment which needs to be managed. A World Bank study has predicted a 70% global increase in municipal solid waste by 2025, which means that the expected waste volume will rise from today's 1.3 billion tonnes to 2.2 billion tonnes per year. (Yalcin-Enis et al, 2019). Developing countries like India are at crucial risk when it comes tosolid waste dumping.Scantywaste collection and frequent disposal of solid waste are creating land and air pollution continuously which in turn, puts human health and environment on risk. Be it natural or synthetic textiles, their cradle to grave lifecycle is contributing to ecological degradation. Therefore, studying the environmental hazards linked with the textiles has become extremely alarming. This research paper is all about discussingthe relationship between textiles and pollution causedby different stages of production and broadly categorizing recycling according to the types of waste. The author has also tried to list down the benefits of textile waste management. Some suggestions are also given for converting textile waste into products.

Keywords: *Textile, Waste, recycle, Waste management, Environment, Sustainability*

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Introduction

The textile industry is considered to be one of the most polluting industries and therefore can be easily categorized under environmental hazards. If we look at the predictions, it is estimated that the world's population will reach 8.2 billion in 2025 (Ouda etal. 2016). Out of this population, nearly half of them is now living in urban areas. The rate of urbanization is growing higher day by day along with growing industrialization. This will have a direct impact on energy consumption

and waste generation. In this regard, A World Bank study has predicted a 70% global increase in municipal solid waste by 2025, which means that the expected waste volume will rise from today's 1.3 billion tonnes to 2.2 billion tonnes per year. (Yalcin-Enis et al, 2019).

The textile industry is one of the oldest Indian industries which has experienced growth and development throughout.But now this identity has been checked and challenged. The problem and concerns lie in anthropogenic sources of pollution. The industry is harming our environment and causing destruction to the biosphere. Keeping these factors in mind, there is a wake-up call for the textile industry and it needs to be more conscious about protecting the environment.

Textiles and pollution

The textile and clothing industry is considered to be the second-largest polluter in the world after oil. The textile industry commonly refers to the production of yarn, textiles and fabrics. The clothing industry refers to the production of garments. The textile sector also includes other types of products such as household textiles and technical/industrial textiles (for example, textiles for industrial use, hygiene, automobiles and medical industry). Pollution is the discharge of unwanted material, residue and energy into the environment. (Tiwari and Babel, 2013). The majority of operations that are performed typically inthe textile processing industry can be desizing, scouring, mercerization, bleaching, neutralizing, dyeing, printing and finishing. Textile and clothing industries generateall three kinds of waste i.e. solid wastes, liquid effluents and air emissions which in turn causing solid-waste pollution, water pollution and air pollution.

Air Pollution

Gaseous emissionsin the textile industry are considered as the second largest pollution problem in the industry after water pollution. Theoperations performed in textile mills produce atmospheric emissions. Air emissions include dust, mists from oil, vapours, odours and boiler exhausts. Other sources of air emissions in textile processes include drying and finishing operations, printing, dyeing, fabric preparation, and wastewater treatment plants.

Water Pollution

Textile production creates enormous water pollution as this industry is entirely dependent upon water from the preparation of the fibre to the finishing of the fabrics. The usage of high volumes of water in the fabric producing process isposing a threat to aquatic life. If we talk about surfactants and other agents like detergents, dispersants and emulsifiers which are used in almost every stage in the textile production process, they are causing a lot of foaming and effluent aquatic toxicity in the wastewater produced. Cotton is the largest natural fibre produced and consumed in the global textile market after oil-based fibres such as nylon or polyester. Cotton is called 'thirsty fibre' as it is produced using lots of water, chemicals and energy.

Solid-Waste Pollution

Textile manufacturing processes generate huge amounts of toxic and non-toxic solid waste. Some of the pollutants are listed below:

- Fibre lint, scraps, yarns, trimmings and packaging waste which are created directly from the textile production lines
- The cones, looms and reels used during manufacturing of textiles in factories

- Vegetable matter, woods, waxes and dirt produced in fabrication processes
- Leftover powdered dyes and dye containers, storage drums and plastic containers used to hold hazardous chemicals and solvents, scrap metal, Paper and paper sheets oily rugs, wastewater sludge and general domestic waste can contaminate the soil and groundwater sources if not properly disposed of.

When solid waste pollution is left in landfills for a longer period of time, it starts emitting methane into the environment which is a contributorto global warming. Solid-waste can kill marine life andcan directly impact animals as well as human beings who reside nearby.

Textile Waste Management

Waste minimization and pollution prevention have become the need of an hour. Waste management and recycling is the last resort. Stressing the need for industry and consumers to avoid making waste in the first place. But, even after that considerable amount of excess material has been generated. This has resulted in severe limitations on the space for the disposal of solid waste.

The broad classification of Textile waste is as under:

1. Pre-consumer Waste
2. Post-consumer Waste

Pre-consumer waste is the waste which is produced during the spinning of yarns, fabrications of clothes and manufacturing of garments. These items have not yet been used by the consumers are called pre-consumer waste.

Post-consumer waste are the items that are discarded after use and are popularly known as household waste or dirty waste. Examples are any type of garment or household article.

Both the categories of waste should be recycled to maintain the balance in the environment otherwise they will lead to the closure of landfills as well as will be hazardous for human beings, animals and aquatic lives.

Benefits of textile waste management

Waste recycling is a very important issue to save natural resources and help minimize climate change (Umar et al, 2017). Since textiles are almost 100% recyclable, everything in the textile and apparel industries should be utilized (Hawley, 2006). With growing environmental awareness and concerns about the ecological impact, the need to optimize textile waste management has becomemore significant. Therefore, the textile and apparel industries are making efforts to decrease textile waste.

The researchers are triggered by the waste generated from the textile industry waste and therefore has listed down some of the benefits of textile waste management.

1. It decreases the need for landfill space and many problems related to that such as synthetic fibres don't get decomposed and woollen garments produce methane during decomposition contributing to global warming
2. Water and energy can be saved through colour sorting of textiles as no re-dyeing is required
3. Demand and cost of purchasingarealso reduced for textile chemicals like dyes, emulsifiers, fixing agents, etc.
4. Reduction in wastewater as the items does not have to be thoroughly washed with large

volumes of water

5. Improving wastewater quality and reducing treatment costs.
6. There will be less pressure on fresh resources
7. As fibres get locally available, they don't have to be imported frequently thus reducing pollution and saving energy.
8. Recycling provides both environmental and economic benefits.
9. In business perspectives, it increases profitability and improveenvironmentally responsible public image
10. Clothing and textile recycling encourage the development of additional markets because raw materials created from recycling generally cost less, making their use attractive and desirable to manufacturers. This, in turn, leads to the development of more markets for reclaimed fibres
11. It cancreate job opportunities.
12. Contribute to social responsibilities.
13. Protecting the planet for the future generation.

Suggestions for some textile waste recycled products:

Garment lining, upholstery, insulation and sound absorption in automobiles, felts, furniture stuffing and padding
Fabric fruit basket, foot mats, bottle covers, laundry bags, hot pads
Quilts, blankets and carpets
Cotton can be used for making rags, high-quality paper, wiping cloth
Medical products such as bandages, diapers and other disposables items
Threads waste can be used in making mops, padding, and home furnishing

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Innovations and Product Diversification in Panja Durries

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Abstract

The present study entitled "Innovations and Product Diversification in Panja Durries"was taken up to study the development of Panja durries in the villages of Palwal district Haryana and to design and develop products for diversification.This study was conducted in two phases. The first one focused on the development of Panja durries in the villages ofPalwal district of Haryana. In the second phase, a total of thirty designs were made using weaving, a set of the table runner and table mats along with geometrical, floral, animal and bird motifs. Further, graphs were prepared for creating designs, to represent one repeat of the design.The designs were displayed for evaluation to a panel of judges which comprises fifteen experts from the faculty of Clothing and Textile Department along with fifteen post-graduate students of Government Home Science College, Chandigarh. The topmost preferred design was selected for the woven table runner and table mats.

Keywords: *Weaving, Panja Durries, Product diversification*

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Introduction

Weaving is said to be the oldest art in the world and claims to belong to the early youth of the human race.The evidence for the existence of the art of weaving has been found in Egypt around 3000 B.C, in Peru 2000 B.C, in Swiss lake Dwelling around the late Stone Age and in Denmark around Bronze Age. The weaving which is the process of the interlacing of two yarns at a right angle produces not only cloth but other textile materials also such as carpets, kilims, durries, etc (Jaitly, 1990). The first floor covering spread over a whole floor was probably a layer of leaves, straw or the skin of animals.Floor coverings have always been an important part of the interior of a home in India, the use of furniture being very limited. Most of the living was done at the floor level that seems to be the reason for the extravagant use of galichas, coir durries and other related material (Ahuja, 1999). Durries which is essentially a cotton woven thick fabric meant for being spread on the floor was developed all over India and is an indigenous floor covering having a rich variety of designs. In earlier days, girls were taught to weave duration very young age, which termed as a part of their dowry. Durries are familiar objects in almost every home in the villages of Haryana. Mostly handwoven cotton and cotton/wool mixtures, in bright basic colors such as yellow, red green and blue, are made in Panipat, Ambala, and Kurri (Hissar). Durries with floral, geometrical, birds and

animal motifs are especially attractive. They are used on floors, beds, and divans (Saraf,1982). Panja Durries weaving forms part of India's glorious weaving tradition. This craft is mostly used for making durries (light woven rugs used as a kind of floor covering).The craft gets its name from a metallic claw-like tool calledPanja. Panjaused to beat and set the threads in the warp. The designs on those brightly colored durries include stripes, stylized birds and animal forms. One-color is woven to the required width, then interlock with the next color and interlock again, resulting in a reversible design. Durries weaving requires spun yarn, a frame to stretch the warp strings, a heddle or rachh to separate and lift alternate warp strings to insert the warp yarn and then the beating to the weft across the warp by a long-handled metal fork tool called panja(Jaitly, 1990). Usually, it is the women of Jaat and Khatri community who are involved in the panja durries weaving. They weave through the year during their free time for about three or four hours a day. During the harvesting time, however, no weaving is done. Since the weaving is done entirely with the fingers, several persons can weave in unison panja durries (**Varadahrajan, 2008).**

Significance

The present study will be helpful in the capacity building of Panja durrie weavers by providing support in terms of product diversification, design development, and raw material. This would also guide the artisans to start their own business by making new products with a variety of patterns. This study will empower handloom weavers and build their capacity to enhance the competitiveness of their products in the domestic as well as the global market in a sustainable manner. It will further help in conserving this art of weaving.

This study was thus taken up with the following

aims and objectives

1. To study the development of Panja durries in the villages of Palwal district Haryana.
2. To design and develop products for diversification.

Limitations

1. The present study was limited to five villages of Palwal district (Haryana) only.
2. The development of products was limited to runners and table mats only.

Methodology

This study was conducted in two sections. In the first section, fifty respondents were selected randomly from five villages falling within 10 km of the radius of the Palwal district of Haryana state to study the existing durrie weaving technique. The survey method was adopted to collect the required information.Questionnaire cum interview schedule was framed keeping in mind the aims and objectives of the study. The collected data was analyzed in the steps involving coding, tabulating and inferences were made and data was presented in the form of pie charts and bar diagrams.

In the second section,the creation of designs is done. A total of thirty designs were made using weaving, a set of a table runner and table mats with geometrical and stylized floral, animal and bird motifs. Graphs were prepared of creating designs, to represent one repeat of the design. The designs were displayed for evaluation by a panel of judges including fifteen experts from the faculty of Clothing and Textile Department and fifteen students of post-graduation of Government Home Science College, Chandigarh. The topmost preferred design in the topmost color scheme

was selected for the weaving of set ofa table runner and table mats.

Results and Discussion
Section: I

Major findings of the study are as follows:

All the respondents were females only as they were weaving for their household use. 64% of artisans were married while 36% were unmarried. Most of the weavers (92%) were literate whereas 8% were illiterate. The majority of the respondents (50%) were in the age group of 15-20 years when they started weaving Panja durries whereas some of the respondents (32%) were in the age group of 20-25 years. Few respondents i.e. 10% and 8% weavers started weaving Panja durries in the age group of 25-30 years and 10-15 years respectively. Thus it could be concluded that half of the respondents were adolescents when they started weaving Panja durries. Most of the respondents (94%) made durries for their own use, whereas few respondents (6%) made durries for commercial purposes. They took local orders only. The respondents who made durries for their own use usually made it in their leisure time and spent 5 to 6 hours daily. While the respondents who made it for commercial purpose spent 7 to 8 hours daily to complete the order. 84% of respondents had their own loom whereas 16% of them borrowed it from others. The respondents who made durries forcommercial purpose had their own loom. All of them needed two persons to operate the loom.

All the respondents used white cotton yarn for warping. For weft, both white and colored cotton strips were used by most of the artisans (84%) and the woolen yarn was used by few weavers (12%) whereas jute was the least preferred material. Thus it could be concluded that mostly strips of dyed and undyed cotton fabric were used for weft, while the white cotton yarn was used for warping. The strips of cotton fabric were got dyed from the local dyers if any color was not available. The cost of white cotton yarn varied from Rs. 80 to Rs. 100 per kg, while the price of strips of cotton fabric was in the range of Rs. 120to Rs. 150 per kg. The average cost of woolen yarn was from Rs. 250 kg to Rs. 270 per kg. The weavers bought the raw material from the local market only as it was easily available. Price and quality were considered by 40% and 30% of respondents respectively as the main factors for the selection of raw material. While color and weight were considered by 22% and 8% respondents respectively. Thus it could be concluded that they kept in mind the price of raw material as the main factor so that the cost of durrie was within their budget or of the buyers.

The weavers used geometrical designs only as it was easy to weave. They did not make a graphical representation of the designs but did the weaving with the counting of threads. They kept the design in front of loom while weaving.The tools and types of equipment used by all the respondents were adda, scissor or knife, hatha, and creel.The respondents used plain weave only for weaving Panja durries.

A durrie was woven in seven to eight different colors. The colors which were unavailable, they got it dyed from the local dyers. The weavers informed that they mostly used following colors:

English name of colors	Vernacular name of colors
Red	Lal
Yellow	Peela
Green	Hara
Dark Brown	Coca-cola

Maroon	Maroon
Turquoise	Phirozi
Black	Kala
White	Safed

Section: II

A total of thirty designs were created for the table runner (TR) and table mats (TM) using geometrical and stylized floral, animal and bird motifs. The original size of the set of table runner - 50"x13'' and table mats - 12"x18". Designs and color schemes were selected by a panel of thirty judges. Selected colors were light green, medium green, and dark green in the monochromatic color scheme. The design no.4 obtainedmaximum score i.e. 712 and was at first position. Design no. 21 was at second with 669 marks. Design no. 30 was third with 668 marks. Design no. 11 and 2 were at fourth and fifth ranks respectively. Sixth to tenth ranks in descending order was bagged by Design numbers- 1, 3, 8, 24, and 26 respectively.

The cost price of one set of table runners and tablemats is Rs. 1,920/- depending upon the design; white and colored cotton yarn used for warp and weft; binding used and labor charges. A profit of 25% was added to the cost price to find the sale price and itwas Rs.2, 340/-.

Conclusion

Durrie weaving was not practiced as a major income-generating activity by the majority of the respondents. It may be concluded that lack of adequate market outlets dampens the enthusiasm of artisans who need to be helped in terms of product diversification consumer preference,

Design No. 4

latest product styles, and designs. Despite thenon-availability of raw material as well as lack of financial assistance, the majority of the rural women adopted durrie weaving as an income-generating activity. The need of the hour is to hon their skills provide them sufficient training as per the requirement of the market-driven economy. It will support the rural women weavers for promotion of sale and supply of their respective products in the urban market and leads to incomegeneration and helps in improving the quality of life.

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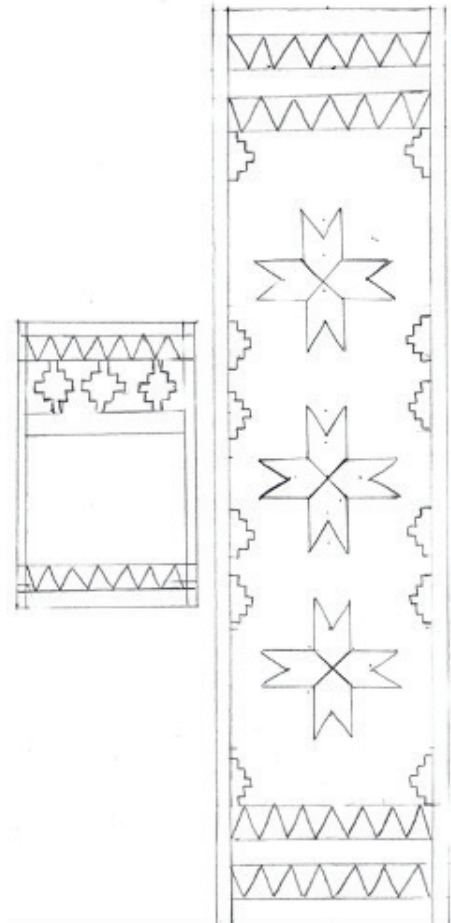
Innovation in the Field of Clothing and Textiles: Designing and Construction of Footwear using Knot Craft-Macrame

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Abstract

Apparels and Textiles have long been a source of innovation in the design, development, and production of goods profoundly influencing the fashion sector. The design is continuously gaining importance in the development of the products so as to meet the various requirements, to produce high-quality goods. All these factors have become key elements of the development in the present economic and social situation. The eternal demand for change is the process that keeps fashion alive and innovative. Fashion senses the changes taking place in the world and responds to them sensitively and immediately. These changes can be directly perceived in the way the individuals dress, giving unambiguous information about the wearers, their wealth, taste, age, national characteristics, etc. This paper explores the acceptance of yarn craft macramé for the creation of footwears. Though Macramé was on the verge of becoming a past, it regained its name when wall hangings, cloth articles, bedspreads, shrugs, tablecloths, draperies, plant hangers and other goods made with the use of macramé were reintroduced in the market. The study is an attempt to explore the use of yarn craft macramé in making footwear. This will give something new to the fashion world and will also be helpful to people who are engaged in this beautiful craftwork by expanding their product line and thereby increasing their income.

Keywords: *Macramé, Footwear, Innovation, Cords, Designing*

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Introduction

India is a land where every corner is evident with the greatness of art and craft. The textile crafts of India are diverse, like weaving, knitting, lace making, felting, knotting, braiding, needle punching etc.Macramé, the art of creative knotting for fabric making is one such ancient craft known to man.

In today's world, it is not only the clothing that spells elegance but accessories like footwear, handbags, and jewelry etc. also count.This study is thus an attempt to revive the age-old macramé craftby making footwears using all suitable materials and all possible macramé techniques to

create something trendy, unique, stylish yet comfortable.The objectives of the study were

- To study the basic and decorative macramé knots
- To find out the material suitable for macramé
- To design foot wears using different macramé techniques.

Methodology

For the present study, the information about macramé was collected by visiting various libraries, museums and through the internet. Various books, magazines, newspapers, online articles, journals and published as well as unpublished thesis were referred.

For the selection of material for macramé footwear, a market survey of cords and accessories was done in leading shops of Chandigarh. Pantone fashion color report for accessories spring/ fall 2013 and spring 2014 was referred for the selection of colour. The standard foot size no.38, which is most saleable size was chosen for the construction of footwear.

Designing was done under four categories of footwears which were- Thongs/ Slippers, Ankle strap sandals, Slides/ Slip-on, and Bellies.These categories were chosen because it was easy to adapt the macramé knots into these styles. The top two designs of each category were chosen for construction by a panel of judges.

Marketability, as well as consumer acceptability of the foot wears, was checked.

Findings of the study

- For construction of macramé footwear sample no. 12 and 3 were chosen.

Sample no. 12

Sample no. 3

- For the selection of colour, eight most preferred colour were chosen from the pantone fashion colour report for construction of footwear.
- **Two most preferred designs of footwear under Category- A (Thongs/ Slippers)**

DESIGN NO. 5(A)   DESIGN NO. 9(A)

- Two most preferred designs of footwear under Category- B (Ankle strap sandals)

DESIGN NO. 4(B)   DESIGN NO. 5(B)
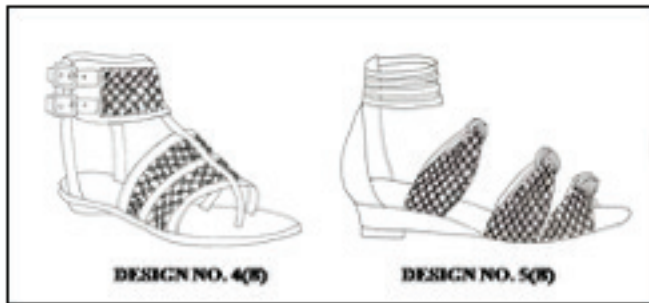
- Two most preferred designs of footwear under Category- C (Slides/ Slip-ons)

DESIGN NO. 4(C)   DESIGN NO. 12(C)
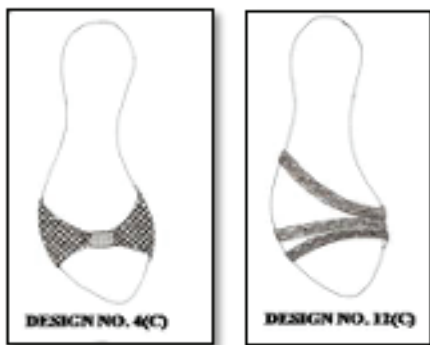
- Two most preferred designs of footwear under Category- D (Bellies)

DESIGN NO. 1(D)   DESIGN NO. 5 (D)
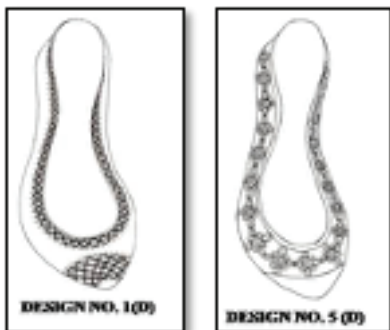
- The cost of foot wears was calculated by adding the price of cords, materials, accessories and labour cost. A profit margin of 15% was added to the cost price to calculate the selling price. The estimated cost ranged between 700-1000.
- Marketability and consumer acceptability was also checked for the appearance, comfort and durability and cost of the foot wears. Majority of the consumers and shopkeepers liked the over-all appearance of the foot wears and they also found the cost reasonable. The designing and appearance was also appreciated. They found the designs unique and innovative

Design no. 1 ₹ 715/-	Design no. 2 ₹ 720/-	Design no. 3 ₹ 800/-	Design no. 4 ₹ 770/-
Design no. 5 ₹ 800/-	Design no. 6 ₹ 720/-	Design no. 7 ₹ 950/-	Design no. 8 ₹ 870/-

Conclusion

In the present world, fashion changes every second and it is essential to have creative ideas, especially in the field of designing. In this ever-changing demand for newer fashion, there is a need to revive and change the old crafts in new forms. This study **Designing and construction of footwear using knot craft-Macrame** will serve as the guidelines for designers to develop innovative creations with the macramé technique. The purpose was to discuss ways of expanding the traditional role of the designer to include macramé craft in creating footwears and to suggest a range of potential fashion futures. It has introduced something new for designers, manufacturers as well as for the consumers. The rich treasure of traditional craft will now give shape to modern textiles and will make the fashion-conscious section of society aware to the rich heritage of this traditional craft. The study will also provide a platform to young entrepreneurs. Skill development workshops for rural women could also be conducted to help them support their family income and to revive this traditional art.

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An Investigation of Professional Development among Educational Policy-Makers, Institutional Leaders and Teachers

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Abstract

This study investigates professional development among educational policy-makers, institutional leaders and teachers. Through a synthesis of associated literature, this study identified a large number of papers focusing on professional development among teachers and lecturers. However, only a few studies on professional development among leaders and managers of educational institutions were ascertained, and research on professional development for educational policy-makers is also limited. This paper first presents key aspects of professional development. It then reviews professional development theories and practices for policy-makers, institutional leaders and teachers. Finally, discussion and recommendations are provided.

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Introduction

Professional development has emerged as a key part of human resources development in education and educational leadership and management. Professional development benefits individuals, institutions and organizations, and educational networks and systems (Mulvey, 2013). Teachers/lecturers, educational leaders, and policy-makers all play vital roles in education activities and should be central to professional development processes in the field of education. Associated literature illustrates that while research into professional development among teachers and lecturers has been abundant, studies on professional development for educational managers and administrators have been limited (Thorpe and Garside, 2017).

This study investigates professional development within higher education at three levels: the micro level, the meso level, and the macro level. After highlighting professional development concepts, the paper presents professional development for teachers and lecturers (the micro level), followed by a review of professional development for institutional leaders (the meso level) and educational policy-makers (the macro level). The final section of this paper discusses these findings and provides recommendations that emphasise the importance of professional development policies and practices, particularly those for educational leaders and policy-makers. This research contributes to the lack of literature in professional development at the meso and macro levels.

Professional development for teachers

Interest in professional development among teachers and lecturers has grown in many countries across the world. Most studies exploring professional development within education pertain to teachers or lecturers. Professional development programmes are frequently designed to promote change in teachers' attitudes, beliefs and perceptions. In addition to the general definitions of professional development discussed above, a number of teacher professional development definitions have been proposed. According to Day and Sachs (2004: 13), professional development for teachers is 'the process by which teachers review, renew and extend their commitment as change agents to the moral purposes of teaching'. Avalos (2011) defines teacher professional development as how teachers learn to learn and how they transform their knowledge into practice for the benefit of their students' improvement. Similarly, Guskey (2002: 381) argues that teacher professional development programmes are 'systematic efforts to bring about change in the classroom practices of teachers, in their attitudes and beliefs, and the learning outcomes of students'.

Existing literature has also adequately defined the purposes of professional development programmes among teachers and lecturers. This type of professional development aims to initiate changes in teachers' attitudes and beliefs and assumes that such changes lead to specific changes in classroom behaviours and practices, which in turn result in improvements to student learning. Some researchers have also reported that teachers participate in professional development activities because they want to become better teachers. Teachers view these programmes and activities as one of the most promising and readily available pathways to increase their own professional competencies. In addition, teachers are also involved in professional development programmes because they believe these programmes will help 'expand their knowledge and skills, contribute to their growth, and enhance their effectiveness with students' (Guskey, 2002: 382).

Professional development for institutional leaders

In this study, the terms 'institutional leaders' and 'educational leaders' refer to presidents or rectors of higher education institutions and school principals. Those in these positions are responsible for encouraging teachers and students to achieve new levels of performance and learning. Educational leadership plays a key role in day-to-day institutional operations, instructional practices and student achievement (Goldring et al., 2012). Professional development for educational leaders is crucial. New educational leaders recently appointed from academic positions in research or teaching must be quickly provided with training that helps them develop the new and different knowledge and skills required to manage their institution (McDade, 1987). Educational leaders who are already in their position should also receive considerable further development and support (Russell and Cranston, 2012). However, a lack of research on professional development for educational leaders persists. In fact, the literature offers little evidence of the nature of professional development for school leadership or its typical features (Goldring et al., 2012). The main purposes of professional development for educational leaders are as follows: (1) to provide management and leadership knowledge and skills, (2) to identify effective instruction methods that support teachers in instruction improvement, (3) to effectively implement institutional practices. Like teacher professional development, professional development for educational leaders takes many forms. The most popular are workshops, conferences and seminars, mentoring, shadowing and coaching. In addition, according to

McDade (1987), educational leaders' professional development strategies are categorised into four groups: national institutes and internships, administrative conferences, conventions of national associations, and short seminars, workshops and meetings. Programmes of professional leadership development are typically conducted by education systems, universities, government organisations, professional associations, non-profit organisations or for-profit organisations.

Professional development for educational policy-makers

A policy-maker is defined by the Cambridge Dictionary (online) (2017) as 'a member of a government department, legislatures, or other organisation who is responsible for making new rules, laws, etc,'. Educational policy-makers are responsible for developing legal documents that guide or instruct students, teachers, educational managers/administrators, educational institutions and other stakeholders to follow or implement certain regulations in an education area. Policy-making is an important aspect of education, because effective policies promote development, while poor policies can encourage waste in human resources, time, labour, materials and budget. Obviously, policy-making is demanding work, and policy-makers must possess expertise and deep knowledge in their area to form effective policies (Knuth, 1995). Nevertheless, many policy-makers, particularly those in developing countries, arguably lack knowledge and experience to develop appropriate policies. The main reason for this shortage of knowledge and experience, for example, the in quality assurance, is claimed because the majority of policy-making officials have been assigned to work in a new field where they lacked professional and academic training.

Discussion and recommendations

Teachers' professional development programmes and associated research far outpaces those of educational leaders and policy-makers. However, professional development among teachers and lecturers still faces many challenges that can prove programmes ineffective. Far more studies have identified the failures of professional development programmes than have espoused their success (Guskey, 1991). A variety of factors contribute to the ineffectiveness of such programmes. The reasons behind such programme failures are the ill-consideration of two important factors: (1) what motivates teachers to engage in professional development activities, and (2) the process by which change in teachers typically happens (Guskey, 2002). Teachers' motivations and change process should be well defined during the formation of a professional development programme. Professional development among educational leaders shares a number of elements with teacher professional development. Those involved in professional development for educational leaders should be familiar with these similarities. Finally, professional development for institutional leaders must include a collegial network of support that promotes the exchange and discussion of ideas and strategies between leaders.

Conclusion

Professional development aims to enhance individuals' career competencies and enable them to perform successfully in professional roles. In the field of education, key players, including teachers, educational leaders, and policy-makers, must regularly participate in relevant professional development programmes to gain or improve their knowledge, skills, and abilities. Professional development has led to changes in beliefs, attitudes, and actions of individuals. At the macro level, it may be changed in policies made by policy-makers that alter supporting methods and institutional leader management (at the meso level). Changes in policy may

result in changes to teachers' instruction and assessment methods (at the micro-level), which in turn improves student learning outcomes. While professional development for teachers has been the target of great concern, little information or research has been published regarding professional development for educational leaders and policy-makers. Educational leaders rely upon professional development programmes to provide them with leadership and management knowledge and expertise, and educational policy-makers need professional development programmes to develop new knowledge and skills necessary to create effective policies. Their changes, as the result of being involved in professional development programmes, have direct or indirect impacts on educational institutions, the educational system, and student learning.

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Recognition of Doodling as an Art, Accelerating Creative startups

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Abstract

Arts and entrepreneurship is not a new area of investigation but it is far from constituting a consolidated topic. The purpose of the study is to shed light on Doodling as an Art and Arts & entrepreneurship literature, outlining the most significant issues emerged and their trajectories for future development. This paper identifies how Doodling is awaking the hidden Artist of layman and connecting them to Creative industry by addressing and training them in the Creative environment of the Arts to incubate their ideas and develop their future or already existing projects or startups.

Keywords: *Doodling Art, Artist, Entrepreneurship, Creative industry*

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Introduction

Art for Art's sake has long been an imperative difficult to demolish. The goal of the Artist, in the purest sense of the term, has always been considered the expression of his own Artistic talent. Indeed, often Artists seemed worried that addressing business-related issues could undermine the Artistic value of what they created. Over the last 20 years, something has changed: there has been an increasing interest in entrepreneurship; it translates into actions aimed at the entrepreneurship, Artist and entrepreneur. With regard to entrepreneurship, it translates into actions aimed at the creation, discovery of entrepreneurial opportunities. Instead, Art is the result of Artistic actions through which Artistic talent is expressed by using a certain Artistic language. Entrepreneurship is about the discovery and pursuit of new Art ideas, using a multitude of Artistic expressions and organizational forms as vehicles by which to express and convey these ideas to the public. Combining creativity and innovation, it leads to the creation of something new in the area of culture. Art is one amongst the various identity of India. India is known for its Art and culture worldwide. Art is one amongst the various identity of India. India is known for its Art and culture, worldwide India is the country that has a diversity of Art forms, different styles of music and performances. Indian cultural diversity and heritage will provide fertile ground for developing the Creative industries. Art is the expression or application of human Creative skills and imagination typically in a visual form and work to be appreciated primarily for their beauty or emotional power. Art presides in every human irrespective of his knowledge about it. The success

of a work is determined considerably by its capacity to redefine an idea to give it altogether different dimensions. Art is believed to be consisting of number of features, one of them being imagination. Other trait can be identified as uniqueness or integration. Another striking quality in Art form is expressionism not be confused with realism. Expressionism is frenzied, intense and fantastic. Doodle Art is the fun way of expressing our inner self. A doodle work usually portrays feelings of the Artist. The more the work is made with feeling, the more exciting work is produced. Doodling is an action to scribble absent-mindedly. Everyone has hidden Artist in themselves which is awakened by some means or inspiration or sometimes just by chance It is enriching exercise. Doodling opens doorways into imagination: there is no such thing as mindless doodles. Doodling Art can create wonderful results collaborating with other Arts. Creative startups created by creatives for creatives. The Creative industries are not only of interest of the trained Artists or enterprises, but of interest to everyone else. Neither are they the concern of developed countries but also of developing countries.

Objectives

To create the awareness regarding Doodling as an Art

To awake the hidden Artists and to find out after effects.

To develop designs inspired from scribbling and to create some Artifacts

To check the consumer and market acceptability of the Artifacts for Creative startups.

Methodology

In order to review the literature on Doodling as an Art in context to creating good opportunities in Creative industry for an Artist researcher followed a rigorous methodological approach, starting with the definition of precise selection criteria to identify the resources to examine and culminating in a qualitative analysis of them.

- Exploration
- Dissemination
- Creation of products

Findings
Exploration

To acquire detailed information regarding the concept, history, components, benefits and other characteristics of Doodling Art and colour blending. The investigator visited various sources such as:

- Libraries: Various libraries were visited to collect the information regarding Doodling Art.
- Internet: It was also surfed by visiting various websites to collect required information.

A market survey was conducted to explore or to check suitability of the doodle Art for product creation visiting various home décor shops of tricity. Shopkeepers were asked to fill the questionnaire regarding end use of the product and to make it affordable with higher market demand. Collected data was analyzed and selected product range (living area range) was finalized which includes cushion covers, lampshades, wall panel and tea coasters.
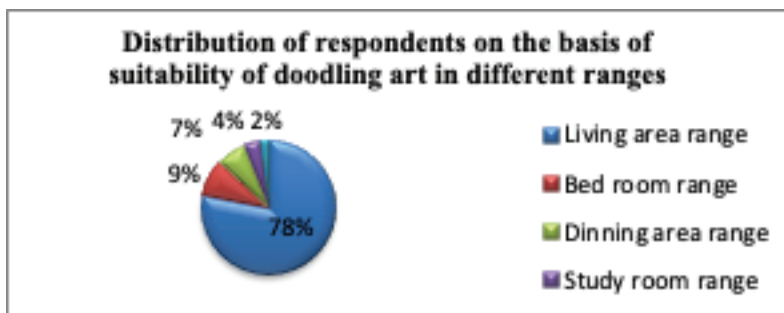
Figure 1: distribution of respondents on the basis of suitability of Doodling Art in different ranges.

The above figure reveals that majority of respondents i.e. 78% opted suitability of Doodling Art in living area range, they found Doodling designs very unique and innovative and best outcome will come in living area range only with higher market demand. 9% of the respondents opted for bedroom range, 7% opted for dining area range, 4% opted for study room range and rest of 2% opted for kitchen range.

Dissemination

Awareness regarding Doodling as an Art and training the students for small startups

The objective of dissemination of Doodling Art was achieved by conducting workshops for students on Doodling Art. The workshop conducted received positive responses and ample interest was shown by students for attending more such programs.

Workshop was conducted with the aim of spreading awareness among students regarding Doodling Art and training them in this Art, workshop was initiated with small exercise by distributing paper pen with in the class and discussing about Doodling, techniques of Doodling and most important how Doodling can be beneficial for the doodler (a person who scribbles or doodle). A PowerPoint presentation was prepared through which the techniques and benefits of Doodling were explained to the students. The workshop concluded with the showcasing of works of some famous doodlers and doodled designs of the researcher who was conducting workshop.

The students were requested to fill the feedback forms to better understand the acceptability of the session . The results of feedback forms were analyzed.
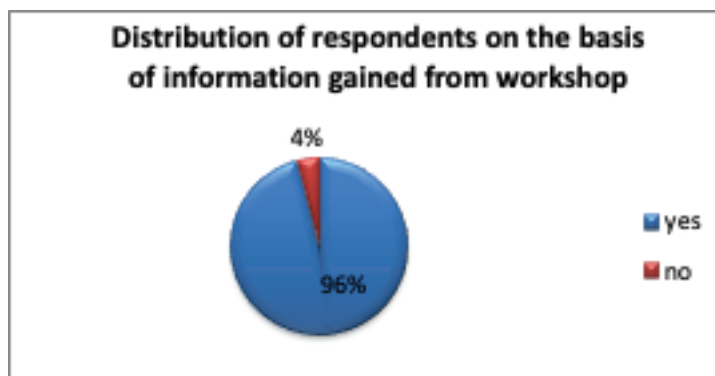
Figure 2: Distribution of respondents on the basis of information gained from workshop.

Above table reveals that up to 96% students agreed that knowledge was gained through the workshop about Doodling Art.
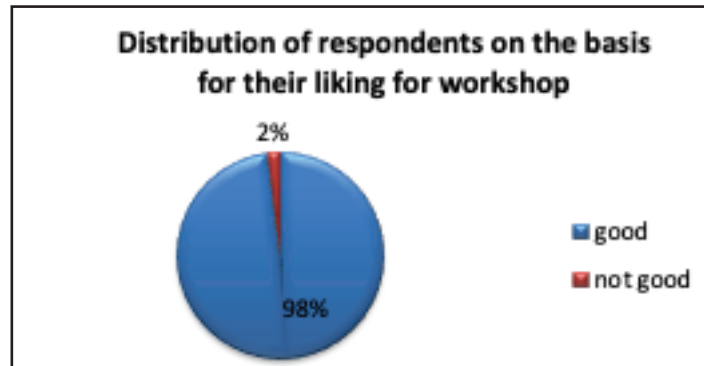
Figure 3: Distribution of respondents on the basis for their liking for workshop.

The above figure reveals that 98% of the students found to assess the workshop as excellent, while 2% students rated it as not good. Thus response received from majority of students was positive.

Creation of product range

Designs were developed taking inspiration from student's scribbled designs on their notebooks when their mind is somewhere else occupied. Designs with significant depiction were used as inspiration for designing of wall panel. There were very few designs with significant depiction and the rest of designs were used for stylization of whole range accordingly.

In this step researcher converted simple drawings into Art designs by stylizing the students scribbling. Some examples of this are as follows:
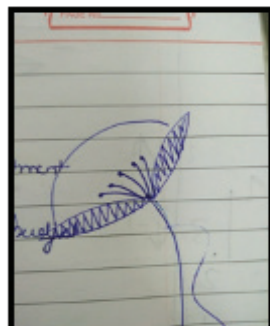
SCRIBBLED DESIGN- 3
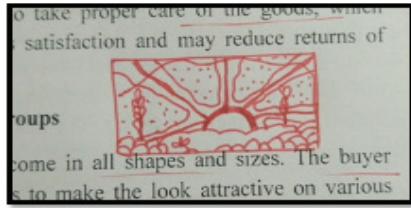
DEVELOPED DESIGN- 3

SCRIBBLED DESIGN-4
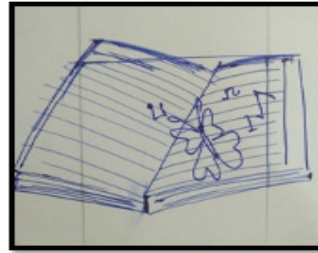
DEVELOPED DESIGN- 4

Created designs were constructed and costing was done to check the market and consumer acceptability.

Range1

Range 2

Costing

The cost of the product was calculated by adding cost of fabric, framing, labour and adding 15% profit.

Cost of range 1 Rs. 9500/- and cost of set 2 Rs. 10300/-

Market and consumer acceptability

Market and consumer acceptability was done and responses from both for living area range were found appreciable, very innovative, unique and exclusive.

All the shopkeepers liked the designing of the products. They found the designing very unique and innovative.
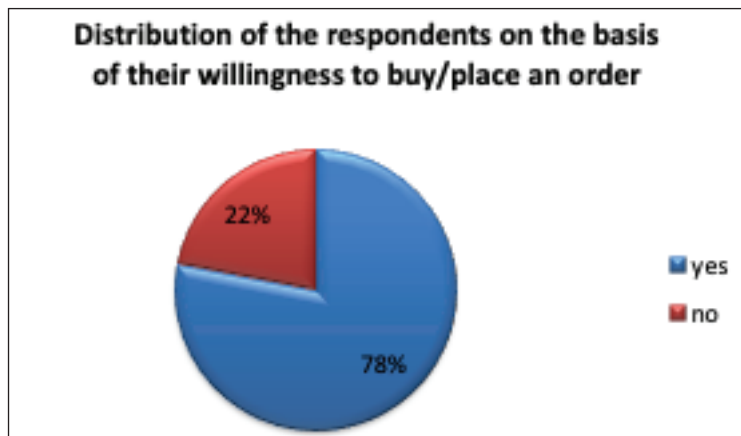
Figure 4: Distribution of the respondents on the basis of their willingness to buy/place order.

The above figure reveals that 78% of the shopkeepers wanted to place order. They were ready to buy the products at the coated price whereas 22% of the shopkeepers like the products but wanted to place order later on.
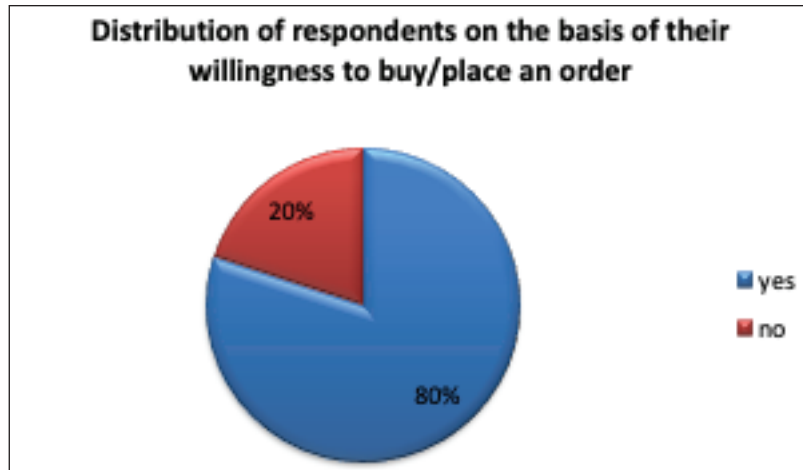
Figure 5: Distribution of the respondents on the basis of their willingness to buy/place order.

The above figure reveals that 80% of the consumers wanted to place order. They were ready to buy the products at the coated price whereas 20% of the consumers like the products but wanted to place order later on.

Conclusion

The study "Recognition of Doodling as an Art: Accelerating Creative startups" opens doorways into imagination: there's no such thing as a mindless doodle. The physical act of producing a doodle necessarily engages the mind, opening doorways into imagination, the intellect, and the hidden centers of insight. Doodling art best serve the society in both ways i.e. psychologically and artistically. The research strives to work towards spreading awareness regarding doodling art to awake the hidden artist of laymen and help them in starting their own startups.

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Home Economics: A Quintessential Tool for Empowerment

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Abstract

Home Economics, an academic discipline that focuses on the management and economics of everything in and surrounding the home, including those who inhabit it, was established at the University of Puget Sound in 1910. Christened Domestic Science, the department aimed to prepare young women for technical and scientific careers in foods and cookery, household chemistry, physiological chemistry, textiles and needlework, household art, fine arts, household administration, home nursing, and house structure and sanitation.

Keywords: *Home Economics, Household Chemistry, Home Science*

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Introduction

Emerging as early as the 1880s, the goal of home economics was not only to teach women how to cook and sew but also provided an avenue for young women to attend college. It was not until the early 1900s that home economics became an organized area of study, developed by Catherine Beecher and Ellen Swallow Richards who founded the American Association of Family and Consumer Sciences. It was these pioneering women who first set out the seven areas of home economics in an effort to teach girls how to properly care for a home and family and to open new career avenues. According to James (2003), Home Economics is a broad field of knowledge and services concerned with all phases of family life. Lemchi (2001) also noted that Home Economics is a skill-oriented subject that is capable of equipping individuals with basic skills and knowledge that will help them to be self-reliant and thereby contribute to the social and economic development of the individual, the family and the nation at large. Some of the careers open to Home Economics include designing clothes, clothing retailers, home services representatives; food specialists, a home economist in journalism, nutrition and dietetics, family and child development, catering advertising, magazines and public relations writing, television, publications, business, and industry.

Home Economics is also a diversified filed of knowledge that involves education and research in many areas including food and nutrition, clothing and textiles, family life and Human Development, Household and Institutional resource management and community health. Home Economics is a course that has a greater role to play in empowerment.

Today, the family's economy plays a more important role that is not limited to housekeeping.

The family is the smallest part of society, which is united not only by blood-related and marital ties but also by economic relations. To satisfy the needs of their homes, families map out time for domestic work and rest, organize everyday life activities, prepare meals and set out processes of receiving goods and services.

The mini-economy of the family involves all available resources of this social cell, especially its properties. The property of the family includes things like:

- A house and a household plot
- Vehicles
- Furniture
- Money and jewellery
- Home economics at the household level

Nowadays, households are one of the most important subjects of economic activities. Their results depend not only on the well-being of their single unit but also on the whole nation. Just like commercial enterprises and the government, households participate in all economic processes. Simply put, a household is a unit that is run by one or more persons living together and having a common budget. The household unites all employees, owners of material capital, land, securities that are engaged and not engaged in the production process. A household is a concept that is broader than the family, and unlike the family, households include more than just relatives and can consist of one, two or more members. In the modern economy, the household plays the main role in social production and the spread of goods and services. In different historical periods, depending on the spirit of social relations, the place and role, structure and functions, magnitude and sustainability, rights and responsibilities, position in society or the socioeconomic status of the household have changed. The household economy is a complex phenomenon of human activities that are constantly changing with time, and it is quite difficult to take the entire spectrum of phenomena and processes occurring within it into account. The modern household is characterized by heterogeneity, complexity, dynamism, and processes occurring in it. In a post-industrial society, the character of economic relations has changed, as well as the role of man in the modern economic system.

Home economics and modern life

The connection between home economics and households is obvious. You cannot run a successful property without some basic skills of householding. Human activities keep getting more intense and complex, so the main motive for the development of a household is not the multiplication of wealth, but the desire for self-expression in the creative activities of each member. Factors of everyday life such as security, freedom, and justice remain most important to them.

The place of households in the expansion of market relations is determined by the following tips:

- Households provide the needed level of consumer demand, without which the market mechanism would not be functional.
- Household savings are a channel of investment which is very important in developing economies.
- Households supply the market with production resources (entrepreneurial ability and labour).
- The household is a required factor for product creation and realization of human capital.

- The ability of households to establish a family business contributes not only to the growth of personal wealth but also to the development of a market economy as a whole.

Households, just like firms and states, play an important role in the movement of resources, income and goods. Households are owners of resources that come in the form of factor services to firms. The payment for resources serves as a material basis for household incomes and is used to purchase consumer goods and services created by firms. The movement of resource flows, cash, as well as goods and services is carried out constantly within households. Consequently, the households supply firms and the state with production resources like labour, natural, capital and entrepreneurial skills; and a household cannot be run successfully without the use of knowledge obtained from home economics. This suggests that we have to pay more attention to home economics and encourage its study.

Importance of home economics for empowerment

- Home economics helps to raise a healthy nation through good food and nutrition, clothing and body care
- It helps the nation to reduce poverty, crime, prostitution and other vices associated with youths. This is because its knowledge provides many jobs for youths who are qualified and willing to work.
- It helps to improve the economy of a nation. Home economics products bring money into the nation in many ways, as those gainfully employed also pay taxes to the government used in developing the nation.
- It provides a variety of jobs for people thereby creating a working nation.

Recommendations

1. Home Economist should encourage the involvement of families in their occupation alongside with farming.
2. Families should be exposed to the importance of being self-reliance and self-employed.
3. Home Economist and governments should encourage co-operative ventures between families as that will enable them to get into small scale ventures together.
4. Non- governmental Agencies participate in institutions programs for poverty alleviation.
5. The government should encourage Home Economist to use their professional skills to teach communities on how to reduce poverty and empowered.

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Empowerment of Transgenders through Society

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Abstract

This present study was conducted to gain an insight into the Empowerment of Transgenders through society. Transgender are those whose gender identity differs from the sex the person had or was identified as having at birth.Transgender people come from all walks of life.The word "transgender" – or trans – is an umbrella term for people whose gender identity is different from the sex assigned to us at birth. Although the word "transgender" and our modern definition of it only came into use in the late 20th century, people who would fit under this definition have existed in every culture throughout recorded history.While the visibility of transgender people is increasing in popular culture and daily life, we still face severe discrimination, stigma, and systemic inequality. Some of the specific issues facing the transgender community. The challenges faced by transgenders through society i.e., Poverty, Social Stigma, Medical facilities, Employment, Legal protections, Discrimination, Harassment, etc.While advocates continue working to remedy these disparities, change cannot come too soon for transgender people. Visibility – especially positive images of transgender people in the media and society – continues to make a critical difference for us; but visibility is not enough and comes with real risks to our safety, especially for those of us who are part of other marginalized communities.So the media should help transgender so that people can break these stereotypes and help people to change their attitudes so that they can be socially accepted. Police should prohibit sexual harassment or use of language that is demeaning based on gender identity or expression. Doctors should make medical services accessible to trans people, and have proper provision for those who wish to transition.

This paper aims to study how society is helping transgenders to develop their skills so that they can empower themselves.

Keywords: *Transgender, Identity, Society, Visibility, Stigma, Media.*

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Introduction

Transgender is a collective term for a person whose gender identity does not match the sex they were assigned at birth. It also includes those identities who seek medical involution to change their bodies with the sex associated with their gender identity. It is a conflict between the gender they are identified and with whom they are assigned. They are both male, female, female to male (F+M) and female (M+F) gender transgressions.Transgenders have a proper community system which is known as gharanas in India. In each of them, one has Nayak (guru) who are head and decision making of their community, under every guru,many chelas followand support them.

The hierarchical system in a transgender
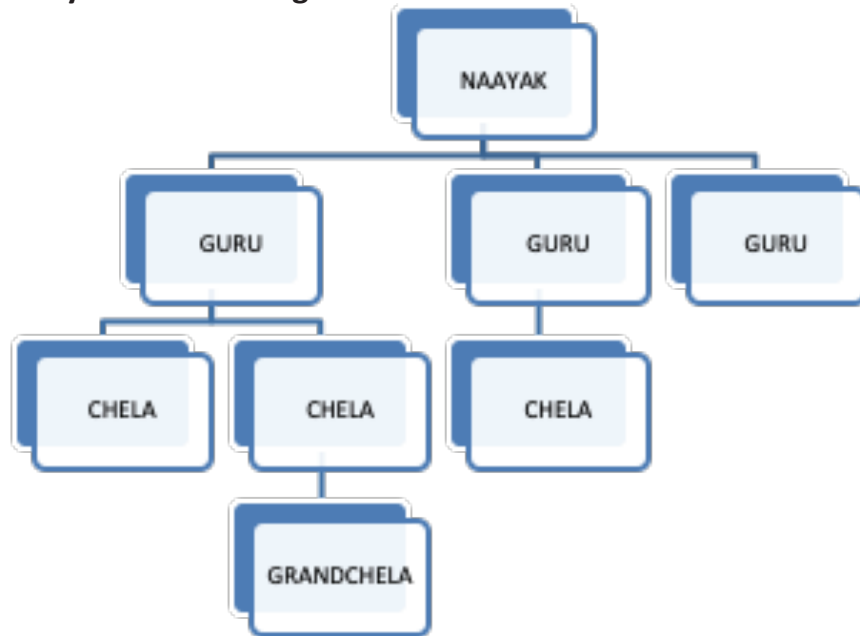
Following are the organisation working for emperoment of transgenders.

Legislative efforts to recognize gender identity

Globally many countries recognize transgender as 'third gender'. According to the Alteration of Sex Description and Sex Status Act of South Africa transgender people are allowed to undergo reassignment which helps them to issues birth certificate and identity documents.Iran provides financial assistance for transgender who wants to undergo sex reassignment surgery. Pakistan passed a Transgender protection bill and which provide them recognition in legal documents such as passports, ID cards, and driver licenses.Union Cabinet of India approves transgender bills which provide empowerment by defining their identity and rights and prohibit discrimination against them.

Indian ngo helping in transgender empowerment

Sangini Trustin a New Delhi is dealing with issues around their gender identity (F to M). It provides counseling and both online and offline community support services.TARSHI supports and enables people's control and agency over their sexual and reproductive health and well-being through information dissemination, knowledge and perspective building. Sappo for equality is offering Psychiatric and Peer Counselling Services, Helpline Services, Drop-in Facilities, Library Facilities, Digital Archive Accessing Facilities,Research and Internship Facilities for transgender. Many NGOs are helping transgenders to pursue their education by tiering up with IGNOU whichencourages them to enroll for its existing courses, short-term sessions in computer skills, certificate courses in food and nutrition and bachelor preparatory program.

Role of social media

Social media is a platform which helps people to form social connection in-person. Social media help trans to connect and build a relationship with the world. It provides the opportunity to narrate and hear affirming stories of other trans-people. GLAAD, a media program talks about transgender issues and rights. They are working with media and accurately tell the stories of transgender lives.It also works closely with transgender people and transgender advocacy groups and helps to raise awareness about transgender issues and provides free training to empower transgender people to share their stories in the media.

Role of medical facilities

Transgender people experience bias, discrimination, and outright rejection from health care providers. So a project was supported by the Health Resources and Services Administration (HRSA) and Health and Human Services (HHS) which deals with barriers to access care transportation, insurance, fear of discrimination, operating hours, immigration status, language barriers, issues with name and gender on identification documents. So they develop these programs and services that would be beneficial in HIV/STI screening, sexual risk reduction, support groups, substance use disorder support, social events, housing support, employment support, legal name change. They provide transgender all health care priorities which include all hormone therapies, preventive care, cancer screening, HIV care, substance use disorder treatment, etc.There is a project in India "Pehchan project" which works with transgender people across 18 Indian states so that they can access health, social and legal services. They are supporting CBO's in providing community-based HIV prevention and linking people to medical care and treatment and creating a supportive environment for transgender communities by facilitating access to wider social, legal and health services. HIV/AIDS intervention programs were carried out in Tamil Nadu which include beauty contests for transgender to create awareness programs and brought attention to the situation of transgenders and violation of their rights.

Role of education

Education plays a pivotal role in enhancing jobs and economic opportunities for an individual. Among all disadvantage groups, transgender is the most vulnerable communities in our country who are seriously lagging on human development. They have restricted access to education, health facilities, and public laws. It is so challenging to provide equal opportunity of education to transgender because there is a problem of inclusion with cisgender.A residential school has opened for transgender in Kochi, India so that they can live a dignified life. There promote inclusive education and free gender reassignment surgery at Government hospitals.

Skill training for transgenders

Rajasthan Transgender Welfare Board, have taken initiative to take up a skill for training them. They impart skill training of cooking, making leather products, jewelry as well as beauticians. The Social Justice Department has formulated schemes to develop skill development training for transgenders to provide skill training so that they become self-reliant. It provides training to transgender to build self -confidence and to create job opportunities. Kerala was the first state in our country to establish policy for transgenders. This scheme provides an education program for Transgenders and helps them to get legally married. The scheme helps in self -employment and helps in financial aid to transgender for Sex Reassignment surgery and future treatment. It provides education facilities, hostel facility 24*7 helpline and scholarship to them. It also provides an identity card for them. Sathrangi venture is helping transgender by developing entrepreneurship skills by providing technical and marketing assistance by developing handcraft products.

Conclusion

There are countless problems that transgender is facing like discrimination, stigma, lack of educational facilities, unemployment, lack of shelter, lack of medical facilities, depression, exploitation, etc. So the media should help transgender so that people can break these stereotypes. Transeducation should be provided to aware of people and helps to avoid discrimination and provide equals rights and opportunities.Police should prohibit sexual harassment or use of language that is demeaning based on gender identity or expression. Doctors should make medical services accessible to trans people, and have proper provision for those who wish to transition. People should respect and understand these routes of earning money.The education system needs to be strengthened so that they became sensitized on issues of stigma. Vocational training should be provided to transgenders.There should be a workplace with gender-neutral washrooms.

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Skill Development Courses in different field of Home Science: An Overview

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Abstract

Home Science is a science of Home, stitching, Health, Childcare, development, and Management. It deals with all aspects of Home and art. Home Science is a multidisciplinary field of study. It is a combination of science as well as art. Home Science is dealing with different fields. The present study mainly focuses on fashion designing and garment construction. Fashion Designing is the most well-known and career-oriented subject. There are many fields and careers in fashion designing. It's not just related to the world of glamour, but it is an art of application of design aesthetic. Fashion Designing professionals have a lot of employment opportunities. This review paper talks about various job opportunities in fashion designing like Fashion Designer, Textile Designer, Fashion Stylists, Fashion Consultant Mass Media (Fashion PRO), Retail Manager, Sale Adviser, Professors, Fashion Bloggers, Self-Employment (Fashion Boutique, Designing, Illustrator, Hobby Centers & NGOs). Employment and business are the two options to earn the live hood. This is a great business idea and never goes wrong because it is a skill development course. The aim of this paper is to create an awareness of the extensive range of jobs that are available in the fashion designing field and fashion design courses that have evolved and moved to entrepreneurship.

Key Words: *Skill Development, Job Roles, Employment Opportunities, Self-Employment, Craft, Fashion Industry, CAD*

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Introduction

Fashion is big business, employing lots of people and accounting for the one-sixth of all consumer expenditure. Fashion involves change, a succession of short-term trends. There can be fashions in almost all human activities. It employs the greatly diversified skill and talent of millions of people and offers a multi mix of products. Fashion also involves a strong and creative and design component. In fashion designing, design skills are very essential and can be seen in all products like in garments, shoes, accessory and interior design etc.

Fashion and Textiles

Fashion and Textiles related subjects are offered at 10+2 and degree level as well a Bachelor of Arts (BA), Bachelor of Science in Fashion and Textile and Vocational subjects in 10+2 Fashion Designing can be taken up as diplomas after10+2 and after degree(PG Diploma) Most design-oriented courses are also available in various institutes. Most degrees are three years in duration,

but some universities offer a 4year degree course (BD in Design, Fashion or textile). After taking 3 or 4years degree courses, it is possible for graduates to progress to a Post-Graduation degree (MA in Design or M.Sc. in Fashion or MBA in Fashion and Textiles). After Fashion designing, students will able to gain knowledge to new trend and innovative creations it will definitely help to get job easily with the help of brilliant courses.

Objectives of the study

- To explore and understand the skill development courses in fashion designing.
- To study the impact of fashion designing in the career of the youth.
- To know about various job opportunities after pursuing fashion designing.

Research Method

The research paper is an attempt of exploratory research, based on the secondary data sourced from journals, magazines articles, e-journals and books.

Employment opportunities in Fashion Designing

A candidate seeking to make a career in Fashion Designing must possess. Fashion field is dynamic, fast changing and full of creativity in nature. It offers limitless career opportunities and provides a platform for a promising future Fashion Graduates have various options like: Fashion designer Textile designer, fashion Stylist, Consultant, Mass Media (Fashion Pro), Retail manager, Scale Advisor, Professors, Fashion Bloggers, Self-Employment, Hobby Centers, Fashion Boutique CAD Designer etc.

Fashion Designers

To become a Fashion Designer, you need to have a knowledge of drawing, sewing and designing skills. you must also have knowledge about fashion industry. There are many different types of fashion designers and fashion merchandiser, who concentrate on a particular product like, jewellery, cosmetics, shoes, garment andinteriority etc. Fashion Designers can work for suppliers, retailers ready to wear labels or bands. A fashion designer creates clothing, including dresses, suits, pants and skirts and accessories like shoes and handbags. Duties of Fashion Designers: Design Development, Trend research, Theme of current Collection, Sourcing Fabric and trims, Design ideas and Illustration of Designs, visit manufacturers or trade shows to get samples of fabric and many more.

Textile Designers

There are many different types of job are available for textiledesigners in Fashion and Textile Companies. Inthe Fashion and textile industry, Textile designers are artists who dream up and design the look and feel of textiles, including patterns printed on or woven into their surfaces. Although the two roles work closely together fashion designers develop the clothes and textile designers create the textiles that are used to made clothes. Textile designers are responsible for creating designs and structures for creating designs and structures for knitting, woven, non-women or embellishments of fabrics. Duties of textile Designer: The responsibilities of textile designer can be summarized as: -Selecting Yarns, Construction of the fabric, Fabric Manufacturing

Fashion Stylist

There are many different areas in which they use their talent and creativity. Fashion

stylistsrequire extensive knowledge of fashion industry trends and color combination of new era, design and fashion history. Their main responsibilities include providing fashion, advice, choosing and selecting of outfits for models and actors according to requirement.They are also known as wardrobe stylists. It's a great career option, if you are fascinated by the glamorous industry. Nowadays, fashion world calls for a number of fashion stylists due to constant need for skilled professional in making. Fashion stylist work for individual fashion houses and clothing brands. Theyhave some job options as fashion stylists to take up,they can work as image consultant,photo stylists, freelance fashion stylists, music stylists,celebrity stylists etc.

Fashion PR

Social media play an important role in fashion designing. Media is the main reason for increasing acceptance for fashion and brands among the masses. The fashion PR isthe mediator between fashion designers and customers. Media has played a significant role is boosting the fashion industry.Theaim of fashion PRs is to find the creative way to keep the company's brandfamous.Fashion PRs help apparel and textile companies to build a favorable public image.A fashion PR job profile typically includes: writing press releases, launching innovative campaigns, and regularly interacting with the media.

Retail Manager and Retail buyer

Retail manager is responsible for setting daily targets for the staff ensuring promotions and marketing work and customer Satisfaction etc. They can do job as a retail manager in a departmental store and fashion boutique. Fashion retail are responsible for interviewing hiring and training new employees. The primary responsibilities of fashion retail managers are managing sales staff and store environment, checking delivery recruiting training supervision of appraising staff, dealing with customer queries and complaints, overseeing pricing and stock control etc. On the other hand, People who want to become retail buyer, they can start their own store, and source the best option like designer, local, Self made etc. his is the great business idea and it can never go wrong. They should typically have some key skill like: decision making skills,negotiatingskills,analyticalskills etc.

Sale or Marketing Agents

In fashion of textile industry, it is common practice for sales agents to be appointed to sell products on behalf of a company. Sales agents normally sell products from fabric clothing brands. They are responsible for selling products in particular region or area.A bachelor degree in fashion designing in business or marketing is preferred .Some duties of fashion sale agent are :-Maintain knowledge of fashion trends, product knowledge to sell the product, provide customer with a memorable shopping experience, building rapport with customers to make them feel valued and appreciated and learning the features and benefits of new product.

Professors/ teachers and lecturers

Lecturers have the opportunity to impact a wide selection of skill and knowledge gained through experience of working and studying in their fields to future generationofpractitioners. Fashion designing teachers or lecturers are required to have bachelor's degrees, master's degree and they may also need PHD. In Fashion designing, in order to teach college- level classes,they guide their student about different topics such as sewing patters, draping, textiles as his trends etc. Vacancies for the same are usually advertised in newspaper on educational page.

Self-Employment

Self-employeddesigners may work in more variable conditions, which may change from one short- term job to the next.They must also adjust their work hours to meet the client's needs. Self-employed fashion designers design high fashion garments to normal garments. Fashion designing provided several skills that can enable youths to set up home-based enterprises.Self-employment opportunities are: -

- **Hobby Centers**: -HobbyCenters can be started where interested persons can learn art and craft items without taking admission in any institution. They can learn jewellery designing freehand printing decorative articles wallpainting etc.To open the hobby center, it is a great idea for self-employment to get a fashion designing course, diploma and degree.

- **Boutiques**: - Candidate with diploma of post graduate diploma can open their own fashion boutique. Diploma in fashion designingwill help in building your knowledge such as draping flat pattern sketching selecting the correct fabric and handling the sewing machines.A boutique is a small retail shop selling garments and other goods to the people opening a boutique can be a great investment

- **CADDesigners**: -In recent years computers have changed the way many fashion designers do their work CAD means computer aided designs. If you are thinking to work from home and start your own business after your study then you can start your career as a CAD designer.It is also one of the highest paying forms of freelance work.

- **Fashion Blogger**: - Nowadays fashion bloggers earn a lot of money for their generated content and invaluable fashion tips fashion bloggers can deliver their own ideas in the form of videos articles or stories on social media.If you think you have amazing skills and new ideas to create blogs or become an independent blogger then you can start your own fashion blog on social media such as Facebook,YouTube,Instagram etc.

Conclusion

A career in fashion designing is right for you if you are talented after completing fashion designing.Students can find a variety of jobs in the world of fashion. They can become a costume designer, fashion consultants, and personal stylists.Fashion Photography and Sales representative. To Conclude, it can be analyzed that the present study focuses on various skill development courses in Home Science. It is viewed that various Doors are open for Fashion Designing degree holders. They can opt for jobs as well as established a new business is also one of the great opportunities they can avail. These skill development courses need skillful people who can show their potentials in college time.

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Government Schemes for Women Empowerment in India

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Abstract

Women empowerment means the capacity of women to participate as equal partners in the cultural, social, economic and political systems of a society. Various schemes have been launched by the government of India for the empowerment of women. For instance Beti Bachao Beti Padhao, ICDS, WWH, STEP, Ujjawala and many more for improving employment, education, health, and infrastructure development.

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Introduction

Women empowerment refers to the process of treating the women with the same status with that of men in all the fields of the society. In simple words, it is the creation of an environment where women can make independent decisions on their personal development as well as shine as equals in society. Women want to be treated as equals so much so that if a woman rises to the top of her field it should be a commonplace occurrence that draws nothing more than a raised eyebrow at the gender. This can only happen if there is a channelized route for the empowerment of women. *During Vedic era, women had enjoyed equal status with men but slowly with time, women lost their value. Now the basic problem a woman faces is that of education, poverty and safety and health. In order to tackle it various schemes and policies are drafted and implemented. Even the UN has dedicated one of its Millennium Development Goals to empowerment of Indian woman.*

Britishers tried to improve the condition of women by enacting some Acts such as Abolition of practice of Sati, Widow Remarriage Act 1856 etc. The real change came after independence. Constitution of India guarantees equality to women (Article 14). There are other articles too which ensure rights of women e.g. no discrimination by the state [article15 (1)] equality of opportunity (Article16) etc. Not only this but also the 73rd and 74th Amendments 1993 to the Constitution of India provided for reservation of seats (at least one third) in the local bodies of Panchayati Raj Institutions and Municipalities for women. Another Constitutional Amendment (84th Constitutional Amendment Act, 1998) reserving 33 per cent seats in Parliament and State Legislatures is in the pipeline. Hence, bringing about more and more legislations to ensure better opportunities to grant more right and concession is of no benefit unless there is a basic change in the people's attitude towards women and women's role in society. The year 1975 was observed as "International year of Women" as per the call of the UNO" and The Government of India declared the year 2001 as the "Year of women's empowerment."

Government Programmes

The Government of India is implementing a number of programmes, for improving access to employment, education, health, infrastructure development, urban development, etc.As for an Indian woman,Freedom does not just mean those guaranteed under the Constitution but means more jobs, opportunities for entrepreneurship, increased safety, ease in day-to-day living, and protection of the girl child. .Few of the programmes that are encouraging women are as follows:-

The Beti Bachao Beti Padhao Yojana

It is a joint initiative of the Ministry of Women and Child Development, Ministry of Health and Family Welfare, and Ministry of Human Resource Development. It was launched on January 22, 2015, in Panipat, Haryana.It aims to generate awareness and to improve the efficiency of welfare services for the girl child. The initial aim of the campaign was to address the declining Child Sex Ratio (CSR) but later included gender-biased sex-selective eliminations, and propagating education and protection of the girl child.

Mahila-E-Haat

Under the Ministry of Women and Child Development, the government launched Mahila-E-Haat in 2016. It is a bilingual online marketing platform that leverages technology to help aspiring women entrepreneurs, self-help groups, and NGOs to showcase their products and services. It is open to all Indian women above the age of 18 it claims to have attracted 17 lakh visitors since its launch and features over 2,000 products and services across 18 categories from 24 states.

Mahila Shakti Kendra

The government launched the Mahila Shakti Kendra in 2017 to empower rural women with opportunities for skill development, employment, digital literacy, health and nutrition. The Mahila Shakti Kendras will work through community engagement through student volunteers in the 115 most backward districts. Each Mahila Shakti Kendra will provide an interface for rural women to approach the government to avail of their entitlements through training and capacity building. It works at the National, State, District, and Block levels.

Integrated Child Development Scheme (ICDS):

The ICDS launched in 2nd October, 1975, which currently covers 8.63 crore children and pregnant and lactating women, is the world's largest programme for early childhood development and care. It is significant to note that the number of beneficiaries for supplementary nutrition has increased from 705.43 Lakhs in 2006-07 to 884.34 Lakhs in 2009-2010 (upto 31.03.2010).

Working Women Hostel

The government launched the Working Women Hostels to ensure availability of safe, convenient accommodation for working family, along with daycare facilities for their children, wherever possible in urban, semi-urban and rural areas. Under the scheme, assistance is provided for construction of new hostels and expansion of existing ones. The working women hostels are available to any woman provided her gross income does not exceed Rs 50,000 per month in metropolitan cities and Rs 35,000 per month in any other place.

Support to Training and Employment Programme for Women (STEP)

The STEP scheme was set up to provide skills to women so that they can take up gainful employment. It also provides the right competencies and training for women to become entrepreneurs. Open to every woman above the age of 16, it is run through a grant given to an institution/organisation including NGOs directly.

Rajiv Gandhi National Crèche Scheme

Working women needs support in terms of quality, substitute, care for their young children while they are at work. This scheme provides crèche and day care facilities to those working women's and poor women's. This scheme comes under the central social welfare board.

Short Stay Home For Women and Girls (SSH)

Short Stay Home for women and girls was introduced as a social defense mechanism, by the Department of Social Welfare in 1969. The scheme is meant to provide temporary accommodation, maintenance and rehabilitative services to women and girls rendered homeless due to family discord, crime, violence, mental stress, social ostracism or are being forced into prostitution.

Mid Day Meal

This scheme provides a post of bhojanmata in every primary and secondary school who make the food for school children.

Ujjawala

This schemes aims to prevent trafficking of women and children for commercial sexual exploitation through social mobilization and involvement of local communities, awareness generation program generate public discourse through workshops/seminars and such events and any other innovative activity.

SwadharGreh Scheme Swadhar

A Scheme for Women in Difficult Circumstances was launched by the Department of Women and Child Development in 2001-02. Under the Scheme, temporary accommodation, maintenance and rehabilitative services are provided to women and girls rendered homeless due to family discord, crime, violence, mental stress, social ostracism or are being forced into prostitution and are in mortal danger.

Janani Suraksha Yojana

This scheme was launched on 12 April 2005and referred to as a safe motherhood intervention under the National Health Mission and implemented with the objective of reducing maternal and neonatal mortality by promoting institutional delivery among poor pregnant women.

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Effect of Processing on Quinoa

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Abstract

Quinoa farming and consumption in India is still at a nascent stage however recent impetus in this direction has already been taken. One of the recent project "project Anantha" by Andhra Pradesh was sought to push quinoa, with its lower water intake, as an alternative crop in the dry terrain of Anantapur district. The United Nations has declared 2013 the International Year of Quinoa, which aims at focusing global attention on the role it can play in contributing to food security, nutrition and poverty eradication and policies (FAO, 2013).The worldwide popularity of quinoa and initial promising reports from Asia make it an important candidate as an alternative crop in this region. And this could be achieved only by an integrated effort at all levels: information, awareness, popularization, research, and marketing.

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Objectives

To evaluate the effect of processing on quinoa seed

Results and discussion: Processing of quinoa

Quinoa whole and Quinoa dehulled seed were processed as soaking and germination for 6, 12, 18, 24 hr and 12, 24, 36, 48 hr respectively and were subjected for chemical analysis (proximate, minerals, anti-nutrients) to find out the effect of processing on anti-nutrients with the nutritional profile.

Proximate analysis of quinoa whole

Proximate composition of processed and Quinoa whole (QW) revealed that there was a significant difference in moisture content among all processing which ranges from 3.5 to 4.9g/100g. In cereals and legumes, this increase is due to the presence of protein hydrolysis as well as the results of protease enzyme activity during the germination of the seeds. Proximate composition of processed and unprocessed Quinoa seed whole (QW). The difference was found in moisture content among soaking and germination treatments which range from 3.5 to 5.7 g/100g. The moisture content was found highest in 18 hr Soaking (Q3: 5.2 g/100g) indicating that with increasing soaking time the moisture content increases. Abdulsalami*et. al.* (2010) investigated the effect of processing on the proximate and mineral composition of Bambara groundnut and found an increase in moisture content. Crude fat content of unprocessed Quinoa seed whole was found higher (Q0:5.6 g/100g) than processed Quinoa seed whole and there was

a decrease in fat content with soaking (Q1 to Q4) and germination (Q5 to Q8).Ocheme (2008) studied the effects of soaking and germination on some Physico-chemical properties, of millet flour and sensory properties of porridges. It was reported that fat, decreased significantly as a result of soaking and germination. The lower fat content of the germinated samples can be due to the breakdown of lipids that occurs during germination in order to obtain the energy required for the plant's development. There was a significant difference in ash content in Quinoa seed whole after processing (Q4 to Q8). A slight decrease in ash content was also observed on soaking (Q4, Q6, Q7, Q8). Abdulsalami*et. al.* (2010) also found slight decrease in ash content from 5.37 to 2.89 (g/100 dry wt) after processing methods. While soaking, biological breakdown of various complexcompounds into simpler compounds takes place as suggestedby Narsih*et al.* (2012) and thus a significant increase in totalprotein content was observed with enhancement of thesoaking time from 22.60 g/100 g to 28.77 g/100 g.

Effect of soaking and germination on proximate analysis of Quinoa seed whole (QW):

Processing	Nutrients (g/100g)													
	Moisture (g)		Crude Fat (g)		Total Ash (g)		Crude Protein (g)		Crude fibre (g)		Carbohydrates (g)		Energy (kcal)	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Q0	4.09	0.61	5.6	0.15	3.56	1.67	12.52	0.73	8.98	0.84	65.25	1.45	361.49	7.11
Q1	3.5	0.53	2.45	0.16	3.41	0.16	12.98	0.35	7.39	0.13	64.70	0.06	352.00	7.53
Q2	4.4	0.50	1.87	0.28	3.17	0.10	13.09	0.45	7.09	0.03	64.39	0.14	331.75	6.24
Q3	5.2	0.23	1.35	0.22	3.04	0.04	12.59	0.28	7.94	0.13	64.12	0.08	316.00	4.24
Q4	3.9	0.13	1.31	0.24	2.83	0.21	14.81	0.11	8.36	0.32	63.55	0.34	296.50	9.13
Q5	4.3	0.12	1.36	0.23	3.02	0.04	13.64	0.42	8.80	0.26	62.99	0.08	282.00	5.10
Q6	5.7	0.23	1.18	0.14	2.64	0.31	14.45	0.09	8.30	0.12	62.62	0.14	264.00	4.32
Q7	4.3	0.45	0.94	0.15	2.69	0.20	13.04	0.04	7.78	0.39	62.22	0.10	253.00	4.24
Q8	4.9	0.19	0.90	0.16	2.14	0.07	14.53	0.19	8.25	0.05	62.04	0.05	240.00	5.92
SE	0.27		0.24		0.04		0.13		0.09		0.84		1.76	
CD5%	1.58**		0.57**		0.23**		0.37**		0.25**		0.14**		5.18**	
CD1%	1.80*		0.78*		0.31*		0.50*		0.34*		0.19*		7.06*	
CV	7.04		7.77		5.56		2.39		2.85		0.15		1.20	

Q0= No processing, Q1=6 hr Soaking, Q2=12 hr Soaking, Q3=18 hr Soaking, Q4=24 hr Soaking, Q5= 12hr germination, Q6= 24 hr Germination, B7=36 hr Germination, B8= 48 hr Germination, ** significant and * significant at 5% and 1% level of significance, NS = Non significant.

While soaking, biological breakdown of various complexcompounds into simpler compounds takes place as suggestedbyWhile soaking, biological breakdown of various complexcompounds into simpler compounds takes place as suggestedbyNo significant difference was observed in the protein content of Quinoa whole after soaking (Q1 to Q8). Fibre content was decreased gradually on soaking and germination, (Q4 – Q8) as compare to unprocessed Quinoa whole (Q0).Significant difference was observed in the Fat content which was lower than unprocessed quinoa seed ranged between (2.45-0.90). A significant difference in carbohydrate content was observed after processing of whole. On germination and soaking of whole carbohydrate content was found to decrease as compared to unprocessed Quinoa whole (Q0).

There was a significant difference in calcium content of whole (Q0) after processing (Q1-Q8) and was found higher than unprocessed whole (Q1). Zinc content of was found lower after soaking (Q1 – Q4) and higher after germination (Q5– Q8) as compared to unprocessed whole (Q0). Iron content of processed Quinoa whole was found lower in soaking (Q4:13.91) and higher in germination for 48 hr (Q8:19.27) as compare to unprocessed whole (Q0:15). The iron content was found slightly lower in over soaking (18 hr, 24 hr) as compare to unprocessed flour. The Potassium content of whole was found to increase with soaking duration of 6 hr,12hr ,18 hr and 24 hr (Q1, Q2, Q3, Q4) and germination 24 hr,36hr and 48hr (Q5, Q6, Q7, Q8) as compare to unprocessed whole (Q0). The Phosphorus content of whole was found to increase with soaking duration of 6 hr,12hr and lower in 18 hr and 24 hr and higher in germination 24 hr,36hr and 48hr as compare to unprocessed whole (Q0). Significant difference was observed in Saponin content of Quinoa whole after processing. A continuous degradation was observed in phytic acid with soaking and germination. Non significant difference found in anitioxidant activity of whole after processing.

Proximate analysis of quinoa dehulled

The moisture content of Quinoa Dehulled was found significantly decreased after soaking increased after germination. Fat content was significantly decreased after germination and slightly decrease after soaking for 24hr as compared to unprocessed Quinoa Dehulled (Q0: 3.88 g/100g). There was a significant difference in ash content after the processing of Quinoa Dehulled ranged from Q4 (2.20g/100g) to Q8 (1.25g/100). No significant difference was observed in protein content after processing. Fibre analysis of Dehulled after soaking and germination revealed a significant decrease as compared to unprocessed Quinoa Dehulled (Q0). Carbohydrate was observed slightly decreased after soaking (Q1 to Q8) and germination as compared to unprocessed Quinoa Dehulled (Q0). This also reflects as energy content after soaking and germination of seed ranged from (365 Kcal to 242 kcal). A significant difference was observed in calcium content after the processing of Dehulled. Iron content was significantly ($P< 0.05$) decreased in 6 hr to 24 hr soaking (13.63 ppm to 11.84 ppm) and was found an increase in germination for 24 hr to 36 hr (14.75 ppm, 16.45 ppm). Zinc content of Dehulled was found to be significantly decreased after soaking and (Q1-Q4) increased after germination (Q5-Q8) as compared to unprocessed Dehulled (Q0). The Potassium content of whole was found to increase with soaking duration and germination as compare to the unprocessed whole (Q0). The Phosphorus content of Quinoa whole was found to decrease with soaking duration and higher in germination as compare to the unprocessed whole (Q0). A significant difference observed in saponin content after processing whilephytic acid was found lowest in germination and soaking . Though there was significant difference found in anitioxidant activity of dehulled after processing.

Effect of soaking and germination on proximate analysis of Quinoa seed Dehulled(QD)

Processing	Nutrients g/100g													
	Moisture		Fat		Ash		Protein		Fiber		CHO		Energy(Kcal)	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Q0	2.89	0.45	3.88	0.735	2.56	0.81	12.23	0.09	7.99	0.38	63.56	1.99	377.04	3.59
Q1	1.19	0.40	3.36	0.33	2.27	0.15	14.81	0.11	7.22	0.16	62.99	0.08	365.00	4.76
Q2	0.95	0.06	2.80	0.19	2.25	0.22	14.53	0.11	6.51	0.34	62.62	0.14	354.75	6.88
Q3	1.81	0.19	3.14	0.21	2.11	0.09	15.26	0.18	6.35	0.19	62.22	0.10	332.75	4.50

Q4	1.02	0.17	2.47	0.34	2.20	0.11	14.31	0.16	6.94	0.14	62.04	0.05	319.50	2.89
Q5	2.48	0.39	1.52	0.25	1.80	0.26	15.07	0.09	6.70	0.24	61.71	0.17	291.25	10.72
Q6	3.22	0.25	1.37	0.10	1.64	0.24	15.86	0.06	6.11	0.09	61.30	0.11	254.25	9.43
Q7	3.67	0.32	1.39	0.35	1.28	0.15	15.52	0.11	7.83	0.14	61.11	0.06	239.50	7.72
Q8	4.69	0.20	1.06	0.27	1.25	0.08	15.50	0.11	7.08	0.11	60.16	0.57	242.00	12.45
SE	0.14		0.13		0.08		2.01		0.08		0.09		4.71	
CD5%	0.40**		0.393**		0.243**		0.538**		0.224**		0.256**		13.855**	
CD1%	0.549*		0.535*		0.330*		0.392*		0.305*		0.349*		11.863*	
CV	1.527		2.507		8.926		3.818		2.452		0.282		3.142	

Q0= No processing, Q1=6 hr Soaking, Q2=12 hr Soaking, Q3=18 hr Soaking, Q4=24 hr Soaking, Q5= 12hr germination, Q6= 24 hr Germination, B7=36 hr Germination, B8= 48 hr Germination, ** significant and * significant at 5% and 1% level of significance, NS = Non significant.

Conclusion

The Quinoa whole and Quinoa Dehulled were processed separately as soaking (6, 12, 18, 24 hr) and germination (12,24,36,48 hr). Chemical properties were also analysed and on the basis of nutritional composition and minimum anti-nutrients, 24hour germination processed Quinoa Dehulled was most acceptable.

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Community Counseling: A Novel Approach towards Stress Free Society

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Abstract

This article provides a critical appraisal of the term 'community counselling' and the role of counsellors to resolve the issues and problems at the grass-root level in the Indian context. Community counselling is relatively a new concept and form of practice which India is slowly adopting but not widely. In the Indian scenario, we have specialized counsellors for individual problems. We have counsellors at schools, hospitals, industries, de-addiction centers, career centers and many other establishments working exclusively for individual problems. However,a holistic approach of community counselling can create a better approach and access to handle the socio-psychological issues in our society.Community counselling is a type of counselling in which different counsellors and social workers work with the individuals, families, couples, groups and communities in one or the other way. Community counselling provides a holistic and multifaceted approach to improve the individualsand groups capacity to cope with the problems and live in a socially acceptable way for the overall wellbeing of the society. The Government of India caters to the health needs of the people at the community level by providing community health centers. Based on a similar pattern each communityis in dire need of a community counselling center.

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Need for community counselling in India

The big question in the mind of policymakers and educators is whether there is a real need for community counselling in Indian communities or are we just mocking the western culture. And also, is the Indian society ready to accept the services of community counsellor or is burdened with the stigma? Looking into the present societal issues there is definitely a need for community counselling in India. This is because there is a vast difference in the socio-cultural structure of India. This is evident because of the changing family trends such as divorce, working mothers, social media, single-parent families, substance abuse, changing social values, stress and strain amongst the people leading to suicides and depression. A community is a very diverse place with different issues which can be solved only by an expert involvement. A community counsellor or a social worker can resolve many issues related to psychological, social and personal problems related to an individual as well as the community. Community counsellors give immediate and direct support to the community.The job of a community counsellor is quite simple – as the name suggests someone who is qualified to give guidance, support, and advice to a community after a calamity or catastrophe is called a community counsellor.Communitycounsellors can be selected

from the local community so that they can help the people live their life in a better way.Community-counselling is generally conducted to prevent a problem and assist in setting prevention programs in different communities. The community counsellors also advocate different social changes to assist their patients and clients at the large. Community counselling is actually a different form of counselling in which not only people are taught about different right or wrong things but there also shown the right ways so that they can live their life peacefully and happily.

Present scenario

WHO predicts that by 2020, roughly 20 per cent of India will suffer from mental illnesses. And to cater to this demographic, we have less than 4,000 mental health professionals. People are very much aware of the physical problems and are more conscious and vigilant about it.But when it comes to mental health, stress or abuse they undermine these issues and are not ready to come out. This is because of age old stigma, prejudice and taboo related to counselling.

Indian Institute of Counselling, Bangalore provides Career counselling, Family counselling, Individual counselling, Marriage counselling, Parent-child counselling and Corporate counselling services. Following the same pattern each state, district and town should adopt this method and provide services to the community for the wellbeing of the society.The Institute for Human Relations, Counselling and Psychotherapy – Christian Counselling Centre, Vellore is a Professional Organisation involved in three major areas of services.

a. Training of counselors through courses of different duration.
b. Direct Counselling services to the needy Individuals and Groups
c. Research, documentation and publications.

Some of the social welfare boards in some states are also providing this type of services to the community. There are only handful of these types of community counselling centers in India offering counselling for individuals, couples and groups also.

Areas of community counselling

Traditionally counselling was carried out by Mantrawadis and Patris. Later on Mental health centers came into being followed by specific counselling centers. Instead of concentrating counselling at macro level, micro level counselling can be initiated at the community level for grass root level problems.Community counselling services can be catered to all age groupsof children, parents, adolescent students and old age people both individually and in a group also. Community counsellors provide wide range of services to people with variety of problems related to work, life and achievement.Broad areas that can befocused are as follows:

- Adolescent issues-Low self esteem, sexual identity and stress, confusion or forgetfulness, anger.bullying and peer pressure in school/colleges, aggression and violence in adolescents and temper tantrums from children, unhealthy habits like excessive television viewing and telephone use, sibling rivalry and unhealthy competition, poor school performance, school refusal and phobia, trauma, abuse and neglect, faulty parenting styles.
- Career counselling-A career counselor helps candidates to get into a career that is suited to their aptitude, personality, interest and skills. Career Counselling is helpful for people of all ages and in different stages of life. It is helpful for school students, graduates and those wishing to make a mid-career change.
- Family issues and relationship difficulties-Insecure attachment, ego, arrogance, jealousy,

anger, greed, poor communication/understanding or problem solving skills, ill health, infidelity and so on.

- Industrial counselling-Helps the employees in making healthy lifestyle choices by providing the employees and the organization with the tools, resources, and knowledge to create a health work environment.
- Premarital counselling
- Social issues -Domestic violence, marital counselling
- Drug, alcohol and sexual abuse
- Mental health problems like depression, isolation, anxiety, panic attacks
- Personal disputes
- Crisis management and intervention
- Awareness classes
- Legal aid for women and children.
- Disaster management

Community counsellors can use various techniques such as behavior therapy, case studies, positive reinforcement, mental status examinations, discussions and various other supportive services as requiredto strengthen families and neighborhood. Community counselling and psychology aims to improve the condition of the community by giving therapy, supportive counselling, linkage and referral, advocacy and various other services as demanded.[5]

Outcomes of community counselling

- Community counselling services are often more specialized, allowing professionals to help their patients with a more particular set of skills.[6]
- They can provide improved emotional support
- They serve the people with available resources and support systems.
- They help the society to make interventions.
- They help to tackle the problem where they occur and stop the development of those problems before they turn much difficult to diagnose, and successfully treat.
- Preventive and remedial steps are carried out at community level.
- They conduct follow-up sessions to gauge and monitor the progress of the clients.
- These services can be used by the poor and the areas that are underserved.

Recommendations

- Community stakeholders, social workers, NGO's and professionals in the field of counselling should be involved actively in shaping the training of community counsellors who are willing to dedicate themselves to public service.
- Training of community counsellors should take place in innovative community settings.
- They should be encouraged to identify community strengths and resources, resolve conflicts and concerns, and prevent problems.
- Prevention, consultation, and collaboration would be major tools in realizing community counselling goals. There would be a focus on collective interests rather than individual differences.(Anupama 2010)
- Governmental policies should be strengthened emphasizing the need for guidance and counselling services to the people at grass root level.

- Expansion of community counselling services countrywide beyond related concerns like schools and hospitals.
- Universities should start post graduate courses in community counselling so that, the youth can be employed and a large proportion of population can lead a stress free life.

Conclusion

Community counselling is a comprehensive approach to build a supportive and health-promoting environment in a community rather than individual assessment and intervention. Research is needed to explore whether and how one should develop a community counselling framework that is relevant to the Indian context.A partnership between counsellors, NGO's, social workers, psychiatrists and local volunteers could play an important role in providing community counselling services to masses.The specialized skills of the community counsellor need to be tapped to prevent and treat increasing psychosocial problems of the people and to provide a holistic and stress-free development of the community.

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Role of Govt /NGO s in Women Empowerment

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Abstract

Women empowerment is one of the burning issues all over the world including India forthe last few decades. Empowering women means increasing and improving social, political and legal strength to women. At earlier times they were beware of getting equal status with men. But after that, they had faced many problems during post-Vedic and Epic age. The empowerment of women is essential to generate a bright future of family and society as well. Pt. Jawaharlal Nehru had said that to awaken the people, first awaken the women need to be awakened, because once a woman has been awakened then the whole nation and family get awakened with her. To uplift the status of women, the government of India has adopted and ratified different schemes and programs and international conventions and human rights instruments to secure equal rights for them. NGOs fulfill a number of functions in areas that tend to be neglected by the private and public sectors. Non-Governmental Organizations (NGO's) mobilize people for constructive community work and often reach the most deprived sections of society and contribute to the socio-economic development of the country. This study shows the cooperation between the Government and the Non-Governmental Organizations (NGO's) to implement the government programmers in India. The paper presents the impact of government policies on women empowerment at large scale.

Key words:*Women empowerment, NGOs, programs*

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Introduction

Women empowerment is one of the burning issues all over the world including India since last few decades. Empowering women means increasing and improving social, political and legal strength to women. At earlier times they were beware of getting equal status with men. But after that they had faced many problems during post Vedic and Epic age. Many agencies of United Nations in the reports have emphasis that gender issue is to be given at most priority. It is rightly believed that education of man means education of an individual but education of women means education of entire family.To uplift the status of women, the Government of India has adopted different schemes and programs and international conventions and human rights instruments to secure equal rights for them.

According to**Kofi Annan (UN secretary General Assembly September 2000.)**Government can bring about change not by acting alone but by working together with other sectors with civil society in the broadest sense governments can define norms and plans of actions after carefully listening to the views of civil society but then need to work with appropriate partners to put

those norms into practice. So the large number of NGO 's programmes are launched in India for economic upliftment of women. Women empowerment can be achieved through provision of adequate education facilities, political support, and effective legislation system and employment generation for women.

Definitions

According to P.K.B. Nayer- "Empowerment in an aid help women toachieve quality with men or at least to reduce gender gap considerably". Women empowerment refers to increasing and improving the social,economic, political and legal strength of the women to ensure equal right to

Women and to make then confident enough to claim their rights. **Batliwala(1974)**defines empowerment as the process of challenging existing power relation and of gaining greater control over the source of power women's empowerment is viewed as the process and the result of process of: Challenging the ideology of male domination and women "s subordinations. Enabling women to gain equal access to and control over the resources

(Material, human and intellectual)

Review of literature

Thingalaya.N.K (2001) proved in his study on "Microfinance and Rural Employment: An Appraisal of the Potentialities" observed that for enabling the SHGs to play their assigned role efficiently, there is an imperative need for avoiding target fixation, subsidy distribution and political intervention also. The urgent necessity of providing vocational training, general guidance and organisationalsupport for marketing facilities. The small commonwealth of self-help groups has to be protected from political interference and excessive state intervention. The National Bank for Agriculture and Rural Development (NABARD, 2000) conducted a study on the impact of Micro Finance (MF) on the living standard of SHG members. The study aimed to find out how far the SHG bank linkage programme hadlightened the burden of life for the average member of a SHG and to analyze the betterment of household by gaining access to micro finance. The study covered 560 SHG member households from 223 SHGs spread over 11 states. It showed positive results. There were perceptible and wholesome changes in the living standards of the SHG members, in terms of ownership of assets, increase in savings and borrowing capacity, income generating activities and income levels. The study revealed that almost all the members developed saving habits in the post SHG situation as against 23 per cent of households who had this habit earlier and the average borrowings per year per household increased from 4, 282 to 8, 341. The study concluded that the involvement in the group significantly contributed in improving the self- confidence of the members. The feelings of self-worth and communication with others improved after association with the SHGs and the members were relatively more assertive in confronting social evils and problem situation. As a result,there was a fall in the incidence of family violence.

Rajasekhar (2000) attempted to analyze the contribution made by microfinance programmes initiated by two NGOs, namely, Shreyas and RASTA to poverty alleviation and women's empowerment in Kerala. The results of the study revealed that the better participation of members in microfinance programmes resulted in savings and credit operations that were conducive to women's needs truly. **Soile et al, (2003**) made an attempt to examine the role of NGOs engaged in microcredit delivery across the country. The study revealed that

membership and outreach of these institutions expanded greatly. However, the overall effective cost of credit fromthese institutions was too high to encourage entrepreneurs. The study advice that there was a need to encourage the establishment of more of these institutions. They stated that the poor are illiterates, sometimes unskilled but are engaged in viable entrepreneurial activities and they hardly progress and improve because they lack capital and training to expand their different business

Major Programmesfor Women Empowerment

Indira MahilaYojana (IMY) launched in 1995-96 and retiled as swayament in 2001 to empowerment through awareness generation ,achievement of economic strength through micro-level income generating activities and establish convergence of various services such as Literacy,healthrural development ,etc.

The Rural Woman's Development And Empowerment Project (Rwedp) Now Called "Swashakti" projet was sanctioned in 1998 as a centrally sponsored projet for a period of 5 years with an estimated outlay of rRs.186 crore.

Programmefor Support of Training and Employment[STEP] for encouraging employment and income generation.

Women's Economic programme WEP] [1982-83] with assistance from norwegain agencies for development corporation [NORAD] for extending financial assistance to women's development corporations, autonomous bodies and public sectors to train poor women and to ensure their employment.

Hotels for working women (HWW)aims to promote greater mobility for women in the employment market through cheap and safe accommodation for working women in low income groups .

Integrated Child Development Scheme(ICDS)through its nationwidenetworking have more than 6,00,000 anganwadi " [child care] centers and crèches \day care centers for working ainling mothers are also being taken jup.

 Shorts stay homes(SSH) for women and girls under implementation since 1969 to protect and rehabilitate women on girls in social and moral danger due to exploitation .

A special intervention for improving the well being of adolescent girls using ICDS infrastructure is kishorishaktiyojana [KSY] the scheme aims at breaking the inter generational cycle of nutritional and gender k disadvantage and providing supportive environment for self development of the girl chid in the group of 11-18 years.

Udisha the ongoing ICDS training programme is being strengthened into a dynamic training cum-human resource development programme with World Bank assistance to the extent of RS.6 crore has been committed. Another national level programmelaunched in 1997 to improve the status of the girl belonging to the below poverty line [BPL] groups is "**BalikaSamridhiYojana** [BSY] this scheme has been reformulated in 19999 ex tend [1]post delivery grant of RS. 500 [2] annual scholarship ranging RS.300 to Rs 000 between classes 1to theseamounts in name of the girl and be paid to the girl child in lump sum of attending the age of 18 years .

NGO'S and the self-help groups (SHG) plays very vital role towards women empowerment by providing basic education, vocationaltraining, training for self-employment, legal aid, protection for women and self-awareness

The promotional schemes available in country in order to develop women entrepreneurship are as follows.

- MahilaUdyannidhi.
- Mahilavikasnidhi.
- Priyadarshiniyojana.
- TREAD
- Special programs condented by SIDO (Small industries development organization)
- CWEI (The consortium of women entrepreneurs in India)
- WIT(Women India trust)
- SWEA(Self employed women association)
- SHG(self help group)
- KVIC(Khadi village industries commission)
- Women all women industries food schemes.
- Sabla Scheme (2010)
- National Mission for Employment of women (2010)

These schemes can financially help the women but she has to take her own decisions

Conclusion

A review of several studies conducted in regional, national and international levels, reveals mixed results and conclusion on the ability of SHG micro-finance in empowering women and poverty reduction was incomplete. As the impact of SHG micro finance on women's empowerment and poverty reduction differs by the sources of promoters of SHGs, it is imperative to study the extent of variations in the impact of SHG microfinance provided by different promoters, impact on different social groups and income groups and draw correct policy suggestions for sustained reduction in poverty through empowerment. Against this background, the present study considers the SHGs promoted by NGOs, Co-operatives, and Government. The study also made an attempt to compare the different socialgroups.

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Innovation: Agro-Waste to Active Textiles

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Abstract

Waste is no more waste now. Many researchers and manufacturers are now entirely engaged in various projects related to the innovative technology of "waste management". The textile industry is also adopting a sustainable waste management concept by reducing, recycling and reusing industrial/agriculture waste. In Present times, bio-wastes like peel/rind, husk, seed coat, corncob, etc. are used as a new source for extracting fibers, dyeing, and finishing. It is also used as absorbents in dye removal from wastewater. Thus, the present research paper is an attempt to review various potential uses of agro-wastes in developing active textiles.

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Introduction

Environmental degradation is one of the major threats that our planet earth is facing in recent times which can be contributed to a rapid increase in population, excessive utilization of toxic substances to meet the needs of humans and scarcity of natural resources and fossil fuels. In addition to these, there is a problem of disposal of waste which is also adversely affecting the environment. To overcome this situation, many researchers and manufacturers are now working on various projects related to the innovative technology of "sustainable waste management" with a vision to reuse/reduce/recycle the industrial/agricultural waste. Waste material which is obtained from the living organism or of organic origin like fruits/vegetable waste like shell/peels, seed coat, seed etc or agricultural waste like corn stover, cotton stalk, rice straw etc. can be termed as agro-waste. To deal with the shortage of resources and problems associated with the disposal of waste, there is proficient utilization of the agro-waste material as new resources for producing bio-fuels, bio-gases, bio-chemicals and also to extract bioactive compounds from fruit/vegetable wastes and its application as natural additives/colorants in food and textiles industry.

With the rising wakefulness among consumers about environment-friendly product or eco-safety has inclined their interest towards the consumption of natural or organic materials. This consumer behavior generates interest amongst manufacturers and companies to work with green technology to safeguard the environment as well as human health. The Textile industry is also implementing green product innovation concept for the consumers by using natural resources as dyeing, finishing and fiber extracting processes. As the natural resources are limited and also used in food-manufacturing, medicines or in therapeutic treatments, the need to use agro-waste i.e. fruits/vegetables peels or seeds, post harvested agricultural waste etc. can be used in textile industry. The agro-waste like seed coats, peels/shells, husk etc. have bio-active compounds in

them which can give multifunctional finishes like antibacterial, antimicrobial, UV protection properties etc. to the fabric through dyeing, printing and microencapsulation process. Thus, the present research paper is an attempt to review various uses of agro-waste as a source of fibre, natural dye and finishes to develop active textiles.

Agro-waste: As a source for extracting fibers

The main component of all agriculture waste is crop residue which either left in field or burnt after harvesting which cause air pollution. Environment alertness creates interest among many researches to investigate proficient utilization of the crop residue. As there are limited natural fibers which is not sufficient to meet the textile needs of the emergent world population, therefore, agricultural waste act as a new resource for the development of bio-fibres. Review signifies that agricultural waste like rice husks, rice, wheat and corn straw, cornstalk, hemp straw; flex straw etc. can be used for extraction of natural fibres which is suitable for textile applications (Rosa et al., 2012;Reddy and Yang, 2015; Devi et al., 2017).After the harvesting of fruits and vegetables plantation, billion tons of stems and leaves were thrown away. The wasted part can also be used to extract fibres. It has been reviewed that left over stems and leaves of banana, pine apple leaves, coconut husk etc. can successfully utilized as sources of fibers as they have good absorbent property, highly breathable, quickly dry with high tensile strength and biodegradable (Deka et al., 2014; Debnath, 2016). The industrial bio-waste viz. bagasse of sugarcane can be effectively used as a source for bio-fibre for textile industry (Michel et al., 2013)

Agro-waste:As a source for bio-dye for textiles coloration

Ecological contemplations are an important aspect in the selection of consumer goods all over the world, which would have changed their minds towards the utilization of the natural or eco-friendly products. Consumers showed positive interest in green manufacturing which encourage many companies and firms to work with natural dyes and mordants to produce eco-safety products. Other then natural resources, waste bio-materials like peels/shells, seed, seed coat etc. can be used as a sources for dye and mordant. Many researchers like Bechtold et al. (2005) explored that the food and beverage industry liberates substantial amounts of wastes e.g. pressed berries and grapes, peels from vegetable processing etc which contain natural colorant and could be serve as sources for dyes for textile-dyeing processes. Another study done by Jung and Bae (2014) that black cowpea seed coat a crop waste can effectively used as a source for bio-dye to colour cotton and silk fabric.

The flower waste collected from temples, vegetable market, household and university hostels and used as a dye material for colouring cotton, silk and wool fabric. It was also found that the remaining residue after dye extraction was rich in nutrients and can be reused as the resource material like source for vermicomposting, used to generate biogas etc. (Jain, 2017; Singh et al, 2017). It was also studied by Zubairu and Mshelia(2015) that kitchen waste viz. onion skin/peel can be used to extract natural colorant for dyeing ccotton fabric by using selected synthetic and natural mordants. The study reveals that post-mordanting with iron sulphate gave darker shade and showed good colour fastness property.

Agro-waste: As a source for bio-active finishes on textiles

The demand for bio-active finished textiles has been increased over the last few years as consumers are becoming conscious about personal hygiene and the health risks associated with

some microorganisms. Researcher also found that some waste material have very effective bio-active compound present in it which can be potentially utilized as eco-friendly finishes on textiles through dyeing and micro/nano encapsulation process.

A study by Raja et al. (2012) utilizes waste part of saffron flower i.e. petal as a source for natural colorant to dye pashmina fabric and showed antimicrobial efficacy against Staphylococcus aureus. Another study by Salah (2012) did alkaline fractions of waste banana peel and dye cotton fabric to give multi-functional, antibacterial and UV protective finish. Mirjalili and Karimi (2013) studied extraction of colorant from walnut shells using Soxhlet apparatus and used to dye polyamide fabric with different mordants. Results signify the excellent antibacterial activity in the dyed fabric and also exhibited good and durable fastness properties. Tamarind seed coat extract can also effectively utilize as a bio-mordant for dyeing textiles with natural dyes. The results also showed good antibacterial activity (Prabhu and Teli, 2014).

Conclusion

It was concluded that due to more awareness of textile eco-processing in the last two decades, several bio-polymers, bio-dyes, bio-fibers, and bio-active textiles are getting constant attention. The shortfall of natural resources and environmental issues related to the disposal of waste gave new directions to the researchers to proficiently utilize agro-waste materials as a new resource for dyeing, finishing and fibre extraction processes to develop bio-active textiles.

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Role of Information and Communication Technology (ICT) in Skill development: Prospects and Challenges

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Abstract

The focus of this study is to examine the role of Information and Communication Technology (ICT) in skill development in higher education in India and the problems being faced in its implementation. The exposure of ICT has radically changed the application of not only work and governance but education as well. A sudden, Information Technology transformed the way how knowledge is spread today and one of the changes it has brought about is the way how teachers interact and communicate with the students and vice versa.While the role of ICT in the higher education sector cannot be ignored, there is also a need to assess the problems and prospects in its execution. ICT in the education system continues to project that it can help improve India's higher education system by providing greater equity, better access, and improved quality.

Key Words: *ICT, Higher Education, Technology, Innovation*

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Introduction

Technology and innovation have made our life so easy and has given us so many facilities, which we could never have imagined before. At the same time technology has not only improved the standard of living of human beings but has brought revolutionary changes in the field of development of the country and the world. The exposure of Information and Communication Technology (ICT) and innovation have fundamentally changed the practices of not only business, governance or education but every sphere of human struggle. It helps in changing the role of teachers and students in the Learned-Centered Environment.The term innovation is widely used to define the creation and commercialization of knowledge, leading to state-of-the-art technologies. The positive influence of ICT use in education has not been proven In general, and in spite of thousands of impact studies, the impact of ICT use on student attainment remains tough to measure and open to much reasonable debate. The training of ICT has influenced all walks of life like agriculture, well-being, decision making, administration and also education. The government is overwhelming a lot of money on ICT: the National Mission on Education is increasing on the role of ICT in enhancing the enrolment ratio in higher education and availability of trained teachers in the process of dissemination of education.

The main factors that affect the enactment of ICT in education are the mission or goal of a

particular system, programs and curricula, teaching/learning strategies and techniques, learning material and resources, communication, support and delivery systems, students, tutors, staff and other experts, management and evaluation. CT is a prerequisite for the Innovation Economy. It is the backbone of the digital economy, which depends on connectivity, efficiency, use of technology, innovation, and linkages within and across sectors. This, in turn, is expected to lead to economic growth.

ICT in Education Sector in India
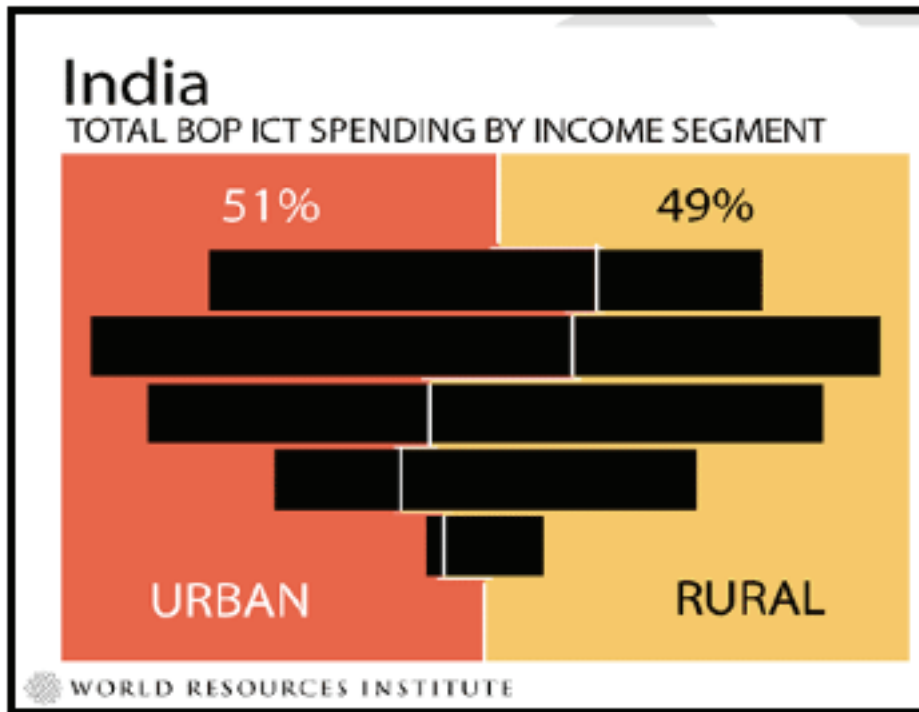
In this data it has been noticed that the total BOP (balance of payment) spending in income segment 51% for urban area and 49% for rural area. As a result, urban area has higher spending in ICT.

ICT Ranking In India

As per ICT and Development Index (IDI), India has been ranked 121st among 157 countries in terms of progress in the kingdom of information and communication technology(ICT) in a newly-released report of the International Telecommunication Union (ITU), which makes an annual assessment based on awide range of parameters and data.

It comes in the wake of the Broadband Commission for Digital Development, in a recent report, ranking India 145th among nearly200 countries in terms of the percentage of individuals using the Internet and 106th in the case of mobile broadband penetration."Out of a total of 145 million young Internet users in the developed countries, 86.3 per cent are estimated to be digital natives,compared with less than half of the 503 million young Internet users in the developing world. Within the next five years, the digitalnative population in the developing countries is forecast to more than double," the report said. And that will make a difference to thesecountries.

Discipline-Wise Analysis
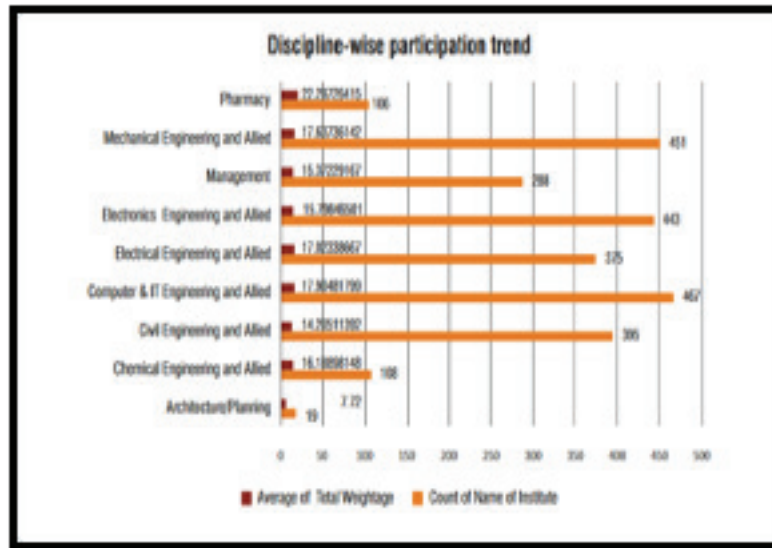
Source AICTE-CII 2018

As per report AICTE-CII (All India Council for Technical Education) Survey of Industry Linked Technical Institutes 2018,nine disciplines are covered in the survey of AICTE-CII.

Engineering stream saw the largest participation across most disciplines, with'Computer & IT and Allied' institutes had highest average weighted score.

Engineering Institutions
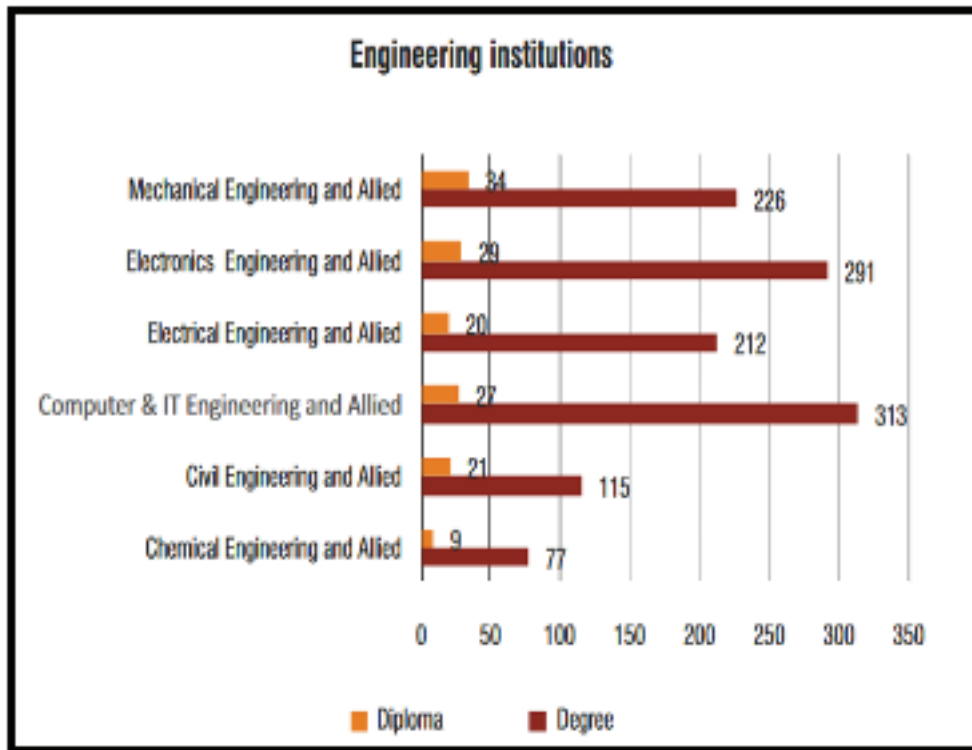
Source AICTE-CII 2018

This figure shows that In Computer & IT, top scores in both degree and diploma are good though diploma is leading here too with a score of 78 while the top degree institute in this category has a score of 71, this indicates that most of the students are directed towards opting ICTenabled courses of IT and Allied streams.

Initiatives Taken by the Government Towards ICT in Higher Education

- **SwayamProject:**The government of India proposed Swayam Projectapproved by Shri Narendra Modi, in this our prime minister tells about a program for online Education. The basic aim of this project to provide strength about the National Mission on Education as well as to generate awareness amongst students.
- **Aakash Project:**This project aim to promote education with ICT.
- **RRA Project**:The Government has launched Rashtriya Aavishkar Abhiyan (RAA) programmed on 09.07.2015, to motivate and engage children of the age group of 6-18 years in science, mathematics and technology through observation, experimentation, inference drawing, model building, etc. both through inside and outside classroom activities.
- Laptops will also be given to students in medical and engineering college.

Others projects

- National Digital Library:
- Free and open source software for education (FOSSEE)
- Virtual lab project
- E-Yantra project
- E-Pathshala

Important Initiatives have been taken in the Sphere of Rural Education:

- Computer literacy projects for teachers and students
- Mobile classrooms through IT buses
- E-Learning centers and kiosks for enhancing online education for social and economicChange in rural society
- Community Tele-centers to meet the needs of ICT learning outside formal school setting
- Bicycle-based connectivity in rural areas

Role Played by Technology in Colleges and Universities

- Guide students toward education that enables them to achieve their goals, is suitable to their needs, and aligns with their interests. Students should have access to digital tools that allow them to explore their interests and that provide them resources for evaluating various education and career pathways.
- Helps students make wise financial decisions about postsecondary education.
- Prepare students for postsecondary-level work.
- Allow students to adjust the timing and format of education to fit other priorities in their lives. Colleges, universities, and other education providers should consider how to offer programming at various times and through multiple means of delivery such as online, mobile, and blended, and through competency-based education models.
- Create a network of learning that supports students as creators and entrepreneurs, and agents of their own learning. Empower students to drive their own continuous learning

through a digital infrastructure that enables everywhere, all-the-time learning. These will support the variety of learning and credentialing pathways that students pursue throughout the stages of their lives, and need to be flexible to the learner's needs, interests, and goals, and responsive to constraints around schedule, employment, financial means, and other life circumstances.

Barriers to Implementation to ICT

- In general the attitude of peoples is not of acceptance of ICT. Peoples think technology means solution for all problems in magic way, which is not practically possible.
- Economic positions of common peoples arenot so good, though it is difficult for them to afford computers, tabs, and android phones.
- It is very difficult to safe guard the children's from porn sites.
- Govt. doesn't have any clear cut policy on service part or customers education for proper use of gadgets.

Fear and Limitations of Misuse of ICT

In the Asia-Pacific countries studied, a range of factors were seen as inhibiting the use of new ICTs. These factors include:

- High cost of the ICTs leading to restriction of access to the new technologies;
- Lack of deregulation and government legislation which gives monopoly to a few information technology companies.
- Poverty and harsh economic climate.
- Lack of basic education and computing skills.
- Political culture which discourages open sharing of information.
- The Copy and paste syndrome–Schools and universities have more and more problems with students who prepare essays/ project/ presentation by using material from websites or blogs. Often, students just copy pieces of information that look relevant and paste them together, without sometimes even understanding them, let alone citing them.

Future Recommendation

- The States will establish state of the art, appropriate, cost effective and adequate ICT and other enabling infrastructure in all secondaryschools.
- In composite schools, exclusive laboratories with appropriate hardware and software will be provided for the secondary as well as higher secondary classes.
- Appropriate hardware for Satellite terminals will be provided to selected schools in a progressive manner.
- Computer access points with internet connectivity will be provided at the library, teacherscommon room and the school head's office to realize the proposed objectives of automated school management and professional development activities.

Conclusion

The result of the study shows ICT is bringing radical changes by providing ease of work and better penetration of knowledge. Computers, laptops, tabs, etc are just gadgets,need is of pedagogy to use ICT. Information and Communication Technology has no doubt brought about

a huge change in education, but we are yet to achieve the desired level of IT adoption inhigher education in the country. The excellent utilization of opportunities appearing due tothe spreadof ICTs in higher education system presents an excessive challenge.Nonetheless, it has become a significant support system for higher education as it could address some of the challenges facing the higher education system in the country.Moreover, it can provideaccessto education regardless of time and geographical barriers.

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Nurturing Innovation through creation of Silk Lampshade with Paper Folding Technique and Colour Blending

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Abstract

Innovation is the approach which initiates the novel ideas and solutions that accommodate new requirements or already existing needs. This study was undertaken by the investigator to add beautiful and appealing ideas that can break the monotony, give a touch of novelty in construction and designing of lampshade by paper folding and colour blending techniques. For the above purpose, twenty designs of lampshades were designed and scrutinized by thirty respondents. Selected designs were developed in Adobe Photoshop Software. Colour combinations were also created for the uniqueness of designs and overall appearance. The respondents rated from the entire lampshade developed excellent to very good. Consumer acceptability and marketability of designed lampshades were found to be in the range of very good to excellent. Further, it was found that consumers preferred to purchase these lampshades on the suggested price. It was also seen that many respondents were ready to pay more than the suggested price. Thus, on the basis of the result, we can say that designing of lampshades with the fusion of paper folding and colour blending is a successful technique.

Keywords: *Silk Fabric, Paper Folding, Colour blending, Lampshade.*

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Introduction

Art and craft for home decoration are entirely human creation; they need human excellence, passion and love to be brought forth. Lightening is one of the interior designer's most powerful tools. It must be planned from several viewpoints to achieve a homogenous and relaxing atmosphere. Lampshade is one of the most important sources for artificial lightning. There are two common sources of artificial lightening – the incandescent bulb and fluorescent tube. Light bulb and tubes can be grouped in general categories according to the way they produce light. They are installed in ceiling fixture, floor and table lamps, and structure light designs that direct the light to where it is to be used.

Today, lampshades are not only used just for lightning, but also as accessories. Lampshades are available in an array of materials and textures such as: silk, velvet, linen, cotton, handmade

paper and burlap. They are also made in stone, porcelain and stained glass. They are available drum, French country, flute, pendant, rectangle, hexagon, octagon and so many others all available in various designs, colors and styles to suit any home décor. Silk is a delicate and requires just the right touch to paint easily by seta silk from peobeo France, since its colors are fixed simply by ironing. These are water- based colors, bright and colorful for painting on silk. Their fluid nature guarantees they fuse on silk.

The art of lamp shades making can be given a new face using paper folding and colour blending technique. A paper folding is an art used by Chinese people. Different types of folding gives new and unique patterns which were used with combinations to achieve perfect designs. Color mixing is an important process which has a wide application in several fields. Tying is used to resist the fabric from colour and to create different types of pattern simultaneously blending is done to create smooth transition between two or more colours. It is a technique of fabric printing that give the freedom to experiment with colour thread and folding technique to express the creativity. So, here an attempt has been made to create unique patterns using paper folding and colour blending technique for lampshades.

Aims and Objectives

- To study the origin and history of lampshades.
- To develop the different types of folding techniques.
- To create designs for lampshades using folding techniques.
- To construct preferred designs.
- To determine the marketability and consumer acceptance of final developed lampshades.

Significance

- This study will give many opportunities to the researcher to enhance their talent and give a wide way to become an entrepreneur in home designing.
- The study will introduce something new for the designer, craftsmen as well as to the consumer.
- The study will help the entrepreneur to meet the demands of consumers that are highly conscious and always look forward to the latest trend, unique, innovative and customized items.

Methodology

To study about lampshade and folding techniques

To acquire detailed information regarding lamp shade and folding techniques, the researcher collected secondary data from:

Libraries: - The researcher has visited various libraries to collect the information from books, journal and published as well as unpublished thesis.

Internet: -The websites on lamp shade were also search. These references were made the researcher aware of the types, shapes and development of lampshade.

Selection of shapes

A survey was conducted for the leading lighting shops and furnishing houses of Chandigarh. The main aim of this survey was to select the most popular shape and size of lampshade in

between the basic lamp shapes i.e. Drum, Coolie, Empire and Bell. A questionnaire was prepared and responses were noted down from the owner of the shops and customers of the shops about the prevailing or preferred shape.

Development of color combination range

Colour Combination range was prepared conveniently as per the availability of Silk colour in the market. Available colours were randomly arranged or combined to create colour combination range.

Designing of lampshade using folding techniques

Twenty techniques were created with selected colour combination. Top five techniques were taken for designing of lamp shades. Twenty designs were developed with selected colours combination under the categories with the help of Adobe Photoshop Software.

Development of lampshade

Estimation of fabric: Frame was divided into four parts and measured from upper and bottom circles. Length was also measured and five inch fabric was taken for allowances on upper and bottom circle of the frame for the edge finishing of the lamp shade. According to length of the frame, fabric was cut in square which was equal in length and width.

Folding and tying: Fabric was folded according to the selected technique and was tied with the thread, after that colors was applied and left it to dry. Ironing was done for fixation of the colour and wrinkle free surface.

Marking and cutting: After ironing the fabric, marking and cutting were done carefully according to shape of frame with appropriate seam allowances.

Stitching and finishing: Final selected designs were prepared by joining all four panels of the fabric. Stitching was done carefully according to the measured frame. The finishing of shade was done with the help of hemming on the top and bottom of frame. Outside and inside finishing was also done carefully.

Costing: Before checking the marketability and consumer acceptability of the products, the cost of lampshade was estimated by adding the cost of frame, fabric, labor charges and color used. The total cost of products was then calculated. Sales price was calculated by adding 40% profit to the calculated cost price.

Finding the marketability and consumer acceptability of lampshade

Marketability: Marketability of thefinal products was checked by surveying leading furnishing houses and lighting shops of Chandigarh. The main aim of this survey was to seek their view point regarding the general appearance of the lampshade. The questionnaire was prepared and responses were noted down from the owner of the shops. The data was then calculated and analyzed.

Consumer acceptability: To check the consumer acceptability exhibition was put up for prospective buyer i.e. the girls and faculty of the Government Home Science College, Sec-10 Chandigarh. The finished lampshades were display along with their sale price. The visitors were asked to fill the performa. Responses of respondents were then coded and analyzed.

Analysis of the data

Coding: The data from the questionnaire was transformed into the coding sheets.

Tabulation of data: After coding , the data was arranged in the form of tables.

Diagrammatic representation*:* For this study, pie charts and bar diagrams had been used for the inference of the result.

Results and Discussion

Figure no. 1 - Selection of shape: Survey was done for the selection of shades shapes.
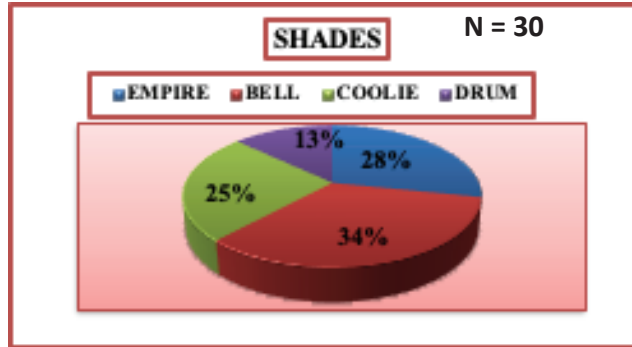
Figure no. 2 - Selection of colour combination for lamp shades
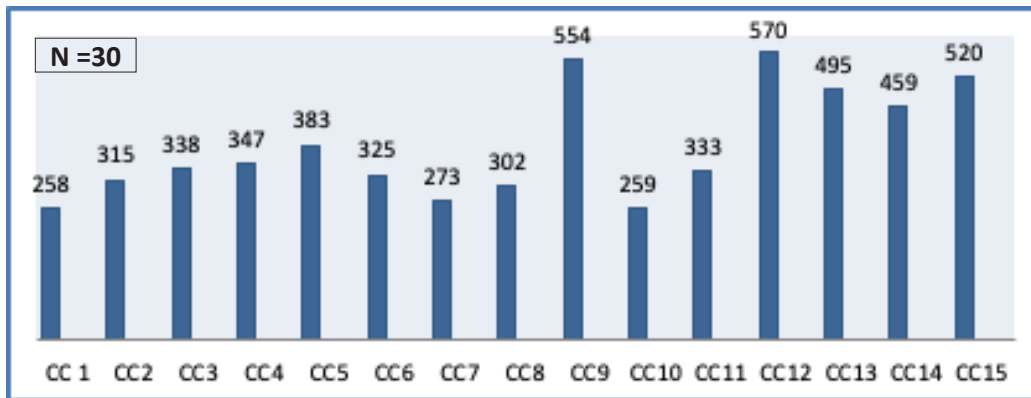
Figure no. *3* - Selection of folding techniques for lamp shades
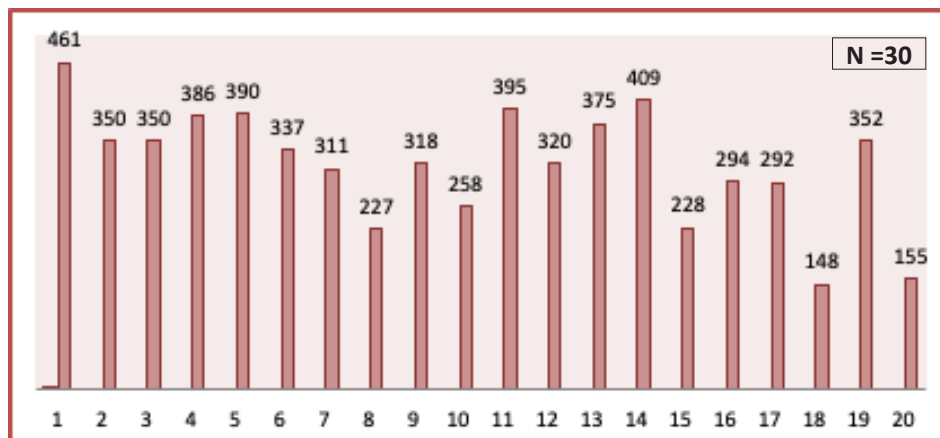
Selection of designs for lamp shades:

SILK LAMP SHADES DESIGNS:

Figure no. 4 - Category A
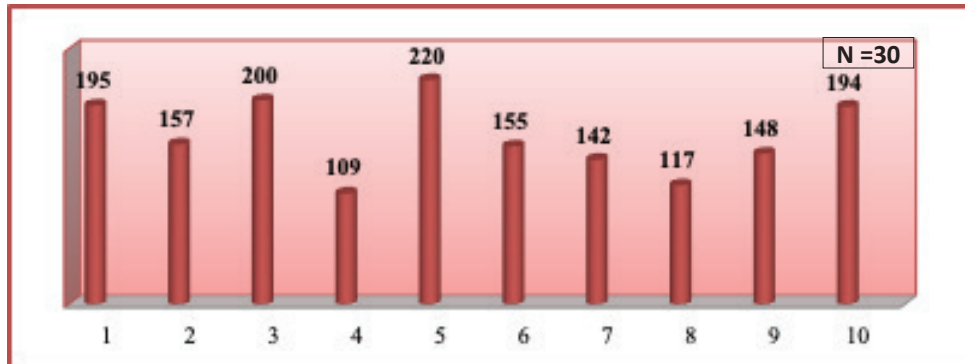
Figure no. 5 - *Category B*
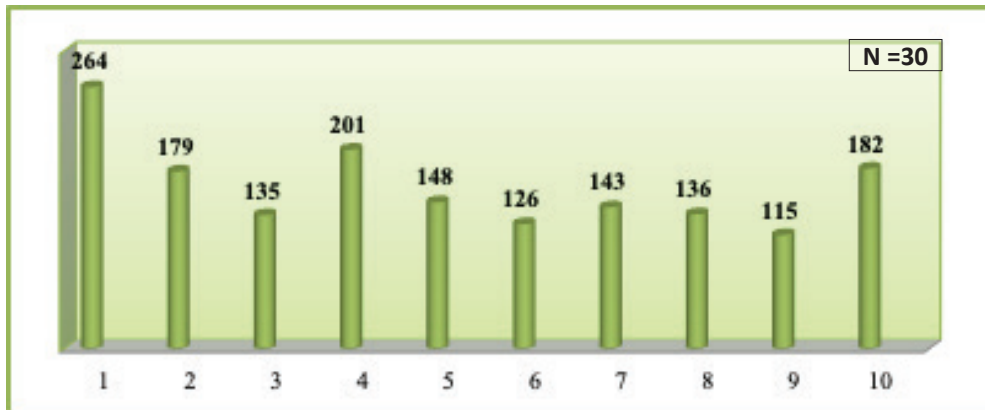
FINAL PRODUCT (SILK LAMPSHADES)

DESIGN NO. 1

DESIGN NO. 2

DESIGN NO. 3   DESIGN NO. 4

Marketability of lamp shades:

The results of marketability were as follow:-

Figure no. 6 - Distribution of responses of the shopkeeper on the basis of overall appearance of the Lamp Shade:
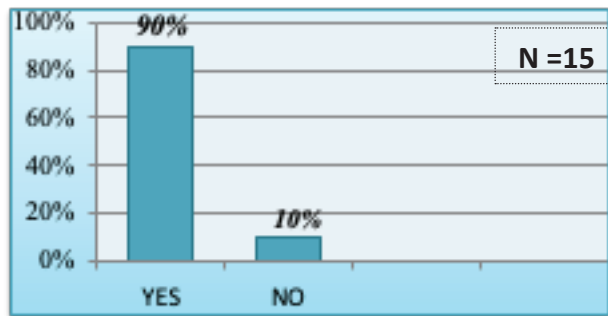
Figure no. 7 - Distribution of responses of the shopkeeper on the basis of the colour combination of the lamp shades:
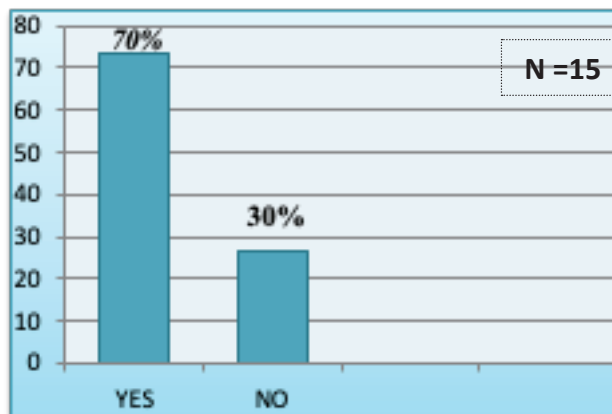
Figure no. 8 - Distribution of responses of the shopkeeper on basis of their willingness to purchase the Lamp Shade or to place an order:
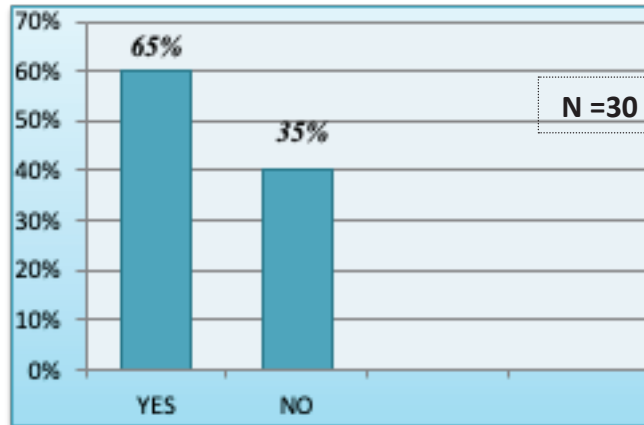
Consumer acceptability of lamp shades:

To check the consumer acceptability of lamp shade, an exhibition was put and visitors were asked to fill the Performa. The results of consumer acceptability were as follow:

Figure no. 9 - Distribution of responses of the consumer on the basis of appearance:
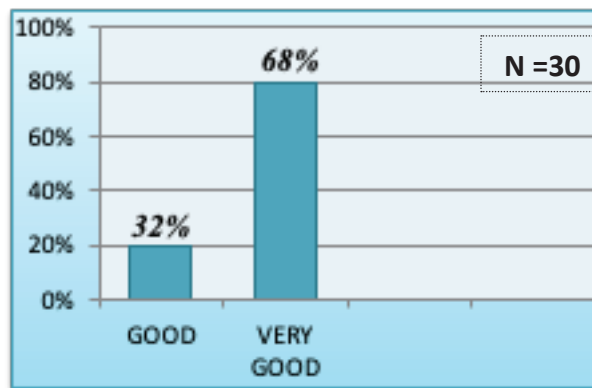
Figure no. 10 - Distribution of responses of the consumer on the basis of quoted price of Lamp Shade:
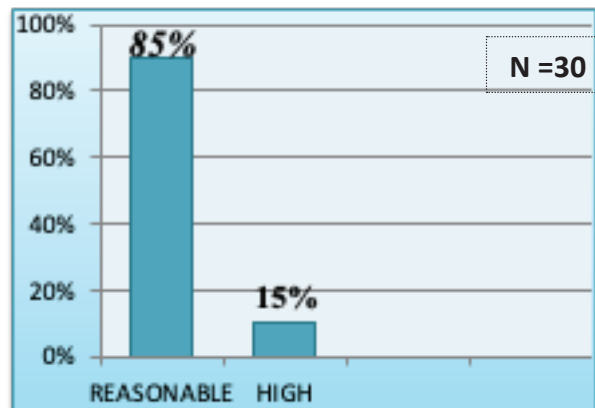
Figure no. 11 - Distribution on the basis of their willingness to place an order for the Lamp Shades:
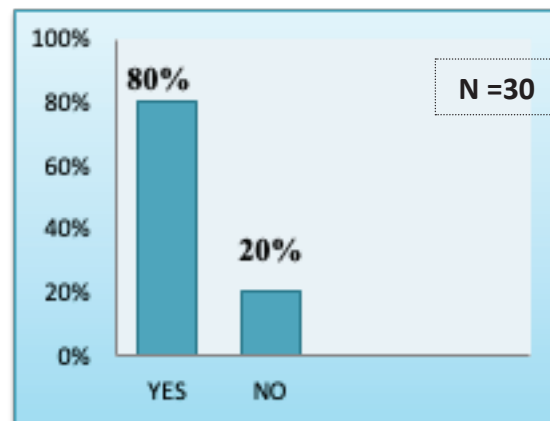
Conclusion

It was calculated that the study of designing of lampshades was able to express consumer acceptability and marketability. The consumers were ready to purchase these lampshades. The techniques used in the development of these lampshades were also appreciated by respondents. The overall design of the lampshade was extremely liked by the consumers.

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Skill based Workshops:
A Way towards Entrepreneurship

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Abstract

Skill development contributes in a positive way towards the success of an individual and society. This can be in terms of economic, social, vocational development. For a country that celebrates knowledge and intellect, skill with in-depth knowledge and experience can prove to be a great asset. With the second largest human capital in the world, Indian skill can benefit tremendously towards the overall development of the country and hence Skill India campaign was launched on July 15th 2015 with a mission to train the Indian youth in various skills. The present research contribution of various skill development workshops conducted for the learners and how these workshops have helped some of the beneficiaries to establish themselves as successful entrepreneurs.

Keywords: *Skill, Enterprise, Entrepreneurship*

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Introduction

Skill is the ability to do something well. In India skill has been valued since time immemorial. It has been used in establishing the identity of people in society. Jim Rohn, who was an American entrepreneur, author and motivational speaker has said, "You must either modify your dreams or magnify your skills." Youngsters have been learning skill form their parents whether these are skills of homemaking or skills of producing specialized products for the market. In the present times too, learning skills is emphasized: which is learnt either in educational/professional Institutes or online training programmes. The main motive of skill training is to train the youngsters in variety of skills that can help them to develop entrepreneurial qualities. They can identify their hidden talent and further utilize the same. Such trainings help youth to be job creators instead of job seekers. These programmes help in development of Industry and if provided on the job then, help in improving productivity. It also gives a platform to beneficiaries to get global platform for employment. Some of the trainings that are and can be provided are carpentry, welding, nursing, weaving, stitching, jewelry designing, footwear designing, baking and catering, banking, hotel management and tourism etc. There are many organizations which are working towards skill development. There are many organizations which are working towards skill development.

National Skill Development Corporation is one such institution. It was setup as a one of its kind, Public Private Partnership Company with the primary mandate of catalysing the skills landscape in India. NSDC is a unique model created with a well thought through underlying philosophy

based on these pillars: To create, To fund , To enable. The motive of NSDC is to upgrade the skills through industry involvement, curriculum and quality assurance. As per the record of NSDC, Vocational training introduced in 10 States, covering 2400+ schools, 2 Boards, benefitting over 2.5 lakh students. Curriculum based on National Occupational Standards (NOS) and SSC certification. NSDC is working with 21 universities, Community Colleges under UGC/AICTE for alignment of education and training to NSQF.

There are many skill development programmes under UGC. As per UGC three schemes variants are available for skill based vocational courses which are B. Voc. Degree Programme, Community College and Deen Dyal Kaushal Kendra. The main objective of B. Voc. programme is to provide skill training along with academic knowledge. To integrate relevant skills into the higher education system in order to make higher education relevant to the learner and the community is motive of Community Colleges. Through Deen Dyal Kaushal Kendras skilled manpower is created for requirements of industries at different levels. Under these schemes vocational education is provided at various levels that are Certificate, diploma, advanced diploma, B.Voc, M. Voc etc.

Ministry of Skill Development has also launched a scheme named as Pradhan Mantri Kaushal Vikas Yojana to provide skill training to youth of India in various fields which will surely help them to improve their lives. Skill Development Initiative under Ministry of Labor and Employment include vocational training to drop outs from schools, existing workers, and graduates by utilizing the available infrastructure in Government and Private Institutions.

Skill development workshops at school and college are conducted time to time to nurture talent, improve the quality and standard which are the requirements of today's competitive workplace.

Summer schools/ short term courses conducted at colleges or schools in vacations helps the students to learn different types of activities to be able to start their own business. Skill based competitions also contributes towards bringing one's talent in front of others. Through these types of competitions, a person gets a chance to showcase her skill, to make public relations, to publicize her work among others. These competitions are organized at various levels like college, city, state and district etc. for example in Chandigarh, every year many competitions are organized every year during rose festival, Teej festival etc. Youth and Heritage festivals organized by universities are also a major contributor in identifying the different skills of youth.

Role of Skill Based Workshops towards entrepreneurship

It will be right to say that at school and college level knowledge and personality of a student gets enhanced by education, holistic training, communication skills and skill based learning. Students learn better if they learn by doing that is by workshops. In colleges many types of workshops are conducted to provide them professional skill training. Famous and skilled trainers are invited to deliver demonstrations of specific skills. Along with academic knowledge students can explore their skills by attending these workshops. Awareness about skill-based, solution-centric learning can bring in a positive change in making students aware of the actual job scenario through real work environment in the industry or to start their own enterprise because skill should not be limited to demonstration it should be productive. For being a successful entrepreneur, some qualities are required in a person like confidence, creativity, determination and open mindedness

which can be developed by training programmes. An entrepreneur should have skills and ability to start, organize and manage a business in order to gain profit which is possible through proper training programmes or workshops. Researchers also have experience of conducting some skill based workshops like Hastkala- workshop on fabric ornamentation in which training was given in various techniques of tie & dye, block printing and fabric painting, workshop on sewing, workshop on cloth bag making etc. Some of the participants of those workshops were able to start their own business in various skills. They told the researchers that they were able to learn and enhance their skills through practical exposure provided in the workshops. They gained more confidence and efficiency in their respective skills.

Pictures from some of the workshops conducted by researchers

Success stories of some participants

- After getting training in painting and printing through the workshop of fabric ornamentation, one of the participants, Bhavdeep Kaur residing in Derabassi realized to utilize the learnt skills to earn money as well fame through her skills and started taking orders for printing and hand painting on various garments, now she experiments with different techniques of tie and dye to create beautiful articles and sell them. She feels very happy to share her experiences of learning skills and using those as her entrepreneur. She has been able to do all this just after getting skill training. She creates beautiful scarves, dupattas, kurtis with tie and dye, printing and painting, some of her creations are-

- Tanvi Sharma, currently pursuing her masters in sociology has been running her part time enterprise in baking successfully. She had a passion for cooking and baking, so had attended several baking workshops organized in college. Now she is an expert in this field and bakes many types of cakes, cookies, mousse, muffins and chocolates. She has even created her own you tube channel to share her innovative recipes. Along with this she has won many cookery contests held in and around Chandigarh.
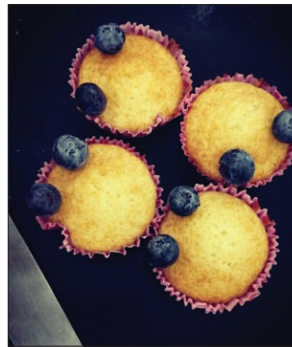
- Nayan Bansal keeps herself busy in creating different products of block printing, tie and dye and fabric painting along with studying BDS. Because of her deep interest in skills of printing and painting she attended 10 days training programme in fabric ornamentation and learnt different techniques with interest and enthusiasm. She created beautiful articles during workshop and after some days of getting training she created many products and even organized an exhibition of her created products of hand painting in Hotel lazyshack, Chandigarh which was well appreciated by the visitor.

Brochure of exhibition   Some creations by participant

Conclusion

It is concluded that skill development programmes and skill based workshops have received considerable results. Skills enable a person to secure better livelihood. Skill based workshops have proved a major contributor in the development of entrepreneurship. It is clear from the mentioned case studies that skill training even provided through workshops can be utilized as an entrepreneurship. Skill training promotes social as well as economic growth of not an individual but of whole country. Therefore more training programmes should be organized in each sector. Internship facilities can also be provided to the trainees.

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Enhancing Sustainability and Skill Development in Home Science for Innovating Nutritious Gelatin Coated Candy for Start-ups

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Abstract

Sustainability has been defined as development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Skills are abilities for adaptive and positive behaviour that enable individuals to deal effectively with the demands and challenges of everyday life (WHO, 2003). Skill development enable individuals to translate knowledge, attitudes and values into actual abilities. Skills for sustainable development are also central to innovation also the skills and knowledge required for sustainable development provide wide benefits for start-ups. One such skill development is seen in Home Science, in field of Foods and nutrition. Owing to this skill a product was developed where gelatin along with glycerol was used to encapsulate the candies; made from naturally derived and nutritious raw materials like dates and nuts; aided by chocolates (dark and white); expressing their ability to preserve product for longer duration i.e. to extend shelf life, prevent oxidation, retain colour, flavour and texture and to enhance the glaze of product (Crampton, 2019). Moreover, these layers are transparent and edible, perfect for coating.

Keywords: *skill development, Home science, Gelatin, candy, nutrition.*

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Introduction

Education, or the transmission, acquisition, creation and adaptation of information, knowledge, skills and values, is a key lever of sustainable development (UNESCO, 2015). These skills of home science help boosting dormant traits and acquire knowledge and experience to face and survive in future.

Some core principles of skill development are:

Decision Making

Decision making helps us to deal constructively with decisions about our lives. It is the process of making assessment of an issue by considering all possible/available options and the effects different decision might have on skill development.

Self-Awareness

Self-Awareness includes recognition of ourselves, identification of our strength, weaknesses, desires and dislikes. Developing self-awareness can help us to recognize when we are stressed or feel under pressure and enhance chances of sustainability. It is also often a prerequisite for effective communication and interpersonal relations, as well as for developing empathy for others.

Coping with Stress

Coping with stress means recognizing the sources of stress in our lives, recognizing how this affects our health, and acting in ways that helps us to cope up with stress, by changing our environment or lifestyle thus preparing us for future startups.

Effective Communication

Effective Communication is an ability to express ourselves both verbally and non-verbally in an appropriate way in relation to our cultures and situations, easing the sustenance. This means being able to express desires, opinions, and fears and seek assistance and advice in times of need.

Creative Thinking

Creative thinking contributes to both decision making and problem solving by enabling us to explore the available alternatives and various consequences of our actions or nonaction. It helps us to look beyond our direct experience, and even if no problem is identified, or no decision is to be made, creative thinking can help us to respond adaptively and with flexibility to the situations of our daily lives. Creative thinking inculcates novelty and flexibility to the situation of our daily lifestyle and helps in innovation.

Problem Solving

Problem solving is also a part of skill development which enables us to deal constructively with problems in our lives. Significant problems that are left unresolved can cause mental stress and give rise to accompanying physical strain. This is having made decisions about each of the options, choosing the one which is the best suited, following it through the process again till a positive outcome of the problem is achieved.

Interpersonal Relationship

Interpersonal relationship skills in home science are a skill that helps us to understand our relations with others and relate in a positive or reciprocal manner with them. It helps us to maintain relationship with friends and family members which are an important source of social support and also be able to end relationships constructively. Interpersonal relationship enhances the mental and social well-being (Anand, 2016).

Utilizing and simultaneously raising these traits contribute to successful development of product i.e. candy.

Edible coating is new environment friendly technology that is applied to control moisture transfer, gas exchange or oxidation processes. Edible coatings provide an additional protective coating to product (Dhall, 2013). It positively affects physical (moisture retention, glossiness, appearance, firmness) and biochemical attributes (cell wall degrading enzymes, oxidation) and acts as replacement for plastic wrappers.

Gelatin is an important biopolymer derived from collagen and is extensively used by various industries. Gelatin is a mixture of proteins and peptides obtained from the partial breakdown of collagen (Ramos, 2016).

Candy is generally described as a broad category of sweet foods, also referred to as "confections." Hard and soft candies, chocolate, and gum all contain sweeteners such as sugars, syrups, honey, or non-nutritive sweeteners (Hornick, 2014).

Nutritional value

With base as nuts (almonds, Cashews and Peanuts) which are good sources of fat, fiber and protein. Most of the fat in nuts is monounsaturated fat, as well as omega-6 and omega-3 polyunsaturated fat. However, they do contain some saturated fat. Nuts also contain vitamins and minerals, including magnesium and vitamin E (Robertson, 2018).

Dates

Dates are natural sugar. Dates grow on date palms in small clusters. High in polyphenols; Polyphenols are antioxidant compounds that can protect the body from inflammation. Also high in potassium, which is an electrolyte the body needs for good heart health (Nall, 2018).

Objective of developing edible gelatin coated candy

To sustain growth with special focus on skill development which in turn propel initiative of startup. Including preparation of a cost-effective edible wrapper which is acceptable and which will help in extending shelf life of product; along with avoiding moisture loss and loss through oxidation.

Method and material

Field of food and nutrition in home science Institution provides an opportunity to students by developing skills and promoting innovation by supplying of materials (equipment) and imparting knowledge about methods.

- For edible gelatin layer: Thermometer, ph. Meter, burner, setting plate etc. were used
- For candy making: Candy was standardized and evaluated. Efforts were made to develop a candy infused with nutrients and new to market. Base of each candy included naturally derived raw material like dates. It involved using double boiler method for chocolate melting and moulding to shape a candy.
- Gelatin coated candies: Knowledge and guidance of prevailing temperature and moisture content ensures the success of product, so that gelatin adhere to the candy.
- Knowledge of Sensory evaluation testing: Candy was selected to be coated with edible layer by sensory evaluation (involving appearance, flavour, taste, texture and colour) which is included in study of nutrition evaluation. The sensory evaluation consists of judging the quality of food by panel of judges. A panel of judges consisted of 3 lecturers and 5 students of Government Home Science College, Chandigarh, India. Acceptability and sensory scoring of the recipe was done on the basis of the scores given by the judges based on Hedonic scale rating (ranging from like extremely to dislike extremely).

Results

Gelatin coated dates candy was approved based on its overall acceptability (through sensory evaluation) keeping in mind the taste, texture, color, flavor. Afterwards it was stored for shelf life testing for 1 month. Home science education calls for using skills approach in education which reorients to address sustainability. It also included the application of assumptions, knowledge, competence, and the ability to challenge one's own thinking (Anand, 2016).

Conclusion

Learning a variety of skills in home science, prepared the individuals for a more successful life at home, in their communities, and at the workforce which also include the initiative for a start-up. Rather than simply letting individuals learn skills by observing people live and interact around them, educational systems such as of home science intentionally teach a breadth of skills. These skills allowed individuals to bridge what they currently know and need to apply in the future. Home science promotes enhanced efforts to positively develop or change behaviour, which ensures sustainability in this environment (Anand, 2016).

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Revival of Indian Folk Art through Textiles:
A Review

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Abstract

India has been known as the land of cultural heritage and traditional vibrancy by the virtue of its conventional folk art. Every region in India has its own style and folk art which are very simple as well as ethnic, yet colorful and vibrant enough to speak volumes about the richness of heritage. Absence of folk art in a country diminishes the identity of culture in human life. Awareness among people for the art forms is limited as the subject is too vast in nature. The fashion world, always demands of something creative and artistic so there arises a need to create awareness among scholars and students about incorporation of folk art with textiles to prevent its extinction. The aims of this review paper is to raise the awareness among people by depicting innovative creations of textiles through folk art, So that our upcoming generation also gets imbibed of our wealthy heritage. The methodology employed here is of descriptive nature. Various journals were studied and analyzed for presentation of this review paper. The study undertaken on the subject was actually an opportunity for the reviewer and a home science scholar which revealed that , if Indian folk painting are creatively blended they could give interesting results in textile designs , that could provide creative hand painted textile products. With the help of innovative creations in textiles by embedding folk art in it, we will be able to redevelop and flourish our traditional art.

Key words*: Innovation, Textile, Folk paintings*

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Introduction

Innovation is the process which brings together novel ideas and solutions that meet new requirements or already existing needs. It refers to doing something different which has a positive impact on the society. Innovation differs from invention in which innovation refers to the use of a better ideas or methods, whereas invention refers to the creation of the ideas or methods itself (Ministry of Textiles 2014).

India has been always the tarn of traditional form of art which includes paintings, embroideries, etc. This land has been known for its rich and colorful folk heritage. Indian folk art came into contact with numerous cultures and has assimilated outside influence, without losing its original culture. Folk art has been depicting rich heritage and religious values of our country. The folk art of India is very ethnic and simple, and yet colorful and vibrant enough to speak volumes about the country's rich heritage. The native folk art apparently has a great potential in

the international market because of its traditional aesthetic sensibility and authenticity. Folk art expresses cultural identity by conveying shared community values and aesthetics. Some of the most famous folk paintings of India are the Madhubani paintings of Bihar, Patachitra paintings from the state of Odisha, Phad Paintings of Rajasthan, Kalamkari of Andhra Pradesh, Pichhvai Paintings of Rajasthan, Warli art of Maharashtra, Nirmal paintings of Andhra Pradesh, Aipan of Uttarakhand, Pithoro paintings of Gujarat, Gond and Mandana Paintings of Madhya Pradesh, Kalighat paintings of Calcutta and many more. Traditionally these paintings were used on canvas but with technological advancement and increasing awareness among people, these paintings are now also being painted on textile materials like jute bags, pen holders, mobile covers, file folders, table cloth, bed sheets, saris, kurtis, scrafs dupattas etc. Awareness for the depicted art form is limited as the subject is too vast in nature, so there is a need to create awareness among today's youth about the folk art in order to prevent its extinction and help it redevelop with means of textiles.

Methodology

The methodology employed here is of descriptive nature. Various write ups and journals were studied and analysed for presentation of this review paper.

Folk Arts Of India

Warli art of Maharashtra

Warli art is an ancient Indian Folk art. Warli Art got its name from warli tribes of Maharashtra. Warli painting added new dimensions to tribal art. These paintings were mainly done by the women Folk. Warli painting represent an artist's relationship with life and everything that is a part of it-religion, ritual, livelihood, family, relationship and death. The trademark of warli painting is the use of geometric designs such as triangles, circles, square, dots, amd crooked lines. These are used to depict human figures, animal figures, houses, crops etc (Satyawadi 2010).

Madhubani Paintings of Bihar

Madhubani painting or Mithila painting is practiced in the Mithila region of Bihar state, India. 'Forest of Honey' (Madhu-honey, Bans-forest or woods) these paintings are basically religious in nature. These paintings are done by women predominantly at home, in anointed areas like prayer room. Hindu mythology is the main theme. It is an Indian living folk art inspired from mythological epics of Mahabharata and Ramayana. The main figures in Madhubani paintings are adopted from nature and mythology (Ekta Sharma, 2016).

Mandana Paintings of Madhya Pradesh and Rajasthan

The art of creating designs on the floor during the festive occasion is the tradition of Rajasthan and Madhya Pradesh and the art is known as Mandana paintings. It consists of geometrical designs originating from eastern Rajasthan, particularly in Bundi and Jhalawar areas. In this the ground is prepared with cow dung mixed with rati, a local clay and red ochre. Lime and chalk powder is used for making the motifs. The architectural motifs in mandama art are made by first plotting the points. A set of three points are plotted to make equilateral triangle. There are smaller motifs used in the paintings (Ekta Sharma, 2015).

Kalighat Painting or Bengal Pats

Kalighat paintings are created in the Kali temple area on the bank of the Ganga in South

Calcutta. Kalighat paintings refers to the class of paintings and drawings on hand made or more usually on machine made paper produced by a group of artists called 'Patuas' in between 19th and earlier 20th Century. Hindu Gods and Goddess and contemporary social events, mythological subjects and secular themes are depicted in Kalighat pantings. (Jain1999)

Phad Painting Rajasthan

Phad painting or Phad is a style religious scroll painting and folk painting, practiced in Rajasthan state of India. This style of painting is traditionally done on a long piece of cloth or canvas, known as phad. The narratives of the folk deities of Rajasthan, mostly of Pabuji and Devnarayan are depicted on the phads. The Bhopas, the priest-singers traditionally carry the painted phads along with them and use these as the mobile temples of the folk deities. The phads of Pabuji are normally about 15 feet in length, while the phads of Devnarayan are normally about 30 feet long. Traditionally the phads are painted with vegetable colors (Ekta Sharma 2016).

Kalamkari of Andhra Pradesh

Kalamkari or Qalamkari is a type of hand-painted or block-printed cotton textile, produced in parts of India. The word is derived from the Persian words kalam (pen) and kari (craftmanship), meaning drawing with a pen. The craft made at Machilipatnam in Andhra Pradesh, evolved with patronage of The Mughals and the Golconda sultanat. There are two distinctive styles of kalamkari art in India - one, the 'Srikalahasti' style and the other, the Machalipatnam style of art. The Srikalahasti style of Kalamkari, wherein the "kalam" or "pen" is used for free hand drawing of the subject, and filling in the colours is entirely hand worked. This style flowered around temples and their patronage, and so had an almost religious identity - scrolls, temple hangings, chariot banners and the like depicted deities and scenes taken from great epics – Ramayana, Mahabarata, Puranas and Mythological Classics. Only natural dyes are used in Kalamkari, and involves seventeen painstaking steps (Ekta Sharma, 2015).

Gond Painting of Madhya Pradesh

Gond paintings are the living expressions of the village people of Gond tribals of district Mandla in Madhya Pradesh. These paintings are deeply linked with their day to day lives. These paintings are made by placing dots over the dots in upward, downward and sideways to create final pictures. The theme of paintings is drawn from folktales and Gond mythology. The tribal folk art gond paintings, based on local Indian festivals like Karwa Chauth, Deepawali, Ahoi Ashtami, Nag Panchmi, Sanjhi etc. are done by women using simple homemade colors. Horses, elephants, tigers, birds, gods, men and objects of daily are painted in a bright and multicoloured hues (Ekta Sharma, 2105).

Patachitra of Orissa

Patachitra painting originated from the temple of Jagannath at Puri in the 12th century; Patachitra painting is considered as one of the oldest and most popular and important form of Oriya paintings. The name Pattachitra has evolved from the Sanskrit words patta, meaning canvas, and chitra, meaning picture. Pattachitra is thus a painting done on canvas, and is manifested by rich colourful application, creative motifs and designs, and portrayal of simple themes, mostly mythological in depiction (Ekta Sharma, 2016),

The study reveals that if Indian folk arts are creatively blended they could give interesting results in the field of textiles such as hand painted dupattas, scarf, jackets, wall panelles, wall

hangings, canvas shoes, bedsheets, pillow covers, sarees, table mats, table covers, hand bags, jackets, capes, pouches, t-shirts etc.

Conclusion

In India awareness among the people for the art forms is limited as the subject is too vast in nature. Many folk arts are in the extinct stage. The need of the hour is to raise the awareness and interest in folk art through textiles among young generations by means of workshops, seminars, exhibitions, demonstrations and deep understanding of the art forms, so that our upcoming generations are imbibed of our wealthy heritage.

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Women Handloom Weavers: Sustaining the Tradition and Cultural Heritage

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Abstract

The textile industry in India is one of the largest industry in the world which comprises of Handloom, Powerloom and Mill sector. Handloom weaving is the second largest economic activity after agriculture which provides direct or indirect employment to 35.22 lakh weavers and allied workers engaged on about 31.44 lakh handlooms (4th All India Handloom Census 2019-20), 72 percent of them are women and most of them are from disadvantaged group. Although they are contributing a lot for sustaining this traditional craft but they are deprived of their social status and recognition. Handloom industry has deep rooted linkage with our culture and traditions. Its not only a precious part of the cultural heritage but also represents the richness and diversity of our nation and artistry of weavers. The Indian weavers are not only weaving the cloth to meet the indigenous demand but also exporting artistic and unique varieties of handwoven textiles to other countries. This sector contributes approximately 15% of the total cloth production and also contributes to the export earnings of the country. 95% of the world's hand woven fabric comes from India. However this sector is facing various problems such as obsolete technology, unorganized production system, low productivity, inadequate working capital, conventional product range and poor marketing skills. The welfare measures introduced and implemented by the government of India for the upliftment of handloom weavers have not been able to bring out the desired result evenly throughout the country for the weavers of all the states of India. There is a need to take various steps for the social and economic empowerment of women in this sector for which the working, living and wage conditions need to be improved specially for the women handloom weavers.

Keywords: *Handloom, Weavers, Women Empowerment*

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Introduction

The Indian handloom is being celebrated the world over but the handloom weavers are struggling for their survival. The Indian fashion designers are proudly showcasing our handloom woven textiles on national and international ramps and celebrating its beauty and uniqueness but the weavers who are weaving the gorgeous fabrics of international fame do not get any monetary benefit and live in very pathetic condition due to poverty and debt.

In order to understand the situation of handloom weavers, an attempt is made in this study to examine the various factors which forced the handloom weavers to be at the lowest rungs of the economic ladder. They live in very poor conditions because of poverty. In spite of almost seven decades of development, handloom weavers have not been able to make any significant progress. The main aim of this study is to find out the hurdles/ reasons which are reponsible for their unsatisfactory growth as the number of handloom weavers is reducing with each succeeding handloom census.

The compulsions of life have forced people into deviations from the traditional norms. The poverty and declining situation of handloom industry impelled the handloom weavers to migrate from one place to another. The adoption of modern techniques and economic liberalization have made serious in-roads into the handloom sector. Competition from powerloom and mill sector, availability of cheaper imported fabrics, changing consumer preferences and alternative employment opportunities have endangered the vitality of handloom sector.

Women in handloom sector in India

Women are an integral part of indian handloom sector. As per the fourth handloom census there are 35.22 lakh handloom workers, out of which 72 percent are women and only 28 percent are men. Where as the percentage of women and men handloom workers as per the third handloom census were 78 percent and 23 percent respectively. Most of the women handloom workers are located in rural areas. They are either illiterate or semi-illiterate due to their poor socio-economic conditions. Its has also been realized that the contribution of women in sustaining this traditional art is not fully recognized but this sector has the great potential to play an eminent role in women's empowerment.

Table:1.Distribution of handloom weavers and allied workers on the basis of gender

Location	Male		Female	
	Weavers	**Allied workers**	**Weavers**	**Allied workers**
Rural	6,01,562	1,77,210	17,54,391	5,20,125
Urban	1,57,587	39,374	1,60,108	1,11,661
Total	7,59,149	2,16,584	19,14,499	6,31,786

Source:4th All India Handloom Census

Even though women form an indispensable part of the Indian handloom sector, their contribution is not fully recognized. Illiteracy or very low level of education makes their condition worse which challenge their social security and future aspirations. In north eastern region the women handloom weavers have advantage of cultural freedom to deal with work on their own but women handloom weavers in rest of the country are constrained with in the male dominating environment where their work in not recognized as equals to men handloom weavers who are recognized as owners of the handlooms.Recognition of women's contrbution as handloom weavers and allied workers are important and should be given the same status in official statistics. They should also be able to access the various government schemes in their own name which will boost their self confidence for future growth.

Initiative taken by the government for the handloom sector

Handloom weavers in India are integral part of its rich cultural heritage and tradition.

Handloom industry provides livelihood to lakhs of people in India. No. of steps have been taken in the last few years to revive the handloom weaving. Special attention was given to increase the earnings of handloom weavers so that the younger generation can be attracted towards this traditional profession. The initiatives by the present government are as follows:

- Introduction of block level cluster approach. Organization of weavers in clusters and facilitating them with basic infrastructure like common facility centre with godown, office with internet facility, rest room, facilities for training and bulk processing.
- Concessional credit availability to handloom sector
- Design and product development through engaging a designer at block level cluster approach. Providing assistance to handloom weavers for training, design development, acquisition of loom, accessories and raw materials.
- Direct benefit transfer
- Introduction of four year degree course in handloom and textile technology.
- Strengthening of weavers' service centers.
- IT enabled facilities for encouraging the handloom weavers to use IT based interventions.
- Involvement of primary weavers' co-operative societies for development of handlooms.
- Launching 'India Handloom' brand for protecting high value handloom products.
- Observation of **National Handloom Day** on 7th August to generate awareness about the importance of handloom industry as a part of our rich heritage and culture, to promote handloom products and to increase income of weavers as well as enhance their confidence and pride
- Promoting educated youth of weavers family as weaver entrepreneur.
- Linking handloom with fashion and tourism.

Some more significant contribution by the eminent persons to promote the handloom products:

It is also important to mention the role of women leaders in India who have thken steps to support and promote the growth of handloom sector such as'

- Union Textile Minister, Smiriti Irani initiated the campaign #wearhndloom on twitter and Facebook to increase awareness of the poor conditions of weavers and motivate consumers to wear handloom.
- **Women's weave** by Sally Holkar provide training and employment to tousands of women handloom weavers.
- Actress Sharmila Tagore has launched the countries first NGO to promote the handloom industry in 2013.
- DesignerAnita Dongre has also taken up the steps to promote andloom through fashion shows.
- Designer and polititian Shiana NC also associated withLakme fashion week to promote banarasi handlooms.

But it is important to spread awareness and capacity building for enhancing participation, decision making, and transformation of women handloom weavers.

Sugesstions to improve the status of women in handloom sector:

Various initiatives have been taken by the government and non-governmental organizations

to improve the participation of women handloom weavers and improve their socio-economic status but it is not enough to bring them up from the lower rungs of the society. There are few recommendations to improve the status of women handloom weavers.

- Implementing literacy and skill development programmes to improve living standard of women handloom weavers
- Programme planning for specific development and budget allocation for the same
- Imlementing welfare schemes related to health and insurance for women
- Formation of cooperative societies exclusively for women through self help groups
- Showcasing handloom products made by women handloom weavers and their recognition at national and international levels
- Appropriate wages for their work

In NER the women handloom weavers have created self-help groups and cooperatives, thus building a platform for generating income and inculcating entrepreneurial skills. This has enhanced their participation in decision making process, developed their level of confidence and strengthened their ability to achieve success and be empowered.

In te recent past, women artisans and weavers have been awarded by the government as a recognition of their craft and contribution for example. "Kamladevi Chattopadhya National awards" were started in 2017 especially for women handloom weavers and handicraft artisans to help them receive due recognition and economic benefits. Anoter initiative by the government to support women such as grant of 'Mudra Loans' would enhance the independence of women in decision making.

Conclusion

Indian handloom sector is one of the few sectors in India that preserve and promote our culture. It plays a significant role in generating employment and revenue for the country but unfortunately it has not received its due recognition in local and global market. The government of India has been promoting and encouraging the handloom sector through a series of measures and schemes. Due to various policy initiatives and implementation of various schemes like cluster approach, vigorous marketing initiatives and social welfare measures have shown positive growth in handloom sector. Capacity building of handloom weavers with comtemporary designs, quality and marketing skills will not only ensure the sustainability of the sector but also revive the dying skills of artisans and foster the exports.

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Issues and Challenges affecting the Nutritional Status of Adolescence Girls

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Abstract

Adolescents comprise 20% of the world's total population. This phase is characterized by acceleration of physical growth and, psychological and behavioral changes thus bringing about transformation from childhood to adulthood. Adolescence has been described as the transition period in life when an individual is no longer a child, but not yet an adult. It is a period in which an individual undergoes enormous physical and psychological changes. Kotecha et al. (2013) viewed that diet play major role in growth and development of adolescents as at this age development of healthy eating habits is of huge importance. The present study assesses the nutritional status of school going Sample of 450 girls aged 10 to 18 years. Using questionnaire cum interview method. The sample girls were classified according to BMI Asian Indian Classification and revealed that in the government school 32% (72) girls were underweight, 58.2% (131) were normal, 6.2% (14) were overweight and only 3.5% (8) were found to be obese and in put schools The energy intake of girls at the age of 10 years was 1699.70 kcal where in Private school the mean energy intake was 1761.74kcal. The energy intake was less than Recommended Dietary Allowance in both categories of school .The mean protein intake of girls was 47.22g at the age of 10 year which is greater than the RDA. In Private school protein intake of girls at the age of 10 year was 51.49g which is greater than RDA.In government school mean iron intake of girls at the age of 10 years was 14.26 mg which is lower than RDA 21 mg. In private schools the mean iron intake of girls was 16.72mg .In both the government and private school the mean iron intake of all the respondents is lower than the Recommended Dietary allowance (RDA)

***Keywords**: - Nutritional status, Adolescence, BMI, RDA, Energy*

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Introduction

Adolescence is a crucial period when major physical, psychological, and behavioral changes take place. Diet plays a very important role in the growth and development of adolescents, during which the development of healthy eating habits is of supreme importance. There is a dual burden of under nutrition and over nutrition in this age-group. Approximately 146 million children are underweight, out of these 57 million are of India. Over 90% Indian women, adolescent girls and children's are anemic where the health of children is dependent upon food intake that provides sufficient energy and nutrients to promote optimal, physical, social growth and development.

Inadequate energy and nutrients have a variety of poor outcomes including retardation iron deficiency anemia, poor academic performance and development of psychological difficulties (Sireesha et al., 2015). Keeping in view above, the present study is an effort to assess issues and challenges affecting the nutritional status of girls of government and private schools of Chandigarh.

Methodology

The present study is based on a cross sectional sample of 450 government and private school going girls ranging in the age from 10 to 18 years. The age range was specifically chosen to study the nutritional status during childhood and adolescence. Other information was collected regarding dietary pattern, dietary habits, and using questionnaire based interview. A 24 hour dietary recall for three days was recorded.

Result

Table 1. Distribution of the Sample Girls on the Basis of Average Actual Dietary Intake of Nutrients

Age	No	energy					Protein					Fat				
			Government school		Private school			Government school		Private school			Government school		Private school	
		RDA	Mean	% of RDA met	mean	% of RDA met	RDA	mean	% of RDA met	mean	% of RDA met	RDA	Mean	% of RDA met	mean	% of RDA met
10	25	2010	1761.74	87.64	1699.70	84.56	40.4	51.92	128.51	47.22	116.88	35	63.77	182.2	59.77	170.77
11	25	2010	1933.78	96.20	1840.64	91.57	40.4	58.46	144.70	37.90	93.81	35	68.20	194.85	67.98	194.22
12	25	2010	1863.99	92.73	1790.20	89.06	40.4	55.29	136.85	43.64	108.01	35	69.97	199.91	70.17	200.48
13	25	2330	1874.00	80.42	1764.69	75.73	51.9	59.25	114.16	51.76	99.73	40	71.08	177.7	55.21	138.02
14	25	2330	2080.52	89.29	1877.42	80.57	51.9	55.27	106.49	49.69	95.74	40	73.64	184.1	69.92	174.8
15	25	2330	2172.40	93.23	1946.61	83.54	51.9	49.45	95.27	45.59	87.84	40	76.06	190.15	63.97	159.92
16	25	2440	2051.57	88.05	1980.19	81.15	55.5	50.82	91.56	48.97	88.23	35	80.30	229.42	60.30	172.28
17	25	2440	1896.19	81.38	1804.23	73.94	55.5	53.10	95.67	54.84	98.81	35	72.00	205.71	63.89	182.54
18	25	2230	1945.65	87.24	1798.40	80.64	55	52.87	96.12	55.87	101.58	25	68.53	274.12	50.10	200.4

It was seen in the Government school that the mean energy intake of girls at the age of 10 years was 1699.70 kcal (84.56%) and at the age of 18 years it was 1798.40 kcal (80.64%) against the recommended daily allowances (RDA) of 2010 kcal for 10 years and 2230 kcal for 18 years. In the Private school the mean energy intake of girls at the age of 10 years was 1761.74 kcal (87.64%) and at the age of 18 years 1945.65 kcal (87.24%) against the recommended daily allowances (RDA) of 2010 kcal for 10 years and 2230 kcal for 18 years. A study conducted by *Twara et al.,* (2015) on 100 students from both Private and Government schools and colleges revealed that among adolescent girls in the age group 13 to 15 years and 16 to 18 years the average intake of calories was lower than the RDA i.e. 1258.2kcal/d and 1534.52kcal/d respectively.

It was observed in the present study that the mean protein intake of girls at the age of 10 year was 47.22g (116.88%) and at age 18 year it was 55.87g (101.58%) which is greater than the recommended daily allowance of 40.4g and 55g. At the age of 11 and 13 to 17 the protein intakes were slightly below than the recommended daily allowance (RDA). In the Private school the mean protein intake of girls at the age of 10 year was 51.49g (128.51%) which is greater than the recommended daily allowance of 40.4g and at age 18 year it was 52.87g (96.12%) which is

less than the recommended daily allowance of 55g. *Twara et al.,* (2015) revealed in her study that among adolescent girls in the age group 13 to 15 years and 16-18 years the average intake of protein was lower than the RDA i.e. 38.14 g/dl and 42.17g/d respectively.

It was observed that in both the Government and Private school the mean fat intake was higher than the recommended daily allowance (RDA).

Table 2 Distribution of the Sample Girls on the Basis of Average Actual Dietary Intake of Nutrients

Age	No	Government school						Private school					
		Iron			Calcium			Iron			Calcium		
		RDA	Mean	% of RDA met	RDA	Mean	% of RDA met	RDA	Mean	% of RDA met	RDA	mean	% of RDA met
10	25	21	14.26	67.90	800	682.71	85.33	21	16.72	79.61	800	720.46	90.05
11	25	21	18.10	86.19	800	802.85	100.35	21	18.22	86.76	800	855.73	106.96
12	25	21	16.26	77.42	800	742.21	92.77	21	16.99	80.90	800	746.34	93.29
13	25	27	18.72	69.33	800	778.94	97.36	27	19.30	71.48	800	839.61	104.95
14	25	27	16.21	60.03	800	725.76	90.72	27	19.93	73.81	800	768.07	96.00
15	25	27	17.24	63.85	800	753.13	94.14	27	21.79	80.70	800	834.25	104.28
16	25	26	18.38	70.69	800	741.90	92.64	26	18.53	71.26	800	837.70	104.71
17	25	26	16.35	62.88	800	717.19	89.64	26	17.47	67.19	800	779.12	97.39
18	25	21	15.58	74.19	600	708.72	118.12	21	19.39	92.33	600	845.10	105.63

The above table shows that the mean iron intake of girls in government schools at the age of 10 year was 14.26g (67.90%) and at age 18 year it was 15.58g (74.19%) which is lower than the recommended daily allowance of 21g for both the ages. In the Private school the mean iron intake of girls at the age of 10 years was 16.72g (79.61%) and at the age of 18 years 19.39g (92.33%) against the recommended daily allowances (RDA) of 21 g for both the ages. In both the Government and Private school the mean iron intake of all the respondents in age 10-18 years was lower than the recommended daily allowance (RDA). A study conducted by *Twaraet al.,* (2015) on 100 students from both Private and Government schools and colleges revealed that among adolescent girls in the age group 13 to 15 years and 16 to 18 years the average intake of iron was lower than the RDA i.e. 19.78mg/d and 19.83mg/d respectively. When seen in the Government school it was observed that the mean calcium intake of girls at the age of 10 year was 682.71g (85.33%) which is below the recommended daily allowance (RDA) of 800g and age 18 year it was 708.72g (118.12%) which is higher than the recommended daily allowance (RDA) of 600g. In the age group of 12-17 years the intake of calcium by the respondents was slightly below the requirement of 800g. As compared to this in the Private school the intake of calcium at ages 11, 13, 15, 16 and 18 was above the recommended daily allowance (RDA). *Twaraet al.,* (2015) stated that the average intake of calcium in the age group 13 to 15 years and 16 to 18 years were lower than the recommended RDA i.e. 424.12mg/dl and 142.17 mg/dl respectively.

Conclusion

Majority of the respondents in both the schools were normal weight however the percentage of underweight respondents were more in Government school as compared to the Private school.

The mean actual dietary intake of energy, protein, iron, calcium was found to be significantly lower when compared with the RDA among majority of respondents. However the findings of the present study revealed that the nutritional status of the respondents was better when compared with other similar studies conducted by *Patanwar et al* (2013), *Banerjee et al.,* (2009), *Mukhopadhyay et al.,* (2005) and *Mohan et al.,* (2013). Efforts are needed to use the school system favorably and proper strategies should be adopted for increasing the consumption of healthy food and improving the nutritional status of girls.

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Creation of Utility Baskets through Up Cycling: A Step to Sustainable Home Decor

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Abstract

Up cycling has witnessed a significant contribution in the past one decade and is gaining popularity. It can be popularly understood as creative reuse to prepare products of a higher value. The purpose of this review paper is to understand the concept of up cycling and use of this technique to make utility baskets of high value and quality. This paper is actually an opportunity for the reviewer and a home science post-graduate to develop their skills and passion in redesigning, using left out cotton fabrics and cotton cord to create something innovative. The aim of this review paper is to create awareness for up cycling and sustainability by experimenting with the technique by creating innovative baskets and bowls in different shapes and sizes along with a set of coasters using coiling method. Their beauty was enhanced by incorporation of decorative flat ribbons and laces. This paper will also serve as a platform for the young designers and entrepreneurs to understand the importance and the need of up cycling for enhancing sustainability through their designs and innovations.

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Introduction

The term "up cycling" was coined by Reiner Pilz of Pilz GmbH in 1994, significantly who explained the concept of adding value to the old or used products, which is quite contrary to the popular concept of recycling that reduces the value of the products. Up cycling is a process in which used or waste products and materials are repaired, reused, repurposed, refurbished, upgraded and remanufactured in a creative way to add value to the compositional elements. Up cycling has been known to use either pre-consumer or post-consumer waste or possibly a combination of the two. Classic 3R concept that comprises reuse, reduce and recycle is regarded as one of the widely acknowledged solutions in the sustainable development. Up cycling is sometimes confused with recycling. Up cycling converts a material into something of **greater value** than it originally was. Recycling converts a material into something of roughly the **same value** as it originally was. Recycling basically takes the waste items and takes them backwards in the chain to their raw state so they can be used again, usually in a similar manner. Up cycling, however, through the addition of design, takes waste items forwards in the chain to become more beautiful, more valuable and hopefully more desirable. It has been part of human life throughout history, and the past few years have seen its revival, driven by multiple factors including growing concern for the environment.

Up cycling is being heralded as a way to increase the quality of materials and products in value chains (Fletcher and Grose, 2012) and counteract the planned and premature obsolescence trend (Sung, 2017). This can create value from post-consumer products and thereby reduce and avoid waste. Up cycling in the manufacturing and creative industries promises to facilitate economic diversification and has potential to create employment opportunities (Khan and Tandon, 2018) and encourage more sustainable consumer behavior (Harris et al. 2016).

A survey published by Element Three and SMARI supported the same idea that is sustainability is a product attribute that 87% of US Millennial internet users would be willing to pay more for. Consumers are aligning what they are buying with their lifestyle. They are willing to spend more to know that the items they are purchasing are environmentally sound. They are looking for products with clear brand messaging: "Products that clearly deliver sustainability attribute and meet their social and environmental standards".

Methodology

Sustainability in fashion is a massive challenge, and textile waste may be used as the raw material for quality products. Redesigning is an essential step in up cycling, which includes ideation, reconstruction and utility. All the baskets, bowls and coasters are created from clothesline/100% cotton cord and fabric using wrapping and coiling methods and zigzag stitching. The fabric used is 100% cotton in solid and print patterns. The left over cotton fabric was sourced from various shops and boutiques. The reviewer studied various books, magazines and surfed the internet to understand the up cycling process and its importance and experimented to create something innovative. The basic supplies used in constructing the products were fabric strips/scraps, cotton cord, sewing machine with zigzag stitching feature, scissors, adhesive, measuring tape, spools, bobbin and bobbin case.

Process of Construction

First, cut a bunch of strips of cotton cloth, 1.5–2 inches wide and fold one side of the strip 0.5 inches. Wrap on the cotton cord, keeping the strip on a slight bias/angle. Wrap the material around the rope, covering the rope completely. After some inches are wrapped, coil the end and roll the material covered rope into a spiral. This is the underside centre of the basket. Place the coil under the machine's presser foot, adjust the stitch width and length so it's an outsized zigzag, and zigzag across the centre, then backstitch back to the starting point. Stitch back and forth across the centre spiral, catching within the centre edges of the rope, then return to the centre, and begin stitching around each "round", catching altogether the perimeters of every round of rope.

The Final Products

When you get to the end of a cloth strip, use adhesive to stick the two strips together to continue. Keep wrapping, coiling, stitching, and adding strips. To start the edges of the basket to begin turning up, tip the underside of your basket up and keep sewing, holding the underside up and turning it while stitching. The form of the basket starts changing from flat to 3D. With the identical technique the edges of the basket are created. For the ending of the edge, wrap the material strip round the end of the rope, securing it inside, and so wrap the end of the strip together, adhering it into a narrow end. To finish the highest edge, stitch all the way round the top of the basket, then backstitch to end off the stitching.

Conclusion

Unlike traditional recycling, within which materials like plastic and paper are gradually degraded and may be reused only a limited number of times, up cycling turns waste into products of greater value. That offers hope for achieving the biggest goal of environmentally minded design, using materials again and again to keep them out of landfills. With growing consumer awareness about environmental and social impacts of fashion products, up cycling and personalizing fashion products has become a new presumption trend (Goldsmith, 2009). As a result of the diversity in applications for up cycling, the up cycling movement has taken off across art, architecture and aesthetic based movements causing an increased demand from consumers for sustainable brands that spearhead up cycled materials in their value-chains. Up cycling has huge potential to create a positive impact on the environment and the way we think about objects otherwise destined for landfill, looking at waste instead as the building blocks of the something altogether novel and practical.

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Need and Role of Incubators in Higher Education Institutions

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> **"Longevity in the business is about being able to reinvent yourself or invent the future."**
>
> - Satya Nadella (CEO, Microsoft)

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Abstract

*Entrepreneurship in India is on the verge of explosive growth which is actually needed for employment generation and poverty alleviation at grass root level. HEIs play an important role in creating a pool of young and talented entrepreneurs that have the versatile skill sets to solve consumer problems and develop products for the rest of the world. In order to entice the students into successful entrepreneurs, HEIs need to start innovation and incubation centers. HEIs are introducing campus spaces where students can connect to fellow entrepreneurs and interested financiers. A **startup incubator** can be defined as a collaborative program that is designed to help creation and growth of new businesses. Incubators help entrepreneurs solve some of the problems commonly associated with running a startup by providing workspace, seed funding, mentoring, and training.*

Key Words: *Entrepreneurship, Start-up, Incubators, Accelerators, Higher Education Institutions (HEIs)*

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Introduction

Start-up Ecosystem in India: Entrepreneurship in India is on the verge of explosive growth which is actually needed for employment generation and poverty alleviation at grass root level (Gupta & Rathore, 2014). The startup trend in India has influenced a lot of people to create their own businesses, in turn boosting the number of startup incubators in the country. By the year 2019, India has continued to reinforce its position as the 3rd largest startup ecosystem in the world, according to a report by IT industry body Nasscom. The report also suggested that the total number of tech startups in the country has grown to 8,900-9,300 with 1,300 startups being added in the year 2019 so far. The country has witnessed addition of seven Unicorns till August 2019 taking the total tally to twenty four - the third highest number of Unicorns (companies with valuation of over \$1 billion) in a single country in the world. The startups have created an

estimated 60,000 direct jobs and 1.3-1.8 lakh indirect jobs in the country (Nasscom, 2019).

It is now ever clearer that India's start-up ecosystem has become more vibrant and mainstream in terms of job-creation, solving consumer problems and creating new products for the world (India). Entrepreneurs are a valuable asset for a country as they have power to develop resourceful skill sets that shape the future of the world and increase the profitability of businesses (Greene). India needs young entrepreneurs with creative thinking to address the challenge of unemployment that is faced by the country today. In order to entice the students into successful entrepreneurs, Higher Education Institutions (HEIs) need to start innovation and incubation centers.

Startup Incubators: Incubation center or incubator can be described as a mother hen, which helps the new ventures to hatch, grow and leave (Carrol, 1986). In a similar way, startup entrepreneur's business idea is incubated in the incubation centers. On an average, startup companies spend two years in a business incubator and seek benefits like funding, office space, equipment, mentoring and training, etc. (Gupta & Rathore, 2014). The sole purpose of a startup incubator is to help entrepreneurs grow and succeed in their business. Academia plays crucial role in growth of incubators, with 30 new academic incubators established in 2016 (Radhakrishna & Goud, 2017). Through incubators in HEIs, industries gain access to leading edge technologies, highly trained students and infrastructure facilities while the HEIs are benefitted from building links with local bodies and improving their objectives regarding student employability. In order to fulfill the dream of our honorable Prime Minister i.e. 'Make in India', the HEIs have a significant role to play as they are the breeding grounds for future entrepreneurs (Prasad). Energy, health-care and manufacturing are some key focus areas of academic incubators (Radhakrishna & Goud, 2017).

Need of Academic Incubators in HEIs:

Today's high-risk/high-reward marketplace tempts students in HEIs to develop daring ideas virtually overnight. Deferred placements by colleges and universities have led students to want more than just academic degrees. They are aiming to launch businesses and develop innovative products. And so in response, HEIs are creating academic incubators to attract and retain entrepreneurial students, faculty and researchers; remain competitive and relevant; interlink industry and academia; and to connect students to start-ups, investors & other collaborators they might not otherwise encounter. Academic incubators are now a vital part of the HEIs as they provide entrepreneurial students co-working spaces, conference rooms, labs, resources, mentoring and training staff that are essential to establish new mediums for idea exchange on campus. They allow students to develop hands-on entrepreneurial skills and foster entrepreneurial exploration (Gensler).

Role of Incubators in promoting Start-up ecosystem in HEIs:

Incubators have been receiving increasing attention as a tool to promote entrepreneurship amongst young talented students in HEIs. An initiative like entrepreneurship courses, student start-up clubs, investor summits offered by colleges and universities is driving the growth of student start-ups in the country. An incubator supports the development of start-up by providing them with advisory and administrative support services. It promotes start-up ecosystem in HEIs by providing following facilities to new businesses:

- Help in idea exploration and generation
- Assistance with basics of business
- Accounting/ financial management assistance
- Access to bank loans, loan funds and guarantee programs
- Networking opportunities
- Marketing assistance
- High-speed Internet access
- Help with presentation skills
- Connections to higher education resources
- Connections to strategic partners
- Access to angel investors or venture capital
- Comprehensive business training programs
- Advisory boards and mentors
- Management team identification
- Management guidance and consulting
- Help with business etiquette
- Technology commercialization assistance
- Help with regulatory compliance
- Intellectual property management and legal counsel

Conclusion

Incubators support startups to grow and succeed by providing them with mentorship, ideation, technical support, access to resources and networking events which would have been expensive if purchased individually. Startup incubators in HEIs encourage and motivate talented entrepreneurial students to create innovative start-ups that leads to job creation and economic growth of the country. Academic Incubators in HEIs helps students to learn and hone their entrepreneurial skills. They act like safe world for budding entrepreneurs to try and test their daring business ideas and scale them for earning profits out of them. Academic Incubators not only help students but also the HEIs where they are set-up to remain updated with ever changing needs of industry. The increase in the start-ups in country would lead to such a scenario where we would witness a longer queue of job providers than job seekers.

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Role of NGO's in Women Empowerment

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Abstract

Women empowerment is the desperate need for the hour. Empowerment of women capacitates sustainable rural and urban development by the uplifting the economic, social and political status of women in India. Empowering the women in these aspects is necessary to convert the idle society into self-sustainable society. Women empowerment can be achieved through provision of adequate education facilities, political support, and effective legislation system and employment generation for women. NGO'S and the self-help groups (SHG) play a very vital role towards women empowerment by providing basic education, vocational training, training for self-employment, legal aid, protection for women and self-awareness programs.

This paper looks into the process through which women empowerment is achieved and the status of women is uplifted with the aid of NGOs in the Indian scenario. This paper discusses upon the empowerment of rural women by means of NGOs and the advantages of entrepreneurship among the rural women. This paper seeks to explore some measures that should be adopted in order to raise the position of rural women as equal players in entrepreneurship and economic development.

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Introduction

The organizations which do not come under the direct control of any governmental agencies or any other autonomous bodies and are engaged in providing financial and non-financial helps to those who are deprived of certain rights in the society are known as Non-Governmental Organizations. They usually do not have an intention to make profits. The concept of NGOs developed in India only after independence. The NGOs have played a vital role towards the development of rural India since 1970s. Develop mentalists, government and foreign donors have often felt that NGOs that are small scale, flexible, innovative and participatory are more successful towards reaching the poor and towards poverty alleviation. This consideration has lead to the rapid growth of the NGOs that are involved in initiating and implementing rural development programs. Initially, the NGOs did not have or did not choose any particular field of expertise and only had the common goal of helping the deprived. Later on, NGOs with their own field of expertise came up. This proved to be useful because, NGOs which have a specific field of expertise knew the exact options and choices that they had towards sorting out the problems in their own field.

Objectives

- To discuss on the features which NGO requires being effective in its functions.
- To identify the strategies followed by NGOs towards women empowerment.
- To identify the objectives of NGO that is focused towards women empowerment.

Features of ngos

NGOs are basically focused towards improving the socio-economic conditions of the people with whom they work. The following are the important characteristics that an NGO requires to have in order to be effective:

- **Voluntary:** NGOs are voluntary organizations and are formed by a few concerned people who have their own self-interest towards societal development. They are not formed because of any compulsion and if formed, then it will not be effective in its functions.
- **Legal Status:** NGOs are registered with the Government under the Societies Act, Trust Act and Companies Act etc. They are also registered under Foreign Contribution Regulation Act (FCRA) with the Ministry of Home Affairs of the Government of India. This enrollment with FCRA is required to be entitled to obtain funds from abroad.
- **Independent:** NGOs need to be independent in planning and implementation of their programs. Any other sort of external intervention may not allow the NGO to perform to its fullest capacity
- **Flexible:** NGOs must be flexible to interventions. They are not bound by redtapism and other bureaucratic obstacles.
- **Quicker in decision making:** NGOs take quick decisions in response to the needs of the society. The more quickly the decisions are taken, the faster the services reach the deprived.
- **High motivation:** The members and the staff are endowed with high motivation and inspiration to work for the cause of the people. They strive tirelessly to achieve their purpose for the benefit of the target groups.
- **Freedom in Work:** NGO workers need to enjoy freedom in their field work, in organizing the community and carrying out the development schemes.
- **Catalytic:** NGOs enhance and induce the communities into social action but they do not dilute and distort themselves in the process of intervention.
- **People-Centered:** NGOs encourage people's participation. They plan things for the people and implement the same through the people. They make decisions by discussing with voluntary people and implement a decision that is the most effective towards helping people develop.
- **Non-profit oriented:** NGOs are not run with intentions of profit. The surplus and gains from economic projects, if any, are not distributed amongst the members or stakeholders. They are re-used for some other development purposes.

Role of NGOs Towards Women Empowerment

Women Empowerment is the primary focus for both government and most NGO's. Voluntary action promoted by NGOs engaged in development play a significant role towards rural development which is dependent upon the active participation of the volunteers through Non-Government Organizations (NGO). The various roles of NGOs towards women empowerment are described below:

- Educating the Rural Women

- Ensure Women's Participation in their empowerment
- Promoting Rural Leadership
- Promoting Technology in Rural areas
- Providing effective & efficient Training to Rural Women.

Strategic areas where NGOs focus in order to bring Women Empowerment

Training & Skill Development: There is a total 22.27% female work participation in India of which main workers contributes 16.03% and marginal workers 6.24%. Women constitute 90% of the total marginal workers of the nation. There are regional variations in work participation rates within the country from 4 to 34 percentages. Women often find employment as casual labor in agriculture and the growing informal sector. Efforts by NGOs focus on the empowerment of poor women. Their aim is to train and provide them with opportunities of self-employment to improve their social and economic status.

Skill Training: The small-scale sector of cottage industry accounts for over 10% of the production in agricultural and rural based industries in India. Government programs focus on skill improvement, employment generation, transfer of technology, rural industrialization and promotion of self-reliance amongst the people. NGO's assist in raw material procurement, skill training, marketing, coordination and inter institutional linkages and render advice to the government on policies concerning to the small-scale sector.

Self-Help Groups: Basically, self-help groups are small groups formed, mostly by women at the village level. The basic intention of everyone in the SHG is to invest in some small business and gain small profits. The NGOs that are women centric usually financially fund these people with initial loans with minimum interest rates for initial investment, which those women can pay back after reaping profits.

Capacity Building: The technical competence of the people manning the delivery of the co-operative support services must be enhanced and adopted to the specific requirements of the co-operative societies. Keeping in view the present state of economic liberalization, immediate necessary measures must be taken by government institutions, cooperative sector, private sector, NGOs, national and international agencies to sufficiently equip self-employed women with information, knowledge, technology, training and decision-making techniques.

Suggestions

A general suggestion to all NGOs is that they can function effectively if they have a particular area of focus. This is because; an NGO that simply focuses on all aspects of the society cannot be at expertise in any of those aspects. Therefore, the NGO cannot perform to its fullest capacity. However if the NGO concentrates only on one area, then it will be able to give its fullest potential towards resorting that issue. Women empowerment does not only mean the empowerment of female adults. Women illiteracy and lack of empowerment in women persists in the society because these women were not educated when they were young. Therefore, if complete women empowerment has to be achieved, then the girl children need to be educated. Only then will the future nation have empowered women population.

All women centric NGOs must have a strategic approach that will expand their scope towards reaching women and empowering them. Only a strategic approach will lead to faster results.

Conclusion

Empowered women have a feminist ideology and wish to empower other deprived women. These empowered women by associating with an NGO whose mission is closely related to their ideology, will be able to realize their beliefs, and this gives them a high level of satisfaction and accomplishment.

Earnings and independence of women must be the primary mission of these women centric NGOs. Although existing progressive affirmative action programs help many persons of different sections achieve social and financial status in India by providing entry into elite professions and the political arena, more attention should be paid to the education and empowerment of underdeveloped and vulnerable women in rural areas. Governments and volunteers can make an effort to ensure that more women, especially those from backward regions, receive higher education and training in interpersonal skills and are recruited to volunteer. Furthermore, there is a need for public support to enable wider diffusion of some of the key themes that are part of the feminist perspectives, namely, concern for equity and social justice. If more people are exposed to such ideology, more may take action in the form of starting NGOs or by supporting the entrepreneurs that run the NGO. It has to be ensured that those involved in social work and in volunteering should be able to receive publicly available resources to support the formation of organizations. These include training programs and mentoring services to facilitate the formation of NGOs. If such programs can be made available to those who are starting NGOs, or who are in the process of doing so, they may be able to increase the chances of success to those entrepreneurs. Thus, the role of NGOs towards empowerment of women is very crucial in the Indian scenario.

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Empowerment of Women:
A Comparative Demographic Analysis

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Abstract

Women empowerment is a multi-faceted phenomenon. The meaning of empowerment is to enable women to be self-reliant, economically independent, have positive self-esteem, have the ability to face difficult situations and be able to participate in the process of decision making. The purpose of the present study was to analyse the empowerment of young lecturers. The effectiveness of women lecturers was analysed in relation to education, age, caste, religion, income, and type of family. Data analysis indicated that education plays an important role in women empowerment. Majority of women lecturers were found to be more empowered as compared to the housewives who were not equally educated as to the young lecturers. Policies, programmes and systems should be established to ensure mainstreaming of the women's perspectives in all developmental processes as catalysts, participants and recipients. A sample of women lecturers from higher educational institutes and housewives from the local neighbourhood was selected and a comparative demographic analysis was done through interviews and informal discussions. Most powerful and important tool for women empowerment is undoubtedly "Education" and thereafter availability of ample and suitable earning opportunities which enable her to assert herself, maintain an independent opinion and have a say in household matters. To make women "Empowered" in the true sense, there is a need to educate them and assist them to develop the requisite skills and abilities. For this, there should be continuous orientation, sensitisation, capacity building and counselling, through respective organisations.

Keywords: *Empowerment, Lecturer, Housewives, Developmental Processes*

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Introduction

Empowerment is a multi-faceted, multi-dimensional and multi-layered concept. Women empowerment is a process in which women gain a greater share of control over resources viz:-

- Material Resources
- Human Resources
- Intellectual Resources like Knowledge, Information, Ideas
- Financial Resources like Money and access to money
- Control over decision making at home as well as in Community, Society and Nation, and

According to Government of India country report "Empowerment means moving from a position of enforced Powerlessness to one of Power".

Empowerment literally means making someone authoritative, facilitating the weak to achieve strength, to increase one's self-respect, to help someone to face injustice and coercion and to support someone to fight for one's rights. Empowerment in women is being measured as the basic human right. She neither wants to beg for power, nor does she support power hierarchy. She also does not want to utilise position power against others. On the other hand, first and foremost, she expects to be acknowledged as a human being. Priority must be given to improve the status, role and participation of women because women have an elementary right to enjoy equality at par with men in all spheres of life, as also because women are capable of playing an essential role in the process of sustainable development.

Components

Women Empowerment has the following components: -

- women's sense of self-worth, their right to have and determine choices,
- their right to have access to opportunities and resources,
- their right to have the power to control their own lives, both within and outside the home, and
- their ability to influence the direction of social change to create a more just & social-economic order, Nationally and Internationally.

Indicators of Women Empowerment

There are women activities throughout the world which articulate and voice women concerns and issues so that their voice can be heard loud and clear. Systematic efforts over the years, though sporadic, have brought changes in the life of women and empowered them which can be observed in their behaviour pattern. However, merely voicing concerns is not likely to bring about a change towards women empowerment and certain concrete steps need to be taken to bring about effective changes.

Following are some of the indicators of an `Empowered Woman': -

- A positive self-image and self-confidence
- Ensuring equal contribution in bringing about social change
- Ability to think critically and creatively
- Exhibition of the ability to promote group cohesion
- Leadership, courage and commitment, to foster decision making
- Promote group activities in order to bring about change in the Society by providing resources for Economic Independence, through employment
- Right to Property.

Objective

To analyse the effectiveness of Women Lecturers and Housewives in relation to Education, Age, Caste, Religion, Income and type of Family.

Hypothesis

Effectiveness of Women Lecturers and Housewives vary with Education, Age, Caste, Income and Type of family.

Research Question

Does the effectiveness of Women Lecturers and Housewives vary with Education, Age, Caste, Religion, Income and type of Family?

Universe and Sampling

Women Lecturers (Regular) from colleges/ universities formed the universe of the study. A sample of 15 women lecturers from colleges/ universities and 15 housewives from the neighbourhood was selected through random sampling for the study. The total sample for the study was 30 (age group between 28 years to 40 years), including 15 women lecturers and 15 housewives.

Tools and Techniques

For the present study, Primary data which is the base for the study was collected through interview schedule, informal discussions and observation method.

Limitations of the Study

- The present study is conducted on the housewives of Chandigarh only.
- Findings and Conclusions drawn in this investigation are based on a field survey conducted on the housewives of Chandigarh only; therefore, these generalisations may not be valid or applicable, cent per cent, in all situations of women.

Major Findings

This paper is an attempt to explore various dimensions of women empowerment as it is a multi-faceted phenomenon. The objective of empowerment is to enable women to be self-reliant, economically independent, have positive self-esteem, have the ability to face difficult situations and be able to participate in the process of decision making.

Women's involvement in the educational system and in decision making roles is an important instrument for empowerment. For overall growth and development, it is important to ensure the advancement of women in all spheres of life, especially in the field of education.

Conclusion

As far as various dimensions of empowerment are concerned, it can be concluded that the most powerful and important tool for women empowerment is undoubtedly "Education" and thereafter availability of ample and suitable earning opportunities which enable her to assert herself, maintain an independent opinion and have a say in household matters. Also, in today's scenario, caste and religion do not play a major role in the empowerment of women, as revealed in the study. The factors contributing significantly, as brought out during interaction with the selected group, in empowering women are Education, Earning capability and capacity, and to some extent the type of Family they live in (i.e. whether nuclear or joint).

As the control on the family resources is an indication of empowerment, it can be drawn from the study that women lecturers are more empowered as compared to housewives.

Suggested Measures

- There is a need to develop the skills and abilities among young women lecturers to make them more empowered.

- They need continuous orientation, sensitisation, capacity building and counselling, through respective organisations.
- Policies, programmes and systems should be established to ensure mainstreaming of women's perspective as catalysts, participants and recipients in all developmental processes.
- More importance should be given to the progressive views of women lecturers.
- They should be made aware of Property Rights.
- Child day care facility should be available within the campus.

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Empowering Women through Skill Enhancement

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Abstract

Women participation and empowerment are fundamental rights of women for making them to have control over their lives and put forth influence in society. Women often face discrimination, and exclusion because of factors such as their familial or professional background or caste. It is essential for them to be skillful in order to be able to properly serve their families at home as well as professionally. Skill development not only creates employment opportunities but in addition empowers them. The aim of skill development, in case of women, is not just preparing them for jobs; but also to enhance their performance by improving the quality of their work in which they are involved. Skill is the link that bridges the gap between job and workforce. Women often have different training requirements than men, since they are more likely to figure as contributing family workers, home-based micro entrepreneurs, or low-paid seasonal laborers, additionally to managing their domestic work and child care responsibilities. The current paper is predicated on the secondary data which was collected from various researches. This paper highlights the impact of skill development on women empowerment.

Keywords: *Women empowerment, Skills development, Capacity building, Recognition for prior learning, economic independence.*

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Introduction

Women play a vital role in the development of a family and the society. Women have been actively taking part in various economic and social activities, but their efforts remain unrecognized. In this male-dominant and patriarchal society, they are still subjected to discrimination in the social, economic and educational fields. Women are not only managing their families but are also playing an important role in the development of the nation. Vocational training programme plans to provide skills and confidence to women from economically backward families and help them to achieve economic and social independence. Women have often been downgraded and subdued in the Indian society. Due to lack of proper implementation of plans, local communities, especially the women have remained outside the scope and benefits of the government schemes.

Women have not effectively taken an interest in their freedom because of their absence of monetary autonomy and proficiency. There is a need to address the issue by improving the condition of women in community. The key lies in women empowerment through monetary and social self-

reliance. Women Empowerment means giving them the liberty and the capacity to live on their own terms in the manner they want. It permits them to recognize their aptitudes, knowledge and capacities to settle on their own choices and decisions.   For the financial improvement of any general public, women empowerment is fundamental. It is significant for women to distinguish themselves with self-assurance and regard. The primary part of empowerment is to invigorate a feeling of self confidence in them. Aptitudes, skills and knowledge are the motors of financial development and social advancement of any nation. Nations with higher and better degrees of knowledge, skills and aptitudes react more successfully and instantly to difficulties. India is experiencing significant change to turn into a skill based economy and its serious edge will be dictated by the capacities of its citizens to make use of the knowledge and skills more adequately. It is a growth process for women which includes awareness, procurement and realization of their own skills. For the wholesome development of any society, women empowerment is essential.

Skills and knowledge are key components of financial development and stability. Skill development can be characterized as capability that is achieved or created through preparation or experience. It reinforces the capacity of people to adjust to the changing business sector requests and help them profit by advancement and enterprising exercises.

Notion of women empowerment

Empowerment is the way of expanding the limit of people to settle on their choice and to change those decisions into- wanted outcomes and results. As empowerment of women implies creating mindful people, who are politically dynamic, monetarily profitable and free to settle on beneficial choices in the subjects and fields that influence and impact them. Women empowerment is a functioning, multi-dimensional procedure which empowers women to understand their latent capacity and powers in all circles of life. The procedure ought to appear just when there is a favorable domain for the illumination which is to be guaranteed first.

Capacity building for women

Women have shown their ability in community development. Hence, it is important that women are made a part of skill development and capacity building. In India, women are presently taking an interest in different regions like – instruction, workmanship and cultural, administration area, sports, legislative issues, media, and science and innovation. They're a significant piece of the workforce - however the working rate pace of women in the all out work power is declining. Most of them are working in the casual areas. This speaks to absence of business openings and opportunities for female workforce. They can be persuaded to build up their fundamental life skills, that will give them well paying occupations with better jobs and certainty to work better for their homes and families.

Some skills that training institutes must impart to empower women are:

- Communication skills
- Business etiquettes
- Language advancement
- Personality advancement
- Leadership abilities
- Management abilities
- Entrepreneurship abilities

Capacity building is the most basic component for India's future monetary development and women empowerment through skill development and capacity building will be the characterizing component in India's development story. The National Mission for Empowerment of Women (NMEW) was propelled by the GOVERNMENT OF INDIA in the year 2010 with the plan to fortify by and large procedures that advance all-round improvement of women. One of the key strategies of NMEW is - investment in skill and entrepreneurship development, vocational courses for economic empowerment of women. This finely conveys that only giving education would not be adequate; the ladies need professional preparing or vocational training likewise to have the option to work on their own and be the earning individuals for the family.

Recognition for prior learning

Another such example of plan by the government to empower the homemakers is the **Recognition of prior learning**. It is a stage to give acknowledgment to the casual learning or learning through work to get equivalent acknowledgment as the conventional degrees of instruction. It intends to acknowledge earlier learning regardless of the mode of accomplishing it. To put it plainly, RPL is a procedure of appraisal of a person's earlier figuring out how to give due significance to learning as a result instead of learning as procedure. Under Pradhan Mantri Kaushal Vikas Yojana(PMKVY) special focus is given to RPL by recognizing prior competencies of the assessed candidates and provides a certificate and monetary reward on successful completion of assessments.

Professional and vocational training for women, Skill advancement for employability will be utilized as a specialist of progress in advancing and promoting women's employment. women face a large number of boundaries or hurdles in reaching the skills, abilities and profitable work, staying at work because of impact of globalization or in some case progressing to more elevated levels of employments, just as coming back to the work place after a time of nonappearance spent, for instance, in taking care of their children.

Conclusion

There is a dire need for more number of government interventions and policies to encourage similar kind of courses in various sectors and raise the rates of employment through various short term, long term, vocational courses and skill development schemes. Although the need for skill development initiative is understood and realized by many sectors still there are few sectors left where awareness has to be created. Skill development will raise the efficiency level of the women work force and increase the rates of employment of women, who otherwise feel alienated after being educated, hence it is the need of the hour to focus on the education enhancement and skill development of women to make them more employable and empower them.

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Role of Higher Education in Shaping Future Economy

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Abstract

" Destiny is being shaped in Four Walls" is the first sentence in education report submitted to the central government by the education commission in 1966 under the chairmanship of Dr. D. S. Kothari. These four walls are the walls of class rooms of educational institutes where the students and the teachers are expected to work together to develop good human resource for the welfare of mankind. However the present scenario is "India's destiny is being shaped both in four walls and outside the walls". There has been the great belief and confidence of not only the educationists but also by the common people that education has a great impact on the society as a whole. Educational institutions happen to be the centers of human resource development and the learners who come out of these centers are expected to go the society and take up some responsibility including business. Good human resource with ethical and moral values will develop good business and good business will ultimately give good service to the society. Thus the business and the society are interrelated and interdependent. Good educational institutes need to take the responsibility of shaping the future of Business and Society by developing good human resources.

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Introduction

"India's destiny is being shaped in four walls" is the first and important statement of the report of education commission which was submitted to the central government in the year 1966. The members of education commission headed by Dr. D. S. Kothari were of the firm opinion that the educational institutes were the centers where future society can be shaped. And the central government took initiatives, on the basis of recommendations of education commission 1966, to bring reforms in education and in educational institutions so that they will become the centers of socio-economic transformation. The process of change in education and educational institutions has been continuing till this date. The learners after completing their education as per their choice come out of the educational institutions of higher education are expected to take some job, including business, as per their interest and capability. If the educational institutions play their proper role in imparting quality education with values and ethics, society will get good human resource. And good human resource will establish business organizations which will provide goods and services to the society to satisfy its needs and the satisfied society will support the business. Thus society and businesses can bring sustainable growth in future since both are interrelated

and interdependent on each other. However shaping the future of business and society depends more on the education system and educational institutions of a country.

Objectives

The basic objectives of the present study are as follows:

- To understand the present scenario in higher education in the process of shaping future society.
- To analyze and conclude the role being played by the educational institutions in higher education.
- To make certain suggestions in the area of higher education to bring some changes.

Review of Literature

The literature reviewed for the present study includes mainly, University Grants Commission (UGC) report 2010-11 which contains detail statistical data on enrolment of students for each faculty, increase in enrolment, number of universities and number of colleges involved in higher education. The weekly research journal on university education, University News, published by the Association Indian Universities has been a great use. An editorial article in the university news 51 (28) July 15-21, 2013, contains on Rastriya Uchachatar Shikshya Abhiyan (RUSA), a strategy made by the central government to bring transformation in higher education. The main objective of the strategy is to increase Gross Enrolment Ratio (GER) in higher education through funding to the institutions. The institutions will be selected on certain predetermined criteria for extending financial help for increasing enrolment. It is like a second UGC in the area of higher education in granting financial aid. The Maharashtra Public University Act 2011 draft has suggested certain reforms on affiliation system and on autonomy of universities. The articles on higher education and human resource development published in research journals like, research journal on management development and research, SIMSARC 2012 research proceeding book have reviewed. The new paper articles related to the topic from The Times of India, The Economic Times, also have been reviewed.

Methodology

The methodology used for the present study is mainly based on the secondary source of information and personal observations of the writer in the area of higher education. Lots of recent and correct information isavailable from authentic sources on higher education and educational institutes. And this information was found to be sufficient for supporting the present study. Information and communication technology (internet) has been a great use in this regard. The apex bodies of higher education like MHRD, UGC, AICTE and few other statutory bodies on education have been displaying the current data on higher education on their respective websites continuously which was great use for the present study.

Limitations

The present study considers the data only on higher education which is imparted in the universities and affiliated colleges for the youth population of age group of 18 to 25 years. The reasons for selecting this age group are, during this age of human life the youths contain highest potentials for taking up any job, they have capability of taking risk, have enough energy for hard work, many of them have ambition of doing something innovative and creative. It is considered

for this study this age group population to play more vital role in shaping the future of business and society, though other age group population also equally important for shaping the future of business and society.

Present Scenario of Higher Education

Indian higher education is one of the largest education system in the world in terms of total enrolment. There were 634 various types of Universities including state universities, deemed universities, central universities, private universities and degree awarding institutes. The system has been imparting higher education to around 20 million students with the help of around 35000 affiliated colleges by the end of 2012. Gross enrolment ratio was around 14percent of the related age group (18 to 25 years) population by the end of 2012.

Table 1. Eligible Population & GER

Year	Eligible Population (total) (In 000)	Total Enrolment (in 000)	% of Enrolment to total eligible population
2011	140000	20000	14

The table 1 indicates, out of the total eligible population as per 2011 census. The eligible population was around 14 crores out of which around 2 crores eligible population was enrolled for higher education by the end of 2012 constituting around 14 percent Gross Enrolment Ratio (GER). Eligible population as per the planning commission is the population in the age group of 18 to 23 years.

Table 2. Faculty-wise Enrolment in Higher Education 2010-11

Faculty	Enrolment	% of enrolment to total enrolment
Science	3127042	18.42
Commerce/management	2904752	17.11
Engineering/technology	2862439	16.86
Medicine	652533	3.85
total	9546766	56.24

Higher education has been divided by the UGC in 10 major faculties, each faculty is consisted with certain subjects. However only four faculties, namely Science, Commerce & Management, Engineering & Technology and Medicine, are selected here for the purpose of the present study. These faculties are considered major faculties in higher education due to quantum of enrolment and their contribution towards shaping the future of business and society. The students of these faculties are expected to play more vital role in the area of technology, management, medicine and science. The table II indicates around 56.24 percent of the total enrolment belongs to these four faculties and the total enrolment for these four faculties together was around 1 crore by the end of 2011. The number of learners enrolled for the above mentioned four faculties constitutes around 7 percent of total eligible population. This population has to become an important asset in of the nation to bring changes and developments.

Relevance of Higher Education

Higher education is at the apex in Indian education system and it has a specific objective of developing good human resource to the society to take some responsibility. Knowledgeable people with ethical and moral values are the only resource which is the prerequisite for shaping the future of the nation. And it is the responsibility of higher education to develop knowledgeable people for their country. Higher education has proved its relevance in the past and due to which few countries have become developed countries in the world. Developing countries including India have realized the vital role of higher education in the process of developing human resource which is essential for national development. Hence Indian governments, state and central, have been taking various steps in increasing investment in this sector. There has been unprecedented quantitative growth in educational institutions and enrolment from the year 2000 onwards. The number of Universities increased for more than double during the years 2000-2011, from 256 to 634. And increase in number of colleges during the same period was more than three times.

Number of colleges during the year 2000-2001 was 12806 which went up to more than 35000 by the end of 2012. Student's enrolment during the same period increased from 8.4 million to around 20 million.

The relevance of higher education for developing India has become an issue during last decade or two. The present higher education has been performing its role partially. Relevance and the quality of higher education is being debated in India by the intellectuals from local level to national level. Ministry of Human Resource Development (MHRD) and planning commission have taken note of it and have been making strategies to make the higher education more relevant and quality oriented. To conclude from above, higher education has been very less relevance for the shaping the future of business and society. Hence following suggestions are made.

Suggestions

- **Good Governance:** there is an urgent need of good governance in the universities, institutions, autonomous bodies and the governments for making the higher education relevant to create good work force.
- **Optimization Existing Resources:** there has been wide difference in capacity utilization of human resources in existing institutions of higher education. The human resources in aided colleges and state universities are either underutilized or underperforming. And the human resources in non-granted colleges and in private universities are either over utilized or being misused by underpayment of salary. Initiatives need to be taken from all the stakeholders including the governments to make effective use of existing resources
- **Optimum use of existing infrastructure:** around 50 percent of the total colleges/ institutions are located in rural areas where enrolment of students is some time less 50 percent of their intake. And hence infrastructural resources are being remained unused.
- **Relevance and Quality Enhancement:** the central government has already planned to accelerate gross enrolment ratio (GER) from existing 14 percent to 20 percent by 2020. Millions of rupees are being spent on this through various strategies. This financial resource, government should spend for enhancing educational standards of present education and existing educational institutions

- **Strict Implementation of Regulations:** the governments, both state governments and central government, have been making various regulations which are relevant and implementable. There is urgent need of implementing them properly with unbiased approach.

Conclusion

Shaping the future of Business and Society depends more on the education system in general and in the institutions of higher education. Present higher education system is required to be improved and the institutions involved in this system have to be made more transparent and accountable to the society. There is urgent need of creating educational social responsibility (ESR) among the institutions of higher education to create better society which ultimately may result in shaping the future of business.

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Comparative Study between Small and Marginal Farm Family Nutritional Status of U. S. Nagar of Uttarakhand State through Anthropometric Measurement

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Abstract

Anthropometric is a term which refers for taking quantitative measurements of the human body. The result of triceps skin fold thickness indicated that 16.9 percent females on marginal and 5.5 percent on small farms were at risk category while figures with respect to males were 16.3 and 5.7 percent. The mid upper arm circumference result indicated that 3.4 to 22 percent males and 4.8 to 22 per cent females were at risk category (< 5 percentile). Based on Gomez classification, the result of children up to 5 years indicated that 71.43 and 45.45 percent children respectively on marginal and small farms suffered from various types of malnutrition. According to water low classification, the result showed that 65.22 per cent and 39.02 per cent children of 5-18 years on marginal and small farms were suffering from various degree of malnutrition.

Key words: *Anthropometric measurement, Triceps skin fold thickness, MUAC.*

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Introduction

Nutrition is a major determinant of health, and the promise of many nutritional issues of public health. In addition to dietary intake methodologies, questionnaire material, hematological tests, and nutritional biochemistries, the assessment of nutritional status requires a series of stature, weight, and other anthropometric magnitude. Anthropometry is the study of the measurement of the human body in terms of the dimensions of bone, muscle, and adipose (fat) tissue. Measures of subcutaneous adipose tissue are important because individuals with large values are reported to be at increased risks for hypertension, adult-onset diabetes mellitus, cardiovascular disease, gallstones, arthritis, and other disease, and forms of cancer.

Materials and methods

The present study was conducted in Rudrapur block of U.S. Nagar, district of Uttarakhand. From Rudrapur block, 4 villages were selected randomly and 50 marginal farmers from the four villages.

Anthropometric Measurement

Methods given by **Jelliffe (1966)** Appendix IV was used to measure, height, weight, mid arm circumference (MUAC) and triceps skin fold thickness (TSK).

Height

An anthropometric rod having minimum count of 0.1 cm for measuring height of subjects who was made to stand on level ground against anthropometric rod, after removing foot wear.

Subjects were weighed by use of weighing machine with the minimum count of 0.5 kg. For taking weight of subject, the weighing machine was placed on the ground level and adjusted to zero.

Mid Upper Arm Circumference (MUAC)

Zarfas tape was used for measuring the mid upper arm circumference with least count of 0.1 cm. For taking reading of mid upper arm circumference, the left arm of the subject was raised till shoulders, midpoint of upper arm was assessed that is halfway between acromion, process of the scapula, olecranon process of ulna and the arm was made to hang naturally. Then the value was recorded after placing the tape firmly round the arm.

Triceps Skin fold Thickness (TSK)

Triceps skin fold thickness (TSK) of the subject was taken by Lange skin fold caliper which Is scaled up to 60 mm. with 1 mm accuracy. It exerts a constant pressure of approximately 10 g/mm^2, skin fold was picked up with the thumb and forefingers of the left hand on the back of the arm at one cm. above the midpoint. Arm to be tested was relaxed in perpendicular position and measurements were taken at mid point.

Result and Discussion

On the basis of triceps skin fold thickness (TSK), 16.9 percent females and 16.3 percent males on marginal farms were found to be at risk category (< 5th percentile) while respective figures on small farms were 5.5 per cent and 5.7 per cent respectively. Thus, subjects of small farms were comparatively at low risk category.

According to BMI classification, on marginal farms the percentage of female subjects in the age group of 18-35 years suffering from CED of grade I, II and III were 8.08, 3.03 and 5.05, respectively.

On small farms, the females of 18-35 years, suffered severely from CED of grades I, II and III compared to males of same age group.

Based on BMI classification, a comparison of nutritional status of adults of marginal and small families indicated that the present status of all types of malnutrition on marginal farms was in severe form compared to small farm families (Table 2).

The percentage of female subject's of small farms was at the less risk of malnutrition compared to marginal farms. Like male subjects, the female subjects MUAC measurement in 5th to below 50th percentile was highest (12.5 percent) for 18–35 years age group. Further about 31.2 percent female subject's MUAC measurement was found between 5th and less than 50th percentile. This result indicated that 9.6 percent female subjects of small size farms were near

to normal as their MUAC measurement was found between 25th and 50th percentile. Only 1.2 percent female subject appeared in the 50th percentile i.e. in the normal category. Nearly 10.5 percent female subject's MUAC measurements fell above 50th to 90th percentile indicating to a situation of near to malnutrition.

The study of comparative results of TSK measurements of males and females of both the categories of selected farms indicated that status of small farms was relatively satisfactory compared to marginal farms.

A comparative result of MUAC measurement of male and female subject of both the categories of farms indicated that, the degree of malnutrition of male as well as female of small farm was lower compared to marginal farm.

Table 1 : General profile of selected marginal and small farmers

Sl. No.	Particulars	Marginal farmers		Small farmers		Marginal + small farmers	
		No.	Percentage	No.	Percentage	No.	Percentage
1	Age (years)						
	1-3	8	2.91	12	3.72	20	3.34
	4-6	15	5.45	11	3.41	26	4.35
	7-9	16	5.82	23	7.12	39	6.52
	10-12	16	5.82	21	6.50	37	6.19
	13-15	17	6.18	23	7.12	40	6.69
	16-18	16	5.82	15	4.64	31	5.18
	18-35	97	35.27	112	34.68	209	34.96
	36-45	36	13.09	46	14.24	82	13.71
	46-55	27	9.82	28	8.67	55	9.20
	56-65	15	5.46	16	4.95	31	5.18
	Above 65	12	4.36	16	4.95	28	4.68
2.	Sex						
	Male	136	49.45	162	51.15	298	49.83
	Female	139	55.55	161	49.85	300	50.17
3.	Family type						
	Nuclear	27	54.00	24	48.00	51	51.00
	Joint	23	46.00	26	52.00	49	49.00
4.	Food habits						
	Veg.	28	56.00	19	38.00	47	47.00
	Non veg.	22	44.00	31	62.00	53	53.00
5.	Educational status						
	Illiterate	22	10.18	36	11.15	64	10.70
	{primary	54	19.61	51	15.79	105	17.56
	Secondary	36	13.09	48	14.86	84	14.05

	High School	57	20.73	53	16.40	110	18.39
	Intermediate	41	14.91	57	17.65	98	16.39
	Graduation	34	12.36	48	14.86	82	13.71
	Above graduation	25	9.09	30	9.29	55	9.20
6.	**Occupation**						
	Only farming	19	38.0	17	34.00	36	36.00
	Service + farming	20	40.0	23	46.00	43	43.00
	Business + farming	11	22.0	10	20.00	21	21.00

Table 2: Percentage of subjects suffering from various types of malnutrition

Types of malnutrition	Percentage of subjects
Chronic energy deficient grade-I (mild) CED-I)	19.70
CED grade-II (moderate)	6.19
CED grade III (severe)	10.23
Low body weight but normal	21.63
Normal	92.14
Obese grade-I	38.74
Obese grade-II	11.76

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Roles of NHRC, NCPCR and NGOs for Protecting and Promoting Child Rights in India: An Overview

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Abstract

Children are the future upholders of authority, aspiration, ideals, peace and security of the nation. The period of childhood has been constructed in terms of golden age that has character of innocence, freedom, joy and play. As per census 2011, there are 4721 trillion children of age 0-18 years in India. India adopted a National Policy for children in 1974, declaring children to be nation's most precious assets. Being the signatory of UNCRC (1992), India globally recognized the significance of child rights. Child rights are complex and multidimensional concepts involving societal values and principles related to children and social as well as legal standards for children's safety and well-being. In India, rights of citizen including children have been provided by the Constitution of India. Child rights protection is arguably one of the most highly contested areas of public/ social policy. Protection of children is related to safety from all forms of violence, abuse and exploitation. But recently UNICEF (2005) reported that millions of children are equally deprived of their rights to survival, health, nutrition, education and safety. There are various Government Organizations such as NHRC, NCPCR and NGOs in India dedicated their efforts to protect child rights with their remedial measures from grass-root levels through their network of dedicated workers, activists and notable supporters that could make long- lasting benefits to vulnerable children. The present paper has made an attempt to introspect the roles and functions of NHRC, NCPCR and NGOs in protecting, promoting and defending the child rights.

Keywords: *Child Rights, NHRC, NCPCR, NGOs, Role, Protection, India.*

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Introduction

Children are precious asset of any society having definite role in the development of the nation. The future of country depends on the way of nurturing the children to make them future citizens of the country. Article 1 of the United Nations Convention on the Rights of the Child gave universal definition of 'the child' as every human being under 18 years of age. World widely, childhood period is recognised as 'golden age' with characteristics of innocence, freedom, joy, play etc. But it is also true that children at the earlier stage of life are most vulnerable than adults so they need care and protection. All children need to be protected from abuse and exploitation. Various actions of government and society have more effect on children.

Children being the most vital human resource of the nation require a more deliberate framework of human rights for fostering various domains. Keeping this in consideration United Nation Convention on the Rights of the Child (CRC) is one of the most important international law for children which laid down rights of the child. This convention is based on the principles of 'Best Interest of the Child', 'Non-discrimination' and 'Respect for the views of the child'. It applies equally to both girls and boys up to the age of 18. It obligates the state to respect the child and ensure that child rights are fairly deal in society. The CRC incorporated the full range of human rights within child rights in terms of civil, cultural, economic, political and social rights with in 54 articles and two protocols. Child rights being laws need to be understood as social law not as a penal law which need to be effectively implemented by people by changing their approach that will lead to a better life for all children.

Child Rights in India:

As a party of UN Declaration on the Rights of the Child, 1959, National Policy on Children (NPC) was adopted by India on 1974 which acknowledged the provisions of constitution and accredited the states to provide necessary services for the holistic development during childhood. Being the signatory of UNCRC (1992), India globally recognized the significance of child right. Children being future citizen of the nation should have fundamental freedoms and inherent rights of all beings. Hence, UN convention on the Rights of the Child and Indian Constitution guarantees certain rights specific for all children in four sets which are:

1. Right to Survival
2. Right to Development
3. Right to Protection
4. Right to Participation

Statuary bodies have been set up in India for protection of individual's right. These concerned for the promotion and protection of child rights by spreading awareness about child rights and encourage the efforts of all stake holders working in the field of child rights at national and international level. In this regard, the present paper analyzed the role and functions of NHRC, NCPCR and NGOs in context of promotion and protection of child rights.

National Human Rights Commission:

It was established on 12 October 1993 under Protection of Human Right Act, 1993 which get amended by the Protection of Human Right (Amendment) Act, 2006. The Indian Constitution enshrined the human rights but it lacks a system that protects the child rights against exploitation. Therefore NHRC in India is equipped with a major intent of protecting human rights by providing a definitive framework to stakeholders or NGOs working in this field. Child Rights are most critical of all human rights reforms because it define the future of both current and upcoming generations. So 'rights of children' is one area on which NHRC which tried to have continuous focus since 1993. The Commission concentrated its attention on preventing and eradicating the problems related to children rights violation.

Roles of NHRC

- Promotion and protection of rights of human and children.
- Review and amendment of laws related to prevention of trafficking of child in prostitution and violence against child.

- Identification of factors that influence the rights of human and children.
- Submission of reports, or recommendation to authorities concerning the protection of child rights.
- Spreading child rights literacy amongst various sections of society and promotion of awareness related to safeguards for protection of these rights.
- Build network with civil society organization that prevent and eliminate of trafficking and violence against child.
- Involvement in taking effective actions to ensure safe and voluntary return of trafficked or abused child to their homes.
- Providing support to NGOs to develop programmers that assist in safe repatriation and reintegration of trafficked children.
- To provide suggestion of skills training, education and financial assistance to trafficked child to prevent re-trafficking.

National Commission for Protection of Child Rights (NCPCR):

The NCPCR was set up in March 2007 as a statuary body under the Commission for Protection of Child Rights (CPCR) Act, 2005 which is under the administrative control of the Ministry of Women & Child Development, Government of India. Its mandate is to ensure that all laws, policies, programmes and administrative mechanisms are in consonance with the child rights as enshrined in the constitution of India and also the UN convention on child rights. It has an indispensible role for the state and respect for decentralization at the local bodies and community level for children well-being.

The NCPCR emphasizes on the principle of university and inviolability of child rightsand recognizes the urgency of formation of policies. It includesfocus on the most vulnerable children.

Roles of NCPCR

- Examination and reviewing the safeguards provided by law for the time being in force that protect child rights.
- Present reports regarding working and effectiveness to the Central Government.
- Inquire about violation of child right and recommend initiation for proceedings in such cases.
- Examination of factors that inhibit the enjoyment of child rights.
- Involve in matters related to children in need of special care and protection
- Periodic review of existing policies, programmes and other activities on child rights and give suggestion for effective implementation
- Undertaking and promotion of research related to child rights.
- Spreading of child rights literacy among various sections of the society through publication, media, conference, seminars or with other means.
- Inquire about the complaints related to the matter of:
  i. Violation and deficit of child rights.
  ii. Non implementation of laws formulated for protection of child rights.

Non-Government Organization:

NGO is a non-profit group that acts outside of institutionalized political structures and purses, matters of interest to its members by lobbying, persuasion or direct action. In Indian context, the

positive role of NGOs is noteworthy. These are playing a very important role in creating such awareness and a culture of child rights in society. Many international institutions permit NGOs to make appeals to them on behalf of the victims of child rights violations. The Act of 1993 has instructed the NHRC to encourage efforts of NGOs in the field of child rights. NHRC clearly defines three work areas for NGOs to have their assistance in the mission of commission:

- Due to the grass root level contacts of NGOs, child rights violations can be effectively identified. It can articulate the child right issues and seek redress from the commission.
- Assistance to commission because of the NGOs rapport with public that help in investigation of violation on behalf of the commission.
- Involvement of NGOs in research and other studies related to issues of child rights.

Role of NGOs

i. Collection of information and data analysis related to child rights through surveys and preparation of report based on the results.
ii. NGOs work to create good relationships with stakeholders along with their formulated goal to bring changes.
iii. It works to create a financial framework in order to support the programme of universalization of education.
iv. Act as bridge between the vulnerable communities and government at all levels to address issues like child trafficking and child labor.
v. They acts as 'grassroots activism'.

Some national child rights NGOs:

1. Child Rights and You (CRY)
2. Smile foundation
3. Child line India Foundation
4. Save the Children
5. Uday Foundation
6. Pratham Education Foundation
7. Teach for India
8. Goonj
9. Butterflies
10. Leher

Conclusion

In India, although awareness and knowledge of children's rights are increasing but still there is much more rhetoric paid to their value than open enforcement. Child rights protection is arguably one of the most highly contested areas of public/social policy. This issue almost always evokes a passionate public concern that demands an immediate policy response. Organizations like NHRC, NCPCR and various NGOs play key role in protection, promotion and defending the child rights in the country. These organizations has a mandate to ensure that all laws, policies and programs are in consonance with the child rights perspective as enshrined in the constitution of India and also in the UN convention on the rights of the child. In order to touch every child, it seeks a deeper penetration to communities and households and experts that the ground experiences inform the support the field receives from all the authorities at the higher level.

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Designing of Crop Tops with Traditional Peacock Motifs using Discharge Printing

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Abstract

India is known for its diverse craft, culture and textiles. Textiles have occupied a prominent place, in different geographic regions and in all climatic conditions, with available resources since centuries. The present study is inspired from the traditional textiles motifs of India to create crop top with discharge printing technique which involves the documentation of Indian traditional motifs from different sources and artistic development of motifs and designs for the creation of Crop tops using discharge printing. Indian traditional textile motifs were collected and documented by visiting libraries, museums and different websites on internet. Traditional Peacock motifs were selected for further designing. The motifs were designed with the help of Corel-draw software and evaluated by judges. The most preferred motifs were selected for designing of crop tops. After creation of designs they were again evaluated by the experts. Highly ranked crop top designs were selected for discharging. Discharge printing was done on the T-shirts and further converted into Crop tops. Marketability and Consumers acceptability showed a very positive and encouraging result. It would serve as a guideline for new designers to develop innovative creations from the Indian traditional motifs and will also help to create some new products with discharge printing techniques.

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Introduction

Since the day man discovered the method to cover his body to protect from environmental hazardous as well as to fulfill his aesthetic needs, he naturally utilized whatever material was conveniently available to him. When he learnt weaving, garments were made. Gradually he started developing textile designing to make it more interesting with the help of artisans and craftsmen. Textile designing is the process of creating designs for woven, knitted or printed fabrics by arranging the elements of art in order to create beauty in finished product. There are different techniques to decorate textile used since ages such as loom weaving, dyeing and printing (Sharma, 2009). Dyeing and printing are processes which convert raw textile material into finished goods to make the product more attractive.

Today's designers have become aware of different motifs and started using them in different areas, in a very versatile way so that same motifs can be used effectively on any other surface. Motifs are traditional, but modern designs based on rhythm and balance and increasingly coming

into trend (Upadhyay, 1993). Printing is a process of decorating textile material after the process of weaving. It is used to add or remove color by application of pigments dyes or other related material in the form of patterns with specially designed machines. There are different methods of printing which is mainly used, that is block printing, roller printing, screen printing and discharge printing (Kadolph, 2006). Discharge printing also known as Extract printing is a method of applying color destroying agent, such as chlorine or hydrosulfite to bleach out already dyed surface. The art of discharge printing can be used to give a new face to Indian traditional motifs by enriching it (Discharge Printing, n.d.).

Crop top is a piece of clothing that covers the upper part of our body between the neck and the waistline. Also known as cropped top, belly shirt, half shirt, midriff shirt, tummy top, cutoff shirt, etc. This tiny piece of clothing has become a major item over the last few years, but has traces from early 1940s. From then till now crop tops are one of the top preferences among youngsters and came in a huge variety.

Aims and objectives

- Creation of motifs by taking inspiration from selected Indian traditional motifs and its evaluation.
- Designing of crop tops with selected motif and its evaluation.
- Creation of crop tops with selected designs using discharge printing.
- Marketability and consumer acceptance of created tops.

Review of Literature

India is famous for its reflection of culture and tradition from its different art and handicrafts, food and textiles. One of the important activities in ancient India was making beautiful textiles. Ancient Hindu and Buddhist sculptures and paintings reflect the beauty of Indian textiles which indicates that Indians excelled the art of weaving, printing and embroidery techniques since early times. The traces can be seen in the garments collected from history. Indian traditional designs and motifs play an integral part in the Textiles of India. Indian craftsmen took inspiration from legends of Vedas, Puranas and nature to shape various motifs. Motifs and patterns created by craftsmen are a symbol of artistic intellect.

From early times embroideries was done in gold and silver threads. Main motifs include the Peacock, the Lotus, the Mango or Paisley, and the Elephant provided inspiration to the embroiderers and weavers as well. Traditionally the work was not meant for commercial purpose but was done for more as personal adornment or as a gift to the family or friends. Different patterns found on textiles are often symbolic, based on religious and cultural background, steeped in the belief that the symbols and motifs used will ensure fertility, prosperity, protection from evil spirits to the wearer, or the patterns are linked to religious beliefs. Hindus often use animals and symbolic figures, such as Lakshmi (goddess of wealth), Krishna, or the elephant god, Ganesh. On the other hand geometric and linear designs that emphasize technical skills, using dazzling, brilliant colors and the play of light on floss silk to enhance the visual impact of the work produced is prominent feature of Muslim textiles. Difference in work is based on traditional customs of tribes, regions, religions, castes which ultimately passed from mother to the daughter (Veenu, 2016).

Methodology

- **Creation of motifs by taking inspiration from Indian Traditional Textile motifs**

Indian traditional textile motifs were collected and documented from internet, by visiting libraries and museums. Inspiration was taken from the traditional motifs used in weaving and printing to create different motifs to make them suitable for Crop tops. Three motifs Peacock, Lotus and Paisley were used. Ten motifs for each category were created with the help of Corel-Draw software.

Peacock Motifs

- **Evaluation of Motifs**

Fifty judges, who have some knowledge of textile designing, evaluated the designed motifs. Total score were calculated for each design by multiplying the frequency according to the marks allotted. The top two motifs were selected from each category.

Selected Motifs

· **Designing of Crop tops with selected and it's Evaluation**

- **Creation of crop tops with selected designs using discharge printing technique.**

Crop Tops discharge printed with selected designs

- **Costing of created tops.**

The cost of each Crop tops was calculated by adding the cost of T-shirt, Labor, Solvent, accessories, Stitching and finishing. 20% profit was added to cost price of each Crop tops and the final price of the product was 1560/-

- **Marketability and consumer acceptance of created tops.**

A market survey was conducted in local market and branded stores of Chandigarh, to check the marketability of the created tops with the quoted price. The performa was filled by the respondents.

Results

Marketability and consumer acceptance of created Crop tops were checked by surveying local shops and branded stores of Chandigarh. A questionnaire was prepared to check the response of consumers as well as retailers. The designs and quality was highly appreciated by the respondents. Majority of respondents found the quoted price reasonable and were ready to place order.

Conclusion

To present study, "Designing of crop tops with traditional peacock motifs using discharge printing" is an attempt to give a fresh insight to immortal Indian traditional motifs, by using them for creating designs with the help of Computer-Aided Designs (CAD). It will serve as a guideline for the designers to create innovative products with use of Indian traditional motifs and discharge printing. As in the present world, fashion trends changes very quickly and the consumers constantly demand innovative changes over the existing fashion. In such a situation CAD plays a

very important role as it gives the designers freedom to experiment with color, shade, texture and form and also helps to go straight from the initial idea to the visual representation of the fabric.

Recommendations for further studies

- Collection of motifs from Traditional Indian ornamental designs and can be further modified with the help of Coral draw.
- Designing of Crop tops can be done with hand painting and embellishing them with embroidery.
- Designing of wall panels with printing and hand painting using traditional Indian architectural motifs.
- Designing of textile with surface ornamentation using discharge printing.

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Does Microfinance Empower Women: A Synoptic Review

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Abstract

The self- help group-bank linkage programme (SHG-BLP) aims at empowering women by making them financially independent, developing their social network and in the process making them more confident and autonomous. Literature review shows that in cases where microcredit is not misused, women are empowered to some extent. Access to money and widening social network instills women with confidence and boosts their self-esteem and makes them more autonomous in financial and non-financial decision-making. However, support of men-folks and productive uses of credits are vital for greater empowerment of women.

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Introduction

Woman has often played a second fiddle to man. She is relegated to the background. Her world is often confined to the kitchen and the upbringing of her children. She is quite often used as a pawn and no more than a piece of property. But now things are looking up. Gender inequality is now looked upon as an inequity and even iniquity. Many important milestones have been achieved. The forces of gender equality are on the march. The job is not yet complete but it is continuing.

Muhammad Yunus, the Nobel laureate from Bangladesh had an illuminating insight. The poor, particularly women could be successful entrepreneurs. They had only to be equipped with finance, skills and market linkages. The idea was picked up and replicated worldwide. In India, the microfinance movement began with the introduction of self- help group-bank linkage programme (SHG-BLP) in 1992. National Bank for Agriculture and Rural Development (NABARD) launched a pilot project that aimed at promoting and financing 500 microfinance self help groups (SHGs) across the country. The programme not only targets stimulating a self-sustaining source of income to fight poverty, but also at empowering women. Majority of microfinance clients across the world are women. It aims at empowering women by making them financially independent, developing their social network and in the process making them more confident and autonomous.

Starting from a modest scale as a pilot project in the year 1992, the number of SHGs has astronomically grown to more than 79.60 lakh savings-linked SHGs covering over 10.30 crore poor households, as on 31 March 2012 (Joshi, 2013).

The current paper presents a synoptic view of the literature available on impact of microfinance on women empowerment. The following analysis includes Indian studies. The same are briefed

in Table 1. By reviewing some studies, seven dimensions of empowerment are recognized. The impact on each one of these dimensions is discussed separately.

Table 1: Impact of microfinance on women empowerment

Study	Coverage	Methodology	Findings
Self-confidence			
Puhazhendi and Satyasai (2000)	India (11 states)	Before-after approach	Increase in self-confidence, self-worth and improvement in communication skills.
Puhazhendi and Badatya (2002)	Orissa, Jharkhand, Chattisgarh	Before-after approach	Increase in decision-making abilities as a result of increased confidence and improvement in communication skills.
NCAER (2008)	AP, Karnataka, Maharashtra, Orissa, UP, Assam	Before-after approach	Increase in self-confidence. Increase in participation in public issues
Chen and Snodgrass (2001)	India (SEWA Bank)	Case-control approach	Statistically insignificant increase in respect women receive from home.
Financial matters			
Puhazhendi and Badatya (2002)	Orissa, Jharkhand, Chattisgarh	Before-after approach	Index of meeting a financial crisis confidently, increased from 33 to 85.
NCAER (2008)	AP, Karnataka, Maharashtra, Orissa, UP, Assam	Before-after approach	Increase in control over use of money, particularly for children's education.
Deininger and Liu (2013)	Andhra Pradesh	Case-control approach	A woman was able to set aside money for herself.
Swamy (2014)	India	Case-control approach	Income growth for women members is more than double than that of men, thus women were automatically more empowered as they show highly positive impact on economic indicators.
Swain (2007)	Orissa, Maharashtra, AP, Tamil Nadu, Uttar Pradesh	Case-control approach	Limited empowerment. No impact in key areas of family planning and property matters. Need for training, educating and creating awareness for larger and lasting impact on women empowerment.
Chen and Snodgrass (2001)	India (SEWA Bank)	Case-control approach	No significant change in financial autonomy enjoyed by women as the initial autonomy was already high.
Garikipati (2008)	Andhra Pradesh	Case-control approach	Women are forced to repay from own earnings as resources are used for household needs. Small size of loan and lack of group investment led to no profit in women's enterprise. No female ownership of family assets.

Awareness and activism			
Puhazhendi and Satyasai (2000)	India (11 states)	Before-after approach	Increase in desire to protest against social evils. Fall in incidence of family violence.
Puhazhendi and Badatya (2002)	Orissa, Jharkhand, Chattisgarh	Before-after approach	Women were empowered to protest against social evils of domestic violence, gambling and drinking.
NCAER (2008)	AP, Karnataka, Maharashtra, Orissa, UP, Assam	Before-after approach	Increase in participation in public issues.
Mann, Randhawa and Kaur (2011b)	Punjab	Before-after approach	18 percent members reported success in protesting against few cases of gambling and drinking in the village through collective group action.
Mobility of women			
Puhazhendi and Badatya (2002)	Orissa, Jharkhand, Chattisgarh	Before-after approach	Women reported an increase in mobility. The score in mobility increased from 45 to 75.
Deininger and Liu (2013)	Andhra Pradesh	Case-control approach	A woman was more mobile and did not need permission to visit a market, a doctor or a community centre.
Decision-making			
Puhazhendi and Badatya (2002)	Orissa, Jharkhand, Chattisgarh	Before-after approach	Increase in participation in decision-making.
NCAER (2008)	AP, Karnataka, Maharashtra, UP, Orissa, , Assam	Before-after approach	Increase in participation in household decision-making.
Gender equality and overall empowerment			
Puhazhendi and Satyasai (2000)	India (11 states)	Before-after approach	Index of social indicators increased from 40 to 65.
Swain and Wallentin (2007)	Orissa, AP,TN, Uttar Pradesh, Maharashtra	Case-control approach	Positive but unequal empowerment amongst beneficiaries on account of varying socio-economic characteristics.
Rai and Ravi (2011)	India	In-depth interview (male and female comparison)	Either empowered women join microfinance programmes or the programme empowers them is unsure, but wives of male clients are disempowered by contrast.
Berglund (2007)	Andhra Pradesh	In-depth qualitative interviews	Stronger minded women were empowered by SHG membership but weaker women were further burdened.
Networking			
Kumar (2011)	Kerala	Compared MFI and other networked groups	Networking as a result of SHGs helps women's empowerment by expanding their consciousness.

Source: Review of literature

Major findings

Having discussed the findings of many studies on various dimensions of women's empowerment, it is safe to conclude that in cases where microcredit is not misused, women are empowered to some extent. Access to money and widening social network instills women with confidence and boosts their self-esteem. This makes them more autonomous in financial and non-financial decision-making. They develop the courage to participate in public issues and raise their voice against social evils. Increased empowerment enjoyed by women positively impacts children's education and household health. However, support of men-folks and productive uses of credits are vital for greater empowerment of women. The role of SHPIs and social activists in addressing the structural causes of disempowerment of women is essential to lend impetus to their empowerment.

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Approach of Third Dimension of Education to Promote Polythene Free Chandigarh

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Abstract

Plastic Bags- Ek Gambhir Samasya: A plastic bag (polybag) scientifically named as poly-ethene (polythene) is commonly used for packaging and transporting various goods. But with the uncountable hazardous effects of plastic bags to us as birth givers to plastic, developers of plastic bags and threat to the environment, these plastic bags have certainly become a 'Gambhir Samasya' for one and all. The multidisciplinary field of Home Science includes Extension Education as a subject of eminence. Extension education also called as third dimension of education is a dynamic and flexible type of education that serves the people wherever they are and whatever they are. As an extension program, a study was carried out through a survey amongst 350 people comprising of shopkeepers and vegetable vendors of various areas of Chandigarh- 'the city beautiful'. The main aim of this study was to generate awareness about the threats that plastic bags poses to our lives and further sensitize them about the alternatives to the plastic bags. The study, after analysis, clearly indicated that the use of plastic bags is more in sabzi mandi than in the market. In an endeavor to achieve the objective, a number of activities were performed and presented to the users of plastic bags so that they mark a break between the vicious cycle of giving and taking away of plastic bags and thus reduce its environmental pollution. The mass approach was chosen and with the collaboration of the vegetable vendors, an innovative idea was brought into motion. All the customers visiting the vendors for vegetables were offered a discount of Re 1 to Rs 5 if they bring their own bags. With the attainment of results of survey, analysis and evaluation process, the extension programme validated successfully with the achievement of respondent's satisfaction and knowledge in hand.

Key-Words: *Plastic, Home Science, Extension Education, Innovation*

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Introduction

Rapid population growth, urbanization and industrial growth have led to severe waste management problems in several cities around the world. (Banerjee, Srivastava, & Hung, 2014)

In particular, the plastic carry bags are the biggest contributors of littered waste due to simultaneous increased consumption of plastic materials. It is necessary to highlight the fact that plastic bags don't biodegrade, they photo degrade - breaking down into smaller toxic bits. As it breaks down, plastic particles contaminate soil and waterways and enter the food web when animals accidentally ingest them through a process called biomagnification.

To address the issue of scientific plastic waste management, The Ministry of Environment, Forest and Climate Change had notified the Plastic Waste Management (Amendment) Rules 2018 on March 27, 2018. The amended rules laid down that the phasing out of Multilayered Plastic (MLP) will then be applicable which are non-recyclable, or non-energy recoverable, or with no alternate use. *(Press Information Bureau, 2016)*

By 2015, approximately 6300 Mt of plastic waste had been generated 9% of which had been recycled, 12% had been incinerated, and 79% had accumulated in either landfills or the natural environment. If current waste production and management trends continue, approximately 12,000 Mt of plastic waste will be in either landfill or the natural environment by 2050. *(Gündoğdu, Yesilyurt, & Erbaş, 2018)*

An eco-friendly product, which is a complete substitute of the plastic in all uses, has not been found till date so it is impractical and undesirable to impose a blanket ban on the use of plastics in the country. Thus a study was conducted through a survey to find out the prevalence of plastic bags in Chandigarh. In this context, a questionnaire-based survey was conducted to measure the relationship between plastic bag consumption of society and its aspects of environmental protection and plastic pollution.

Material and Methodology

Locale of the Study: The study was carried out in local market of Sector-22 and *sabzi mandi* (grocery market) of Sector-15, Chandigarh with 150 shopkeepers and 200 vegetable vendors through purposive sampling technique respectively.

Questionnaire Survey: A number of visits for the two separate target areas were conducted as a part of the sampling efforts. A face-to-face survey was conducted with randomly selected people. Within the scope of the survey, a self-made questionnaire comprising of 20 questions was directed to the participants/ respondents enquiring them about their general knowledge about plastic bags and their daily use in the shopkeepers' daily routine.
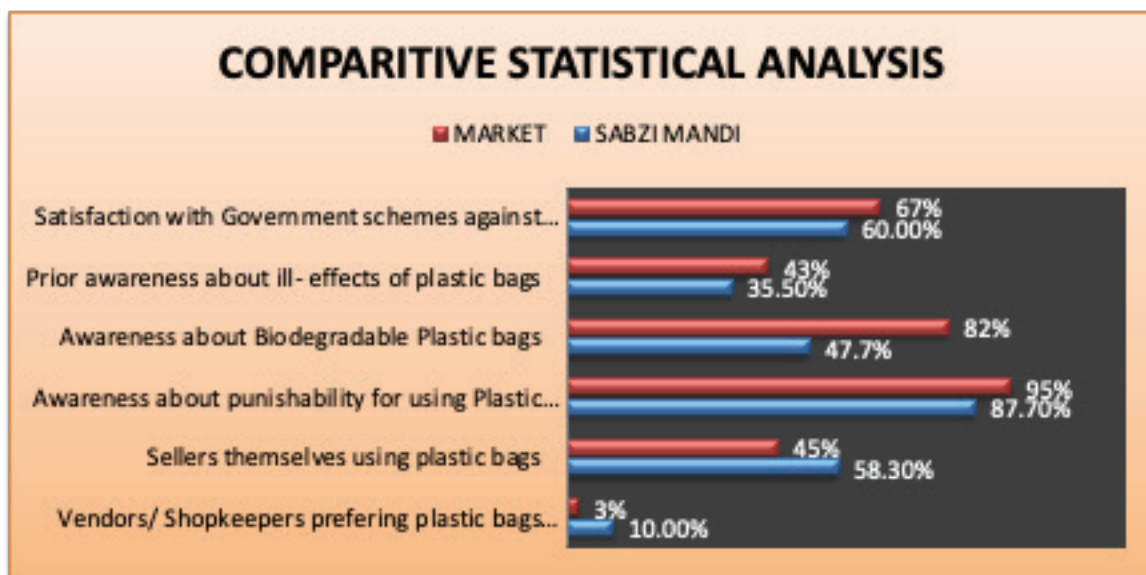
Statistical Analysis of the Situation:

a. **In sabzi mandi:**

- Out of 200 vendors, although 89.8% opted for cloth bags, nylon bags, paper bags and biodegradable bags, but still 10% vendors prefer using plastic bags and that so because of cost factor as other bags are not affordable. Only 5% give their preference for bio degradable bags because of less awareness about it.
- 41.6% people say that animal death is a reason to worry about plasticity
- 68.4% people think that the city does not have plastic disposing machine. This is due to the fact that no efforts have been made to aware the public.
- 67.5% people bring their own bag. In spite of bringing their own cloth bags, they still use plastic bags for keeping the groceries separately.

b. **In market:**

- Out of 150 shopkeepers, 97.4% opted for cloth bags, nylon bags, paper bags and biodegradable bags, 2.6% vendors prefer using plastic bags and that so because of cost factor as other bags are not affordable.
- 40% of people think that plasticity is responsible for animal death, soil damage, death of water animals as well as choked drains.
- 76% people think that the city does not have plastic disposing machine.
- 55.4% people do not bring their own bags. This is clearly because of the easy availability of plastic bags and other bags to carry things.

After analyzing the situation, it was found that most of the vegetable vendors are using plastic bags in spite of knowing their harmful effects. The major reason being easy availability of the plastic bags, ease to use and its economic prices as compared to the 'cloth bags' or 'biodegradable bags' or 'newspaper bags' which makes it suitable and affordable to all. Another reason was that plastic bags have convenience in keeping different fruits and vegetables separate while cloth bags generally do not have while newspaper bags are not durable. A major problem the shopkeepers face if they refuse to give bags to the customers are greater loses because of higher competition in the market.
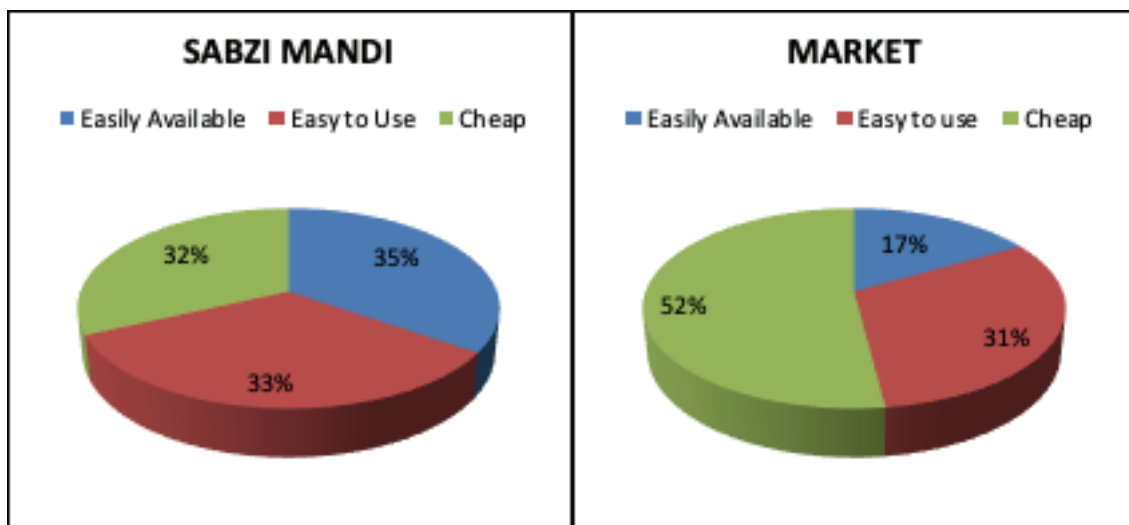
Reasons for using plastic bags
Result and Discussion

It was observed that, participants are aware of plastic pollution and its harmful effects to the environment. They are also known to the punishable offense of using plastic bags. Though many people are aware of the suitable alternatives of plastic bags that are cloth bags, jute bags and biodegradable bags and have also made efforts to bring these into practice; they still choose for using plastic bags because they are cheaper, convenient and easily available. The plastic disposing machines are also available but a very few percentages of people are aware about the same. However, on the contrary, it was determined that the participants were not willing to transform their awareness to act.

Transformation of Innovative Ideas to Action:

An important step was leap forward to synthesize lot of ideas to write off some modern energy innovations supported by the 'creative muscle' that flexes to quick fix the problem of incautious plastic disposal in every possible way, various methods were selected for extension programme and a number of activities were performed and presented to the users of plastic bags.

- The method selected for the extension programme was mass approach (Street play or *Nukkad natak* and Rally)
- The making of paper bags was also demonstrated to the vegetable vendors, so that they can save their cost by making their own paper bags.
- Cloth bag specially designed to buy fruits and vegetables with partition inside was also made available to the buyers and newspaper bags to vegetable vendors free of cost.
- Vegetable vendors were motivated to use paper bags for selling the vegetables and advice their customers to bring their own bags other than plastic bags.
- The real innovation came into play when the vendors collaboratively decided to give their customers a discount of Re 1 or Rs 5 to the customer who will bring their own bags. The idea was that when the customer will bring their own bags then they will not have to spend money on purchasing the plastic bags and that money could be compensated on discounts.
- With participatory collaboration, vendors were aided with handmade placards/charts prepared for highlighting the same for the customers to be put on vendors' handcarts.

Conclusion and Suggestions

The success of a survey lies in the attainment of appropriate data and the insights one needs to make changes to the processes, product, or services. Most of the vegetable vendors are using plastic bags in spite of knowing their harmful effects. In case of *sabzi mandi*, 99% people are using the plastic bags and a very few people are using the newspaper bags. While in case of market, 90% people use cloth bags or biodegradable plastic bags because of strict rules and regular inspections. Within the limitations of the availability of resources, a small step with profound significance was moved ahead with an effort to bring about a change in the society and the mindsets of people. If these baby steps are taken forward to the higher authorities for proper implementation at a greater scale, it will certainly bring about significant transparent changes for gifting a better nature to the upcoming generations.

Some Suggestions:

- Government must provide biodegradable bags at a low cost or on subsidy.
- Heavy taxes and GST must be imposed on the purchase of plastic bags.
- Unity is the key to achieve anything, if shopkeepers together refuse to provide plastic bags or they choose alternatives.
- Buyers should be sensitized and motivated to carry their own bags.
- MC should keep an eye on the use of plastic bags.

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Role of NGOs in Women Empowerment

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Abstract

By examining how NGOs operate in southern India in the early 2000s, this paper discusses the challenges faced by the small and local NGOs in uncertain times of changing aid dynamics. The key findings focus on what empowerment means for Indian women, and how NGOs accountability to these women is an important part of the empowerment being realized. The notion of community empowerment, in which the solidarity of a group can be a path to individual empowerment, is discussed as well as analysing how empowerment can be useful concept in development. The book goes on to discuss the ways that NGOs can work with communities in the future, recognises the limitations of a donor centric accountability framework. It provides a useful contribution to studies on South Asia as well as gender and development studies.

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Introduction

India as a society, has made tremendous strides in various socio-economic and political fronts since Independence. The economic growth of the nation during the past two decades has been phenomenal. In spite of all these achievements, the nation is bar behind in a few core areas of human dignity and social justice. Among them, gender injustice and oppressions through the caste system are the most serious. These two injustices have, often in combination, plays unabated roles throughout the history of India with serious result in denial and outright restrain of the rights of women in various aspects of social life. About 48.5 percent of India's population is female. India has seen a steady growth of women in its work. Yet gender neutrality in pay, positions, promotional opportunities are non-existent. Serious salary gaps between men and women working on same or similar jobs, lack of career advancement opportunities of women workers, and the overall mentality of keeping women away from decision making authority are all too common in both public and private sector organisation.

While the government has either failed to protect women's rights for has been very slow in responding to the issues of violations against women's right, fortunately NGOs sector has made several inroads in promoting women's rights and women empowerment through a variety of strategies and development platforms.

Review

Women empowerment, in concept and practice, is complex due to various dimensions involved in it. It is commonly accepted that women empowerment incorporates a few key

elements including awareness, autonomy, self-reliance, and rights in decision making process, capacity building and certain level of power.

Government's failure to address gender inequalities and inequities in modern India gave the impetus for movements for the advancement of women. Pioneered by women leaders and NGOs beginning in the 1960s and continuing in 1970s, women right movement began to take place. The second approach of women empowerment NGOs was through education. They increase awareness on the importance of knowledge as a way to achieve professional careers and participate in political process. Another form of women empowerment emerged from the feminist movement which began to shun all social, cultural, or religious barriers to the advancement of women.

All the hard work of women's group and NGOs has achieved considerable success in various fronts. Currently, reports and information released by medium and large size women development NGOs through their websites and other printed material indicates the impact of their projects on their overall women empowerment agendas. In addition to these self-reported measures and indicators on varying levels of advancement, done by researcher on NGOs have proved that women have achieve considerable level of knowledge, economic and political empowerment by being members or beneficiaries of them.

Role and strategies of women empowerment NGOs

Because gender discrimination and women's right abuse are systematic, deep rooted problems with various dimensions across the country, solution to address them also need to be multi-dimensional and holistic involving various sectors of the society. Women empowerment NGOs, due to their mission focused nature, are in a unique position to play pivotal roles to link various players including the general public, communities, religious groups and business. They also highlight various issues of gender inequality and inequity in order to stimulate responses from them.

Women economic development strives to promote financial self-sufficiency of women through economic development. They provide direct social services with mission to address specific needs of women such as education, health care, and income generation within the broad development framework. Based on the needs they design and implement project that benefits women from underserved communities.

Women empowerment NGOs range widely in their size, scope and impacts. The good news is that there is a growing number of women advancement related NGOs initiatives at local, state level that provide educational, economic, and other resources needed to address various aspects of women empowerment.

Women Rights Advocacy NGOs are typically established by leaders with strong feminist ideology or groups of people who desire to address one or more aspects of women's rights abuse. Strategies of advocacy environmental NGOs focus on raising public awareness on women rights abuse, their impacts and other issues in order to prevent them. They advocate for gender equality through various measures including activism. They support women activisms and organise public protests that are often the most effective method to mobilise the public and get the attention of law-makers. They link the people with the political processes, so that they can demand responses from governments based on their constitutional and other rights. They partner with local media

to get the word out in order to increase awareness among the public about women's rights issues and the needs to address them. They act as watch dog groups to protect the rights of women from abuse by social groups, caste groups and religious groups that methodically subjugate women to multiple forms of oppressions in the name of tradition, culture and religion. Another fast-growing information mechanism that can be effective for women development NGOs to promote public awareness and demand government actions is the social media. The rapid growth of information technology and utilisation of cellular phones by the mass, especially the youth, make social media an excellent tool for NGOs to reach out to the public. Social media outlets such as face book, twitter and YouTube have proved how information can spread inexpensively and very quickly to a wide domestic and global audience in order to gain support for NGO causes. Social media can also help NGOs to recruit new generations of women activists and supporters of women empowerment from the millennial and next generation.

All policy, legal and enforcement frameworks regarding women's rights are not of any use if they are not implemented properly. Often times, rules and regulations to protect women are not followed or ignored all together. NGOs play a vital role in making sure they are implemented.

Conclusion

Development of the nation lies not just on its GDP growth, but on a series of progressive reforms that resolve and eradicate social injustices faced by various sub-population of the nation. The growing list of government initiated reformative acts, legal framework, regulatory mechanism and judicial actions are not solutions to the major issues of gender injustice by themselves. Unless they change the mindset, attitude and behaviour of people in Indian society especially among men, none of them is worrying about anything. NGOs have paved the way for awareness, advocacy, and outright demands for gender justice. They need to continue to push the boundaries of social justice, laws and judiciary in pursuit of women's rights, equality and equity.

Anguishing about Indian society's inability to rid it of several social evils, a poet once surmised that we got freedom at midnight and it has not dawned yet. This is certainly true with regard to gender injustice and castes related issues. India is at crossroads in so many ways. Its youth population is nearly fifty percent of the total population, the highest such proportion the nation ever had. The younger generation has the opportunity to propel the society into a higher stature by breaking down the barriers that cause these social injustices. Spearheaded by the NGO sector and supported by all other sectors, it can and should be done.

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Role of New Media in the Skill Development of Government Public Relation Departments

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Abstract

The use of Internet is rising as a significant tool for organizations to communicate with publics by the government public relations department. According to the data collected by Internet World Stats (June, 2018), World had 4,208,571,287 internet users on 30 June, 2018 and India had 462,124,989 users out of which 251,000,000 were using Facebook. The Government of Indian budget 2018-19 announced a fund allocation of Rs.3073crore to Digital India Program which is double than the previous budget. Considering the phenomenal rise in the digital India budget, the change warrants a detailed study on the usage of New Media tools in nurturing the skill development of Government Sector Public Relation Departments. The present paper will try to find out the use of new media in Nurturing and skill development of Public Relations tools in the government sector organizations in their crisis situation. The review paper will also try to study the usage of new media platforms by Government sector PR departments over the globe and in the Indian context.

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Introduction

New media presence is a brand of a vibrant and transparent communications strategy, and it offer particular utility to nurture and develop skill of government public relations department. New media tools can improve interactivity between a government and the public, and they reach large number of people that do not use traditional media as frequently as others (Bertot, Jaeger, Munson, & Glaisyer, 2010). This new technology allows officials in government to build relationships with key stakeholders and the public's it represents.

New media can nurturing and develop governments' skill to interact with and engage publics as well as to meet their expectations for transparency. Government public relations departments have more tools to engage and communicate with the public than ever before. A survey showed that two-thirds of online adults use new media platforms (Smith, 2011). Moreover 40% of Internet users go online for data about government operations, and new media users are more tied to civic groups (Raine, 2011).

New media offer great opportunities for local governments in nurturing and skill development. The open, dialogic nature of new media removes many of the barriers in communication that

these governments have experienced in the past (Bertot & Jaeger, 2010). Communication with publics can be more frequent, open, and targeted. In the past, governments have relied heavily on traditional mass media to disseminate public information (Dixon, 2010). The advent of new media provides government public relation departments the means to communicate directly with their publics without the intrusion traditional media gatekeepers (Smith, 2010).

Public Relation departments in Government Organizations

The basic function of Government Public Relations department is to provide information, education/instruction to the publics'. The effort should also motivate the publics' directly or indirectly, to discharge these functions in a meaningful and purposeful manner. The objectives should further the interests and the well-being of the people as a whole and promote the many-sided development of the country.

The objective of present work is to answer following sets of specific research questions based on the general queries above:

RQ1. What are the benefits of using new media in nurturing and skill development of government Public Relation departments?

RQ2. How Government Public Relation departments actually use in new media in India and world?

Benefits of Using New Media in nurturing and skill development for government Public Relation departments

New media can help governments to nurture and develop skill in understanding the target publics and attract the attention of the public's. New Media usage helps government to increase public's engagement, facilitate information exchange and improve governance. It enables real two-way communication between people. Using new media (COI, 2011) is expected to lead to the following benefits:

1. An increase in government access to audiences leading to an improvement in government communication.
2. The ability to serve more stakeholders with minimal financial effort.
3. Governments will be able to be more efficient and productive in their relationships with citizens, partners and stakeholders.
4. There will be greater scope to adjust or change communications quickly where necessary.
5. An improvement in the long-term cost effectiveness of communication.
6. An increase in the speed of public feedback and input.

New Media Usage in the practice of Public Relations of Government Organizations

To examine the use of new media by the government Public Relation departments, articles were reviewed for the last decade that focused on new media usage government to communicate with publics.

According to Vilanilam (2011) while discussing new tasks and responsibilities of Public Relations in India, feels that communication has to be transparent enabling two-way interactions. The author strongly believes that companies must have close links with various Publics in the country, be it at the local, regional and national level and have the policies made based on the needs of the people.

Some suggested that social media had the potential to promote a positive perception of government through dissemination of information and by providing a platform for citizen and government interaction. As an example, a successful social media strategy implemented in Seoul is hypothesized to increase trust in the government through its continued operation ,Park, J.; Cho, K. (2009).

Findings and Conclusion

The usage of the new media in nurturing and skill development of government sector Public Relations department tool is still evolving. The papers reviewed for the study show a promising future for new media in skill development. It is desirable for democratic governments, at least to some extent, to have media policies that promote openness, transparency, and make government available to all, yet in practice we often do not even strive for this, LaPaze, R.E.(2011). We further realize that we need to react in some way to citizen feedback from the social networking and socially interactive channels we currently have, yet it is understood that very few government agencies employing new media are actually affected by citizen feedback, Bertot, J.C.; Jaeger, P.T.; Munson, S.; Glaisyer, T (2010).

Conclusion

For various reasons, some organizations have decided to use the new media in nurturing and skill development. Finally, more work is required government public relation departments to work on skill development for new media use. Government regulations have been traditionally slow to catch up with the information age. As the objectives and strategies for government use of new media solidify over time, policy makers must keep pace with the changing scenario.

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Role of Government Schemes in Women Empowerment

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Abstract

Women are the backbone of the society and occupy nearly half of the world's population but in every part of the world women lack support for fundamental functions of human life. They are less nourished, more vulnerable to Physical violence and social abuse and have less opportunities for education and career development. The most basic capabilities for human development is to lead a long and healthy life by accessing available resources, to acquire knowledge and to be able to participate in the social and political activities. Empowerment is the main process by which the women can participate in economic, political and social sectors of sustainable development and ability to make strategic life choices. The main objective of this study is to analyze the Government schemes for women empowerment in India. Empowering women aims to inspire them and persuade them to come out from different adverse conditions, be it societal or religious that have traditionally kept them suppressed and unable to see their true strength, power and beauty. Higher education deals mainly with youth after schooling. Higher education encourages technical know –how utility, skills, promotes careerism sense of responsibility and prosperity among youth of nation besides dealing with development of moral characters and intellectual level of youth. The Government of India initiated so many Schemes for empowering like Beti Bachao Beti Padhao Scheme, Nari Shakti Puraskar etc help to provide specific skills to girls and woman to become efficient and foster their healthy growth and development.

Keywords*: Empowerment, Government, Schemes, Women.*

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Introduction

Women play a very strategic role in the development of society as well as development of economy. Woman is the chief architect of the family, the first trainer; supplier of labor power and by playing focal role in the development of agriculture, industry, service sector, socio-culture etc. creates a civilized society. Woman if is educated and empowered, her potential power can be utilized for the economic development. Mahatma Gandhi say, "You educate a man, you educate an individual, You educate a woman, you educate an entire family. " Hence women should be physically, mentally, economically, socially, politically and culturally strengthened so that the country can make use of hidden potential power for the economic development.

Women Empowerment

Empowerment is an active, multi dimensional process which encompasses several multi reinforcing components that begin with and supported by economic independence. Power is the key word of the term empowerment. Empowerment literally means becoming powerful. Women need to be empowered in order to become strong and ready to take up new challenges for the building up of the family, society and the nation. In fact women empowerment is human empowerment itself. Women Empowerment is a process which helps women to awaken other women's consciousness through creating awareness. The dignity and culture of a society can be detected from the status of women in that society. Empowerment has become the key solution to many social problems. Empowerment of women is empowerment of family/household and in turn development of a nation. Women must define their own needs and goals as well as strategies. Women must exercise full participation in decision making process in all walks of life with men in finding equitable and practical solution to issues both in the family and society. Thus increasing the productivity level of the nation

Ways to Empower Women:

- Providing education in every field
- Change in women's control over Decision making
- Providing women police stations for their complaints
- Changes in women's mobility and social interaction
- Providing separate hospitals for their checkup
- Changes in women's labor patterns
- Providing separate schools/colleges for their safety
- Providing equal rights
- Providing separate transport system
- Changes in women's access and control over resources
- Self employment and self help group
- Providing equal property rights
- Providing minimum needs like Nutrition, Health, Sanitation and Housing Providing equal opportunity in sports and other activities
- Other than this society should change the mentality towards the word women
- Encouraging women to develop in their fields they are good at and make a career

Women Empowerment Schemes of Government of India

The Government of India is implementing various schemes and programs for improving the access to employment, education, health, infrastructure development, urban development, etc. Some of these are flagship programs like Beti Bachao Beti Padhao Scheme, One Stop Centre Scheme, Women Helpline Scheme etc. These schemes provides assistance for Education, training, financial assistance/Cash, Subsidy on the loans, scholarship, nutrition, self-employment and other facilities. The prime goal is for empowerment, development, protection of Women & Child.

List of Women Empowerment Schemes in India

Women Empowerment Programmes	Year of Commencement	Objectives
Beti Bachao Beti Padhao Scheme	22 January, 2015	• To provide education to girls' and their welfare. • To prevent the violation in the interest of girls. • To celebrate the birth of a girl child.
One Stop Centre Scheme	1st April, 2015	• It is a Centrally Sponsored Scheme. Its aim is to set up One Stop Centres (OSC) which is to be funded from the Nirbhaya Fund. • To provide support and assistance to women affected by violence at private or at any public place, irrespective of caste, class, religion, region, sexual orientation or marital status.
Women Helpline Scheme	1st April, 2015	• To provide 24 hours telecom services to women affected by violence seeking support and information. • To help crisis and non crisis intervention through referral to the appropriate agencies such as police/hospitals/ambulance service/District Legal Service Authority (DLSA),Protection officers
UJJAWALA : A Comprehensive Scheme for Prevention of trafficking and Rescue, Rehabilitation and Re-integration of Victims of Trafficking and Commercial Sexual Exploitation	December 2007	• For the prevention of trafficking and providing support for rescue, rehabilitation, reintegration and repatriation of women and child victims of trafficking for commercial sexual exploitation in India. The Scheme is being implemented mainly through NGOs to provide direct aid and benefit to the victims of trafficking.
Working Women Hostel	Introduced in 1972-73 and after amendment re-launched on 6th April, 2017	• To promote availability of safe and conveniently located accommodation for working women, with day care facility for their children, wherever possible, in urban, semi urban, or even rural areas where employment opportunities for women exist.
Rajiv Gandhi National Creche Scheme for the Children of Working Mothers	The programme was recast by the Government of India in 2006	• To provide day-care facilities for children (6 months to 6 years) of working mothers in the community. • To improve nutrition and health status of children. • To promote physical, cognitive, social and emotional development of children.- • To educate and empower parents /care givers for better childcare.

SWADHAR Scheme (A Scheme for Women in Difficult Circumstances)	2002	• To provide the basic need of shelter, food, clothing, medical treatment and care of the women in distress and who are lacking social and economic support • To enable them to recover their emotional strength that get hampered due to the encounter with unfortunate circumstances. • To rehabilitate them economically and emotionally • To act as a support system that understands and meet various requirements of women in distress.
Support to Training and Employment Programme for Women (STEP)	The Ministry has been administering STEP Scheme since 1986-87 as a 'Central Sector Scheme'. It was revised in December, 2014	• To provide skills that give employability to women, • To provide competencies and skill that enable women to become self-employed/ entrepreneurs. • To upgrade the skills of poor and marginalized women • To provide employment to them on a sustainable basis
Nari Shakti Puraskar	1999	• To recognise women who have exceeded expectations to challenge the status quo and make a lasting contribution to women's empowerment.
Women Empowerment and Livelihood Programme in Mid-Gangetic Plains- 'Priyadarshini'	Pilot Project	• It focuses on Women empowerment and Livelihood in Mid-Gangetic Plains. It also empower to address their political, legal, health problems.
Mahila E-Haat	7th March, 2016	• It will help women to make financial and economic choices which will enable them to be a part of 'Make in India' and 'Stand Up India' initiatives.
Rashtriya Mahila Kosh (RMK) is also known as the National Credit Fund for Women (NCFW)	1993	• It caters to the credit needs of the poor and asset-less women in the informal sector.

Government of India took so many initiatives to empower the women in India. But women are discriminated and marginalized at every level of the society whether it is social participation, political, economic participation, access to education, and also reproductive healthcare. A few women are engaged in services and other activities. So, they need an equal economic power to stand side by side to the men. There are so many cases of rape, kidnapping of girl, dowry harassment and so on. For these reasons, they require empowerment of all kinds in order to protect themselves and to secure their purity and dignity. There is a need to formulate and

reducing feminized poverty, promoting education of women, prevention, and elimination of violence against women and creating the basic assets to empower the women population of the nation.

Conclusion

Empowering women is to make them independent in all aspects like mind, thought, rights, decisions, etc by removing all the social and family limitations. Women need fresh and more capable environment so that they can take their own right decisions in every area whether for themselves or family, society and country. The development of New Media has enabled the women section to participate in the daily affairs of the state, which range from the household work to education, health, governance and so on. The Government drives for up gradation of women status aim to achieve the goal of women empowerment by initiating women to have endowed income and property so that they may stand on their feet and build up their identity in the society Various initiatives are being taken for empowering women in the field of literacy rate, female child education, hygiene and sanitation, awareness and contribution to technology.

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An Exploratory Study on Women Empowerment through Income Generating Activities of Self-Help Groups

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Abstract

Women empowerment in the concern of her development is an approach leading towards characterizing, claiming her identity and defeating the hurdles in breath of women through which she may raise the ladder of her competence, to configure her lifestyle and ambiance. This is an alive, multifaceted course of action, which permits women to comprehend her full identity and potential in all pellets of life. India foresees a future where women are self sufficient and self contained. The portrayal of women's role has been missing at both home and work sector for long, which hampered her beneficence towards the society. In order to improve the representation frequency of women in spheres of life, women must be empowered by enhancing their consciousness, expertise, skills and insight of technology thereby smoothing the creases in comprehensive development of the society. With this aim, the idea of Self Help Groups has proved to be much successful in reaching out the women in rural areas, sensitizing and empowering them about their role in society. Self help groups not only play important role in making women aware, rather these majorly contribute in equipping them with skills, ingenuity, and techniques, which drive women to become independent in decision making and earning. The belief that entrepreneurship development and profit obtaining exercises are a feasible solution for empowering women has proved to be a success. Present investigation is an attempt to study the existence, functioning and benefiting structure of self help groups, which lead a substantial way towards women recognition and empowerment.

Key words: *Empowerment, Self-help groups, Skill, Role, Women.*

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Introduction

Women empowerment and their equality with the other gender have achieved handsome recognition through the world in recent years. The topic was one of the goals of Millennium Summit held at New York in 2000. Women empowerment is to motivate and develop women by promoting their participation in all areas and sectors, to build stronger economies, improve their quality of life and bring gender equality with an equal amount of opportunities. It is to make them independent in all aspects from thought, mind, decision, and wealth and to bring equality in society. Studies have shown that rural women help in producing around 80 percent of food in developing countries, yet they are provided only a fraction of farm of farm land and access to just

10 per cent of credit and five per cent of extension advice. In majority of the societies in the world, women have lesser power in comparison to men. They have lesser say in the major decisions at home as well as at work sector. Women are sometimes considered as 'invisible workforce. Eventually, all these affect women's ability to establish and evolve, and be a part of the progress.

With regard to their multidimensional responsibilities, it is required to empower women socially, economically and technologically to enable them to stand in society on their own with confidence. Empowerment of women is critical not only for their own welfare but also for the development of the country. On these lines, self help groups came as a boon, especially for rural women. Not only they trained rural women in various skills, but motivated them to lead a better life. A group of people working together for betterment of women drastically changed the life of women and brought a way giving them happiness and confidence.

Objective

In the present investigation, author intends to explore the presence of prevalent self help groups and frameworks in Indian societies which are particularly working for growth and improvement in lifestyle and livelihood of women. Their methods of functioning, work design and target groups have been explored and discussed.

Methodology

Data has been taken form secondary sources. The information about self help groups and their existence has been taken from various books and journals.

Discussion

Self help groups are comprehensive programme of micro-enterprises covering all forms of self-employment, organization of the rural poor women into self help groups and their capacity building, planning of activity clusters, infrastructure build up, technology, credit and marketing. It emphasizes on activity groups based on the resources and the occupational skills of the women and availability of markets in the local areas.

- **Working of Self help groups:** Self-Help Group is self-maintained, peer controlled, informal group of people with same social and financial background and having a common aim to collectively work for common purposes. Here poor people, majorly women, voluntarily come together to save whatever amount they can save conveniently out of their earnings, to mutually agree to contribute to a common fund and to lend to the members for meeting their productive and emergency needs. They have been able to effectively recycle the resources generated among the members for meeting the emergent credit needs of members of the group[2].
- **Members of Self help groups**: Self help groups are small informal association of the poor created at the grass root level for the purpose of enabling members to reap economic benefits out of mutual help solitarily and joint responsibility. Self help groups are formed voluntarily by the rural and urban poor to save and contribute to a common fund to be lent to its members as per group decision and for working together for social and economic uplift of their families and community. Self help groups are a group formed by the community women, which has specific number of members like 15 or 20. In such a group the poorest women would come together for emergency, disaster, social reasons, economic support to each other have ease of conversation, social interaction and economic interaction.

- **Requirement of Self help groups:** Self help groups have proved highly significant to make the women of below poverty line hopeful and self-reliant. They enable them to increase their income, improve their standard of living and status in society. These may act as a catalyst for bringing this section of society to the main stream. Ultimately, the nation reaps the advantages of socialism. The Government of India and various state Governments have been implementing various programmes for women upliftment. However, rural poverty and unemployment still persist in the country. The report states that male youth had an unemployment rate of 17.4 percent and 18.7 percent in rural and urban areas, while women youth had rates of 13.6 percent and 27.2 percent respectively in 2017-18.

The Ninth Plan Document (1997-2000) also laid emphasis on the participation of people in the planning process, and the promotion of self-help groups. Self-Help Group (SHG) is a homogeneous group of poor, women. This group is a voluntary one formed on areas of common interest so that they can think, organize and operate for their development[8]. A collective action of the members is ensured in self help groups. This scheme mobilizes the poor rural people especially women to form groups for mutual benefits. SHGs play a crucial role in improving the savings and credit and also in reducing poverty and social inequalities.

Objectives of SHG

- To inculcate the savings and banking habits among members.
- To secure them from financial, technical and moral strengths.
- To enable availing of loan for productive purposes.
- To gain economic prosperity through loan/credit.
- To gain from collective wisdom in organizing and managing their own finance and distributing the benefits among themselves.
- It acts as the forum for members to provide space and support to each other.
- The group may or may not be promoted by Government or non-Government institutions.

The Self help groups majorly pass through three stages of evolution such as:

- Formation of groups
- Formation of capital.
- Developmental tasks through training and imparting skills for earnings.

NABARD estimates that there are 2.2 million SHGs in India, representing 33 million members that have taken loans from banks under its linkage program to date. This does not include SHGs that have not borrowed. The SHG Banking Linkage Programme since its beginning has been predominant in certain states, showing spatial preferences especially for the southern region – Andhra-Pradesh, Tamil Nadu, Kerala, and Karnataka. These states accounted for 57% of the SHG credits linked during the financial year 2005–2006.

Benefits of SHGs

- **Social integrity –** SHGs encourages collective efforts for combating practices like dowry, alcoholism etc.
- **Gender Equity –** SHGs empowers women and inculcates leadership skill among them. Empowered women participate more actively in gram sabha and elections.
- **Improving efficiency of government schemes** and reducing corruption through social audits.
- **Changes In Consumption Pattern –** It has enabled the participating households to spend more

on education, food and health than non-client households.

- ▪ **Impact on Housing & Health –** The financial inclusion attained through SHGs has led to reduced child mortality, improved maternal health and the ability of the poor to combat disease through better nutrition, housing and health – especially among women and children.
- ▪ **Banking literacy –** It encourages and motivates its members to save and act as a conduit for formal banking services to reach them[5].

Conclusion

Self Help Groups have proved to be rewarding in the task of empowering women by indulging in income generating activities. Rise in social recognition of self, family position in society, the size of social circle and indulgement in intra family and entrepreneurial decision making. There has been a rise in self confidence, trust on available sources and independent decision making process. Self help groups could be linked to adult literacy schemes being run by government which may in turn bring about change in thought process of women. Rural women are also inspired and motivated in self help groups to start their new ventures or skill development for the jobs. They are made aware about various government and non government facilities, and available finances for starting micro and small businesses. Therefore, it may concluded in the end that self help groups play vital role in up lifting of women leading the way to their empowerment and their constant efforts prove to be achieve gainful employment as well as attaining beauty of self reliance in every sphere of life.

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Innovative use of Cinnamon (*Cinnamomumaromaticum*) powder for Development and Organoleptic Evaluation of New Food Products

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Abstract

The present study was undertaken with the objectives of evolving food products containing cinnamon powder to find out their acceptability, nutritive value standard and most acceptable cinnamon food products. Five recipes in total were evolved with four variations. Sensory evaluations of these recipes were done by selected panel of 10 judges on a 9-Point Hedonic Scale. Results showed that cinnamon products with Type B-Dark chocolates, Oats cookies, Appe, Apple Jam and Apple Pie were highly acceptable as they scored 8.10±0.57, 8.90±0.32, 8.70±0.67, 8.90±0.32, 8.70±0.48.

Key words: *Hedonic Scale, Cinnamon, organoleptic evaluation.*

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Introduction

Cassia cinnamon originates from southeastern China which is typically less expensive than *Ceylon cinnamon*. Due to the fact that *Ceylon* cinnamon is very expensive, most foods in the USA and Western Europe, including sticky buns, breads and other products use the cheaper cassia cinnamon (dried cassia bark). Cinnamon is a spice that has ancient origins and is popularly used as flavorings, as a condiment and in cooking. Cinnamon is also known to provide various medicinal benefits and includes lowering of blood cholesterol for diabetes (Ranasinghe*et al* 2016).

Thus, keeping in view this background, the present study was entitled as "Innovative use of Cinnamon (*Cinnamomumaromaticum*) powder for Development and Organoleptic Evaluation of New Food Products". Following objectives have been formulated:

1. To prepare and standardize commonly used recipes using cinnamon powder.
2. Organoleptic evaluation of prepared food products.

Methodology

The present investigation entitled "Innovative use of Cinnamon (*Cinnamomumaromaticum*)

powder for Development and Organoleptic Evaluation of New Food Products" was conducted in the Department of Foods and Nutrition, Government Home Science College, Sector 10-D, Panjab University, Chandigarh.

1. **Procurement of cinnamon**: Cinnamon sticks were procured from sector- 15 market, Chandigarh
2. **Processing of cinnamon**: The clean and healthy sticks of cinnamon were used for the preparation of cinnamon powder. They were crushed into small pieces and then ground with the help of electric grinder. Then the ground content was sieved through a mesh sieve to obtain a fine powder of cinnamon. The powdered sample was then stored in air tight container until further use for experiments.
3. **Standardization and development of cinnamon powder based food products:** A standard recipe is one in which the amount and proportion of the ingredients and method will consistently produce a high quality products. The selected recipes were cooked in the laboratory of Foods and Nutrition Department, Government Home Science College Sector 10-D, Chandigarh. After cleaning and removing inedible portion, ingredients required for each recipe were weighed on an electronic food balance.Cinnamon powder was utilized for the development of various food products (dark chocolates, oats cookies, *appe*, apple jam and apple pie) with the incorporation of cinnamon powder.
4. **Organoleptic evaluation of developed cinnamon based new food products:** Organoleptic quality or evaluation is a combination of different senses of perception which come into play for choosing and eating a food or it can be defined as a scientific discipline used to evoke, measure, analyze and interpret results of those characteristics of food as they are perceived by the senses of sight, smell, taste and touch. Therefore, the sensory qualities were evaluated by the panel of judges selected for ensuring the acceptability of the products.

Results

Results obtained during the course of investigation have been systematically presented through classified and supportive material enabling extrapolation of comprehensive outcomes. In context of the study objectives, the results have been presented under the following heads:

1. **Development of value added new food products by using cinnamon**
   Various food products were developed using cinnamon in different proportions. Perceivable sensory characteristics have always been recognized to be the deciding factor in the acceptance and enjoyment of food by masses and have an edge over other equally important nutritional and safety aspects.
2. **Organoleptic evaluation of developed cinnamonbased new food products**

Table 2.A: Mean scores of organolepticevaluations of Dark Chocolates

Types of Dark Chocolates	Appearance	Color	Texture	Flavor	Taste	Overall Acceptability
Type A (Dc::100)	6.70±0.67	7±0.94	6.50±0.85	6.80±0.92	6.80±0.92	6.70±0.67
Type B (Dc:C::100:01)	7.90±0.74	8.20±0.63	8.20±0.63	8.40±0.70	8.40±0.70	8.10±0.57

Type C (Dc:C::100:02)	7.50±0.71	7.30±0.67	7.40±0.84	7.50±0.85	7.40±0.70	7.40±0.70
Type D (Dc:C::100:03)	8±0.82	7.80±0.79	7.90±0.88	7.90±0.74	8.10±0.74	7.90±0.88
Chi –Square	13.090	10.351	15.711	14.407	16.363	15.063
Df	3	3	3	3	3	3
p-value	.004**	.016*	.001**	.002**	.001**	.002**
Dc: Dark chocolate, C: Cinnamon powder					** Significant at 1%	

Mean scores for appearance, color, texture, flavor, taste and overall acceptability and pictorial representation of dark chocolates were presented in Table 2.A.Mean scores of overall acceptability for Type B was lying in the category of "like extremely" and that of Type A was lying in the category of "like very much". Type C and Type D were lying in between the category of "like very much and like moderately" by the panelists.Mean scores for appearance, color, texture, flavor, taste and overall acceptability for Type A dark chocolate were 6.70±0.67, 7±0.94, 6.50±0.85, 6.80±0.92, 6.80±0.92 and 6.70±0.67. Type B scored 7.90±0.74, 8.20±0.63, 8.20±0.63, 8.40±0.70, 8.40±0.70 and 8.10±0.57. Type C scored 7.50±0.71, 7.30±0.67, 7.40±0.84, 7.50±0.85, 7.40±0.70 and 7.40±0.70. Type D scored 8±0.82, 7.80±0.79, 7.90±0.88, 7.90±0.74, 8.10±0.74 and 7.90±0.88 respectively. Statistical data revealed that the appearance, color, texture, flavor, taste and overall acceptability were highly significant at (p≤0.01).

Table 2.B: Mean scores of organolepticevaluations of Oats Cookies

Types of Oats Cookies	Appearance	Color	Texture	Flavor	Taste	Overall Acceptability
Type A (O::100)	7.40±1.17	7.50±1.08	7.50±0.71	7.40±0.70	7.40±0.70	7.50±0.71
Type B (O:C::100:01)	8.70±0.48	8.80±0.42	8.90±0.32	8.80±0.63	8.80±0.63	8.90±0.32
Type C (O:C::100:02)	7.30±1.42	7.60±0.97	7.50±1.08	7.40±1.17	7.30±1.16	7.40±1.17
Type D (O:C::100:03)	6.60±1.58	6.50±1.72	6.40±1.65	6.30±1.49	6.30±1.49	6.40±1.65
Chi –Square	11.952	14.640	18.136	17.483	17.417	17.884
Df	3	3	3	3	3	3
p-value	.008**	.002**	.001**	.001**	.001**	.001**

O: Oats C: Cinnamon powder ** Significant at 1%

Mean scores for appearance, color, texture, flavor, taste and overall acceptability and pictorial representation of oats cookies were presented in Table 2.B.Mean scores of overall acceptability for Type B was lying in the category of "like extremely" and that of Type A was lying in the category of "like very much". Type C and Type D were lying in between the category of "like very much and like moderately" by the panelists. Mean scores for appearance, color,

texture, flavor, taste and overall acceptability for Type A oats cookies were 7.40±1.17, 7.50±1.08, 7.50±0.71, 7.40±0.70, 7.40±0.70 and 7.50±0.71. Type B scored 8.70±0.48, 8.80±0.42, 8.90±0.32, 8.80±0.63, 8.80±0.63 and 8.90±0.32. Type C scored 7.30±1.42, 7.60±0.97, 7.50±1.08, 7.40±1.17, 7.30±1.16 and 7.40±1.17. Type D scored 6.60±1.58, 6.50±1.72, 6.40±1.65, 6.30±1.49, 6.30±1.49 and 6.40±1.65 respectively. Statistical data revealed that the appearance, color, texture, flavor, taste and overall acceptability were highly significant at (p≤0.01).

The present study was carried out with the aim to gain insight as whether recipes should be evolved using cinnamon as the basic ingredient. Five recipes with four variations in each were evolved. These standardized recipes were assessed for their sensory acceptance by incorporating different proportion of *cinnamon powder* in recipes. Recipes were very simple and easy to follow so that it can be included in the daily diets of the common people. The acceptability of these recipes was ascertained Hedonic Scale with reference to appearance, color, texture, flavor, taste and overall acceptability.

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Startup India and Sources of Funding: A Boon for the All Round Future Economic Development- Role of Multi-Disciplinary Approach

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Abstract

Startups are the new buzzword in the business world especially in the country like India. India had declared 2010-20 as the Decade of Innovation. Since India presently facing its worst economic slowdown through the years, the government of India has a measured move in the 2020 budget to bolster growth. Startup enterprises are one of the rays of hopes among other measures to achieve this. Startup initiative provides a further boost to nurture innovation existing in India. The startup initiative has managed to instill confidence in the youth, that their idea is more than just an idea with a ready opportunity to help nurture it further. The Startup India initiative revolves around 3 pillars: Simplification and Handholding, Funding Support and Incentives, and Industry – Academia Partnership and Incubation. Under its ambit, support provided by the government are self certification, startup hubs, IPR support, relaxed norms for public procurement and several Tax benefits. In Budget 2020, simplification of taxation of ESOPs has been made along with increasing the limit to Rs. 100 crore & period to 10 years for claiming 100% profit linked tax deduction thereby encouraging incorporation of more startups to create jobs & incentivizing/attract good talent/ skilled talent. Further funding support is also provided through SIDBI managed Fund of fund along with education support to aspiring entrepreneurs by way of provision of support infrastructure through establishment / up gradation of new/ old incubation centers. From an investors side there are 6 phases of investment in startups as Self-funding/Bootstrapping, Friends and Family, Seed, Growth/Early Stage funding and Expansion funding. Multiple disciplines like state governments, banks and existing startups itself are playing the major role in the overall development of startup ecosystem. Budget 2020 analysis reflects that some support to rural demand is expected given the higher budgetary allocation to rural based scheme which can give a Philip to startup enterprises in rural areas.

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Introduction

Startups are the new buzzword in the business world especially in the country like India. The MOC released a notification on April 1, 2015 to define a startup as, "an entity will be identified as a startup up to 5 years, if its turnover less than or equal to Rs. 25 crores in the last five financial years." The startups should be working towards innovation, development, deployment, and

commercialization of new products, processes, or services driven by technology or intellectual property.

Since India is facing its worst economic slowdown in years, the first advance estimates for fiscal 2020 pegs GDP growth at 11 years low of 5% down from 6.1% in fiscal 2019. The government has a measured move in the 2020 budget to bolster growth. Startup enterprises are one of the rays of hopes to achieve this. PM has announced this initiative on India's 69th Independence Day with an aspiration to impart more "strength and inspiration to the talented young generation of India to do something new for India and humanity". In January 2016, the Startup India Action Plan was launched. This has traversed a long distance from being restricted to the digital/technology sector to growing into a wider range of sectors covering agriculture, manufacturing, education and healthcare etc; thereby spreading their wings far and wide. The initiative has managed to instill confidence in the youth, that their idea is more than just an idea with a ready opportunity. Startups led by women are being focused upon by the government as only 14% of total enterprises are owned by women in India against their share of 48.90% in population. .

Objective

- Conversion of New Ideas/innovations into a commercial venture.
- Steps for resolving the issues for development of such ventures

Development Strategy for Startup In India

The Startup India initiative revolves around 3 pillars: Simplification and Handholding, Funding Support and Incentives, and Industry – Academia Partnership and Incubation. Ambit supports provided by the government are:

Self-Certification:

Startups coming under the 36 'White Category' industries (practically non-polluting enterprises) have been exempted from environmental clearances and are permitted to self-certify for it along with under six labor laws providing no inspections for a duration of three years.

Startup India Hub: For exchanging knowledge and provide access to funding, it works as a nodal agency to aggregate the fragmented startup community, an integrated ecosystem, and reduce knowledge asymmetry. Startup India Learning Programme, a free four week online course, provides guidance to aspiring/experienced entrepreneurs to formulate business plans and approach challenges.

IPR Support: For legal assistance in filing IPR applications and speed up the process for the same, panel of facilitators pertaining to patent/ design applications/ trademark applications established to assist entrepreneurs for filing of IP applications.

Relaxed Norms: With waiving of conditions of prior experience or turnover in tendering, more startups are eligible to be a part of the tendering process especially in CPSU.

Tax Benefits: In Finance Act 2016, startups were exempted from income tax for a period of three years in a block of five years, if registered between 1st April 2016 and 31st March 2019. In the Budget 2017-18, the Governmentannounced an extension in the period of profit-linked deductions to seven years for all startups that are eligible. The introduction of a section 54EE permits the exemption of investment of LTCGs by an investor in a fund announced by the Central

Government. The amendment of section 54GB provided exemption of capital gains on sale of a residential property, if invested in the shares of a startup company. Further as per latest budget 2020, simplification of ESOP taxation has been made whereby, ESOPs of startup employees will be taxed in 1/3 cases:

Five years after exercising the option.

year in which they sell shares.

year when the employee leaves the company, whichever is earlier along with increasing turnover limit to Rs 100 cr for claiming 100% deduction of tax liability in 10 years against earlier limit of Rs 25 cr in 7 years thereby encouraging incorporation of more startups to create jobs & incentivizing/attract good talent/ skilled talent."

Funding Support And Incentives: a 'Fund of Funds' with present corpus of Rs. 10000 crore was introduced and managed by SIDBI to provide assistance to startups for educating/aspiring entrepreneurs through various stages of their entrepreneurial journey along with steps taken by government to support infrastructure through establishment / up gradation of New/old incubation centers.

Sources of Funding for startup enterprises in India

From an investor's side there are 6 phases of investment as under:

1. **Self-funding/Bootstrapping:** It is the first phase of the entire investment process where a founder invests his/her money to begin the startup journey. He/She introduces the initial startup investment from his own funds/savings.. However, a HNI can be expected to put in much more money which demonstrates additional commitment on the part of the entrepreneur to other outside investors (including Angel Investors) from whom the money can be raised at a later stage.

2. **Friends and Family:** Here the founder reaches to people from friends and family and asks them to put a portion if not all of their life savings in the business idea. The founder needs to be very honest with them about the risks of losing all of their investments in case the startup business stagnates, thereby failing, so that their expectations are set clearly upfront.

3. **Seed:** This stage is the first level of raising capital outside of the most common reach of the Entrepreneur such as self funding. Usually, this round is sourced from professional, experts or seed capital investors such as Angel Investors can either individually, or in group comprising small individual angel investors. Since Angel Investors in most cases having their own businesses have experience, being a founder they can provide more than just capital like their knowledge, experience and expertise of the startup ecosystem prevailing in an economy that might provide useful insights to the Entrepreneur. Usually, the three most common traits of an Angel Investor include Wisdom, Wealth, and willingness to Work..

4. **Growth/Early Stage:** Early Stage Investing is the first round into venture capital. It is often used to scale the company's business model & often comes from larger institutional funds. Many of the famous venture funds are the commonly known early-stage investors in India. Due to sufficient funds available with them, they are best source of raising risk capital.

5. **Expansion:** Here the startup business is in growing phase. Business valuation varies wildly with having a lower stake and has a great scope for heavy negotiations. If the founder hopes to have a real chance of the company becoming a earning enterprises in the future with

an excellent chance of going public, they sometimes adopt a common practise to sell the business with gain in order to be in a win-win situation for all. Banks provide a good support for expansion if made and continue to run it. Budget also 2020 proposed to finance MSME by banks the sub ordinate debts as quasi equity.

Role of Multi Disciplines in the development of startup ecosystem

1. Women led startup are specially given 6 marks in state ranking system. Hence role of home science education is more important in encouraging women led startup especially in food & processing sector where adequate potential exists. Some of the states are extending special incentives to promote the women led startup enterprises like in J&K and Uttarkhand etc

2. Banks are playing a major role in providing funding support to startup enterprises by providing easy finance under the government Startup India scheme. Startup enterprises on AI and digitization has given a boost to startups in manufacturing sector leading there to complementarily of development among startup enterprises showing a lot of a future potential to new entrepreneurs.

Conclusion

India declared 2010-20 as the Decade of Innovation. Innovation is the key for startup ecosystems and results for more industrialization resulting into increase in per capita income. For building an entrepreneurial environment, the government, big corporate, educational institutions should come forward to provide a culture for startups in India. Mentor programmes, innovative essay competitions, workshops, seminars should be organized by the government and universities. From an overall viewing, India had a very high scope for growth of startup ecosystems. Budget analysis reflects that some support to rural demand is expected given the higher budgetary allocation to rural based scheme which can give a Philip to startup enterprises in rural areas.

Future Recommendation

- Special impetus by government to promotes startup in Food processing industry.
- On the lines of like MSME, delayed payment monitoring system is introduced for Startup entities to ease out their liquidity and accordingly funding requirement.

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Nurturing Entrepreneurship through Research and Development of Nutritive Energy Bar in a Higher Education Institute

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Abstract

The driving force of every successful economy in the world is entrepreneurship. Higher education institutes provide a good environment, culture, opportunities, and practices that enhance student entrepreneurship. The research whose results we are presenting was aimed at determining entrepreneurial competence. Entrepreneurial knowledge acquired by students at higher education institutions is not limited to theory; rather, it is practice-oriented and applicable for innovation and devising new business processes. The energy bar was developed to meet entrepreneurship standards, development requirements and to provide optimum nutrients. The developed bar was evaluated for its sensory attributes as well as the keeping quality so as to ensure that new venture can be initiated.

Keywords: *nurturing entrepreneurship, higher education institutes, sensory attributes, entrepreneurship standards, new venture.*

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Introduction

Stimulating innovative and growth-oriented entrepreneurship is a key economic and societal challenge to which universities and colleges have much to contribute. Entrepreneurship education has been widely recognized as influencing the establishment of new businesses. Entrepreneurship equips students with skills necessary to fit in this dynamic environment. However, as the country experiences financial and employment problems, there is a need to generate a population that will create new employment opportunities rather than relying on already established opportunities. Entrepreneurship provides knowledge that develops responsible people in the social and family life. Therefore, entrepreneurship prepares the student for a life-long learning process (Gibb, Haskins, & Robertson, 2013).

Entrepreneurial competencies is a key for a higher competitiveness, personal development and sustainable employability of an individual i.e. student. It helps in the creation, recognition and use of opportunities and introducing changes. Entrepreneurial competence makes innovation, survival and growth in a dynamic and competitive environment easier.

In today's on-the-run society, where sitting down for a meal is sometimes an impossible luxury, the emergence of nutrition bars may seem to be just what the doctor ordered. Though these pocket-sized bars once found favor primarily with serious athletes looking for a competitive edge, now anyone who feels the need for a nutritional boost may keep a few stashed in a purse or a briefcase.

Energy bars are a convenient source of nutrition and come in a wide variety of flavors to satisfy different palates. They are often fortified with vitamins and minerals, which can help fill nutritional gaps. (Lisa Drayer, 2017). Energy bars are a dietary supplement often consumed by athletes and other physically active people to maintain their calorific needs. Energy bars provide the strength and vitality for sustained physical and mental activity. It is meant to be high in carbohydrates and moderate protein content. The bars are used in sports nutrition, weight-loss programme, as quick meal or an energy supplement or as meal replacement. Grains used mainly include oat, barley, wheat, corn, rice, rye, buckwheat, triticale and millets.

Finger millet- It grown mainly for its grains and having high proteins, vitamins, minerals, fibre content and energy as better than other cereals/millet. The protein content in this millet is very close to that of wheat; both provide about 11% protein by weight.

Amaranth grain- The amaranth grain is high in minerals such as calcium, potassium, phosphorus, as well as dietary fiber. Amaranth has lysine-rich high protein grains and forms a good source of essential amino acid.

Some varieties include wheat bran flakes, milk powder, jaggery, almonds, flaxseeds and dates, cashew, pistachio, walnuts, etc.

Objectives of the Entrepreneurship Startup

To develop a new venture pertaining to nutritious energy bar using Indian whole grains that is easily available, affordable and highly nutritious.

Materials and Method

The wholegrains used were:

- Amaranth
- Finger millet (Ragi)

Finger millet, E. coracana L. is also known as ragi. It is a vital and nutrient rich food for pregnant women, lactating mothers as well as children and more importantly for more than 50 % the low income marginal people.

The product was developed by using the method of roasting for finger millets.

Amaranth, a pseudocereal, is recognized as the grain of the future and has received considerable attention in many countries because of its exceptional nutritional quality of some species that are important sources of food, as either vegetable or grain. (Srivastava, 2011).

The product was developed by using the popping method for amaranth.

Preparation of energy bar

Cold mixing of the ground ingredients with agglutinative ingredients (jaggery and dates) was accomplished by mixing them both. The mixture was taken out into a tray and sheeting was done

with the help of a rolling pin. The tray was then kept in the freezer for 1 h, de-moulded and bars weighing approximately 50±2 g were cut out with the help of moulds. Each individual bar was wrapped properly in butter paper and packed individually in required size and stored for further quality analysis in biochemistry lab of our institution.

Sensory Evaluation

Process of hedonic sensory evaluation of energy bar was learned and conducted in the higher education institute. Sensory evaluation was done by judging the quality of food by a panel of judges consisting of 3 professors and 5 students. Acceptability and organoleptic scoring of the preparation was done on the basis of the scores given by judges. The recipes were evaluated for (1) appearance (2) texture (3) taste (4) flavor (5) overall.

Result

On the basis of the sensory evaluation method that was studied and conducted, the energy bar was approved based on its overall acceptability, keeping in mind the taste, appearance, texture and flavor. The energy bar developed helped in creating an entrepreneurship startup using resources available at the higher education institute. This venture helped to recognize how important it is to invest in education, to understand the advantages provided by higher education, starting from competitiveness in the labor market to improved employability. Studying in quality higher education institute helps in developing skills required to build or initiate startup thus improving opportunities for entrepreneurship and empowerment of women.

Conclusion

Higher education institutions strive for a culture and environment that fosters initiative and helps in taking responsibility for one's own future through study programs that can create new or additional roles for the students by developing entrepreneurial competences in them like one such development is energy bar , by assuming more responsibility for the technological and economic growth.

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ABSTRACTS

Role of Society, Government and Ngo's in Women Empowerment

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Abstract

Women empowerment is a movement involving respect, honor and recognition towards all Women. Empowerment includes the action of raising the status of women through education, literacy and training. It is the duty of whole society, every citizen, government and particularly NGOs to step ahead to help the women of the country to grow. Government and NGOs play a significant and meaningful role towards promoting self-employment for women by training and skill development, fair trade & capacity building. Nowadays, Women Self Help Groups (SHGs) have been recognized as an effective strategy for the empowerment of women in rural as well as urban areas as they bring together women from all walks of life to fight for their cause. SHGs work on a variety of issues like health, nutrition, agriculture, forestry, income generation activities, seeking micro credit and so on .Since the overall empowerment of women is vitally dependent on economic empowerment, NGOs are involved in the activities to empower women- Educating and creating awareness among women especially the rural women. Supplements efforts of government in women empowerment; Promotes the use of Information and Communication Technology (ICT) for empowering women, Instils leadership qualities among women and ensures their participation in their empowerment , Represents the problems faced by rural women to the concerned authorities and carries out impact assessment of the policy decisions affecting women.

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Women Empowerment
through Skill Development

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Abstract

Skill development is not an isolated phenomenon. Skill development has to be an integral part of education. Lack of education and lack of skills is a pandemic that we need to overcome in the current scenario. According to UNESCO, women empowerment implies developing self- ingenuity among women for change and ability to learn skills the ability to make decisions of their own. It is not just saying yes or no but having a range of opinions and ability to change others perceptions. It is also having access to resources and involving in the growth process.

Education opens the door to lead a life of liberty, but skill development adds more glamour to it. Mainstreaming skills in education both in schools and colleges is the need of the hour. Educational attainment and economic involvement are the key elements in ensuring the empowerment of women. Economic empowerment develops women's capability to impact, transform or form a better nation. Even after seventy years of Independence,India's development is slow due to the lack of women's participation. Women are often invisible in the development scenario. Development process without the participation of women, who form a significant chunk of the society, will be lopsided. Education reduces inequalities, gender biases and encourages women to make a good society and to become the most active part of

the economy. Education empowers women to equip with the ability to enable them to explore the world and partake fully in the development process. This abstract attempts to study specifically the role of education in skill development and women empowerment in India.

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Enhancing Sustainability and Nurturing Start-ups through Skill Development: A Twin Pronged Practice Research Case-Study

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Abstract

Plastic has been banned by various government bodies which is a constructive step to curtail pollution. This step presented itself as an opportunity to the researcher and her team of student designers as a demand for sustainable substitute bags was generated in the market. The researcher trained a group of student designers to upcycle pre and post-consumer textile waste using techniques of patch-work, appliqué, crazy quilting etc. The team 'Baggits' received an order for sustainable conference bags from one of the prestigious departments of Panjab University, Chandigarh. As per the client's order a prototype of an eco-bag was developed which was low-cost, reversible and made with upcycled and sustainable material. The team delivered 120 conference bags within the specified time period. Within a week this team received an order for 110 conference bags from another department of Panjab University enforcing the belief that word-of-mouth and satisfied customer are the best advertising agents. Soon another team of students was trained by the 'Baggits' team to deliver 70 conference bags for another conference. Two sets of design teams achieved sustainable growth as entrepreneurs and a whole batch of budding designers was ready who had used green, eco and sustainable design to earn money while preserving the environment. A satisfying chapter of practice-led research by the researcher which was appreciated by the community of designers and faculty members from various institutions who attended these national workshops/conferences. Practice research with sustainable objectives was complete as not only were the bags an eco-statement but it was a sustainable growth effort for the team of student designers too. They were now established entrepreneurs, waiting for the next order – a commendable start-up indeed.

Key words: *Sustainable, Pre-consumer textile waste, Start-up, Conference-bags, Practice-led Research.*

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Role of Home Science in Women Empowerment

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Abstract

Women empowerment refers to making women powerful to enable them capable of deciding for themselves. Women have suffered a lot through the years at the hands of men. In earlier centuries, they were treated as almost non-existent, as if all the rights belonged to men even something as basic as voting. As the times evolved, women realized their power and then came the revolution for women empowerment. Home Science can be divided into different categories, some of the most important are-Clothing and textiles, Education and extension, Food and nutrition, Human development and Family Relations, Family Resource Management. A course in any of these fields can provide women with the opportunities of both self employment as well as wage employment. The significance of Home Science is based on the ardent desire to improve the well being of the community through every home. This can be achieved through the systematic arrangement of resources. Home Science can take a prominent role in developing good individuality and a good sense of personality in a person. Through modern scientific knowledge, an individual's potentialities can be utilized to the maximum. Home Science education has released women power to the outside world of work. It has proved that women along with being home maker, can also be a teacher, researcher, entrepreneur and administrator. Thus, it utilizes and proves the woman's potentials in every field of life.

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Students Perception on the Use of ICT in Fostering Learning and Innovation in the Field of Home Science

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Abstract

Information and communication technologies have become commonplace entities in all aspects of life and the field of education has undoubtedly affected teaching, learning and research. In a rapidly changing world, it is essential for an individual be able to access and apply information in which ICTs play a very important role. Contemporary settings are now favoring curricula that promote competency and performance enhanced by ICTs. They have the potential to accelerate, enrich, and deepen skills, to motivate and engage students and help in strengthening teaching process.. The purpose of this paper is to bring together the findings and key points from a review of significant available literature associated with role of ICTs in education. This review sets out to assess the level of awareness and perceived effect of ICT on learning outcomes and creativity in students. The dependence of students on ICTs and parent's perception on their use in studies is also seen. Strategies for judicious use of ICT in fostering learning and innovation in students are also suggested.

Role of Home Science in National Development

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Abstract

Education is viewed as an important process for national development and planned social change in any country. In the recent years, home science as an educational discipline has gained considerable importance. It has been included in all forms of education name formal, non-formal and informal. Today home science education is not limited to training good housewives or ideal mother only. It is more to train the youngsters for improved quality of life. Home science is a dynamic society like ours is ever changing phenomenon. Basic principles and objectives of Home Science are subject to change in social, professional as well as other related contexts with changing roles of women and the families in a society.

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Skilling Women:
A Step Forward Towards Empowerment

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Abstract

Skill development among women is the need of the hour for their social and financial sustainability and scalability. There are many programmes run by various organizations/institutes to teach variety of skills to women at grassroot level. One such programme is imparting 'embroidery skills' to women in numerous villages of Punjab. Many NGOs, government departments, educational institutes are involved in one way or the other way to impart skill. During these embroidery workshops, both theoretical and practical aspects are covered, which include on the job training, marketing, innovation etc. Participants are not only provided with the guidance or teaching but many a times raw material to learn as well as development of products is also undertaken. Phulkari is one such embroidered craft of Punjab which is taught to young girls in these workshops. They embroider for developing product range as hand fans, bags, folders etc. during the workshops and many a times organizations who conduct training provide orders or raw material to the trained women to prepare products for the market. They educate women artisans about financial assistance through various government organizations and banks/financial institutions. Some of the women come forward to establish themselves as entrepreneurs: either on an individual level or in a group empowering themselves on social and economic front. The present research discusses the contribution of skill development in Phulkari making towards empowering such craftswomen.

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