

CHAPTER 25

HOME SCIENCE

Doctoral Theses

289. AGGARWAL (Raina)
Youth Volunteering and Youth Development : A Study of Nehru Yova Kendra Sangathan (NYKS) Volunteers.
Supervisors : Dr. Archana Kumar and Dr. Anjali Capila
Th 22213

Contents

1. Introduction 2. Review of literature 3. Methodology 4. Findings and discussion 5. Summary, conclusion and recommendations. Bibliography and annexures

290. CHAUHAN (Kiran)
Depiction of Women's Empowerment in Selected Hindi Films (2006-2014) : An analysis.
Supervisor : Dr. Anjali Capila
Th 22214

Contents

1. Introduction 2. Review of literature 3. Methodology 4. Results and discussions 5. Summary and conclusion. Recommendations. References and appendices.

291. CHOUDHARY (Himani Gulliani)
Application of Natural Colouring and Mordanting Agents on Silk Home Textiles.
Supervisor : Dr. Seema Sekhri
Th 22217

Contents

1. Introduction 2. Review of literature 3. Methodology 4. Results and discussions 5. Summary and conclusion. Bibliography.

292. GAUR (Suchi)
Participatory Community Radio : Exploring the Institutional and Civil Society Initiatives in India, Nepal and Sri Lanka.
Supervisors : Dr. Sarita Anand and Dr. Anupa Siddhu
Th 22219

Abstract

Community Radio (CR) is often termed as a channel for voicing the voiceless, who have remained absent from the development discourses. Even so, countries from the world over have been struggling to fulfil the participatory dimension of CR in a

holistic manner. This study explored Educational Institutional and Civil Society based models behind the functioning of CRs in India, Nepal, and Sri Lanka. Findings from the case studies done on eleven (11) CRs - eight (8) in India, two (2) in Nepal and (1) in Sri Lanka - show that every CR was operating as per the government sanctions of the three countries. However, irrespective of the location and socio-political environment, they all faced challenges with respect to generating relevant and timely content, training the human resource, funding and technology upgradation, and ensuring people's participation. Even though the community members displayed interest, they found it difficult to participate in activities, owing to socio-economic, political and gender-based differences. Narratives from the programme producers highlight ways to overcome challenges in order to empower themselves and showcase the ability of CRs to act as media for the capacity building of people at the grassroots. Stories from the field also highlight their immense potential in empowering the excluded, especially women. Further, the study documents the innovative mechanisms adopted by selected Community Radio set-ups in dealing with these challenges. The research concludes that enabling policy for CR is of utmost importance to promote democratic participation and giving power to people. There are a number of lessons to be learned by the people involved in the functioning of CRs from the experiences of others. This is especially true for the new and upcoming CRs who can adopt the good practices followed by some of the successful initiatives within these three countries to improve their performance.

Contents

1. Introduction 2. Review of literature 3. Methodology 4. Findings and discussions 5. Summary, conclusion and recommendations. Bibliography and appendices.

293. GUPTA (Sonal)

Effect of Cinnamon Intervention on the Nutritional and Biochemical Profile of Patients of Metabolic Syndrome.

Supervisors : Dr. Seema Puri and Dr. Anoop Misra

Th 22221

Abstract

The study was conducted to evaluate the sociodemographic, health, lifestyle, anthropometric, biochemical, clinical, dietary and stress profile of metabolic syndrome patients and the effect of cinnamon intervention on the same. **Methods** In phase 1, information of 516 metabolic syndrome subjects (286 males and 230 females) was elicited using a structured questionnaire cum interview schedule and standard procedures were followed for determination of anthropometric, clinical and biochemical profile of the patients. In phase II, in a period of 16 week double blind randomized control trial, 60 individuals with metabolic syndrome were randomized to cinnamon [6 capsules (3g) daily] or wheat flour [6 capsules (2.5g) daily]. Similar diet and exercise protocols were followed by both groups. Results In phase I biochemical and clinical parameters were noted in abnormally high proportion in most of the metabolic syndrome patients. They were overweight or obese as indicated by higher than the normal anthropometric measurements. Buffalo hump (41.8%) and double chin (85.5%) were the most common physical phenotypic markers

present. The subjects had high fat intake whereas diet was deficient in most of the micronutrients (calcium, iron, riboflavin, niacin, folic acid and potassium). Also moderate level of stress was noted among metabolic syndrome patients. In phase II intervention of cinnamon powder (3 g) for a period of four months helped in improving the anthropometric profile, clinical and biochemical profile of the metabolic syndrome patients. A salient finding was the beneficial effect of cinnamon viz a viz an increase in HDL cholesterol and reduction in weight, waist circumference, hip circumference, waist hip ratio and diastolic blood pressure. Conclusion It is necessary for measuring metabolic syndrome components for the early detection of this abnormal condition and early intervention. Cinnamon, low cost diet based intervention would be of great significance in reducing risk of metabolic syndrome.

Contents

1. Introduction 2. Review of literature 3. Methodology 4. Results and discussion 5. Summary and conclusions. Bibliography.

294. JAIN (Ritu)
Physical Activity and Healthy Eating Among Primary School Children : Impact on Physical Fitness.
Supervisor : Dr. Seema Puri
Th 22216

Abstract

This study was conducted to determine physical activity and fitness, anthropometry, nutrition related knowledge and practices, diet and nutrition profile of primary school children in Delhi (5-11 years) studying in classes I-V at two private schools of North West Delhi. it also aimed to study the impact of a nutrition, health education and physical activity intervention on physical fitness, body composition, nutrition related knowledge and practices of these children. A structured questionnaire was administered to parents of 740 primary school children to elicit information pertaining to socio-demographic, dietary profile, physical activity pattern, nutritional knowledge and practices of the children. Anthropometric profile (height, weight, BMI, WC, WHtR, MUAC, %body fat, fat mass, FFM) was determined using standard procedures. Physical fitness assessment was done using AAHPERD Health Related Physical Fitness Test battery. Nutrient intakes determined from 24-hour dietary recall. 49% had normal BMI. majority had adequate intake of energy and other nutrients, except iron and niacin. Different modules of nutrition, health education and physical activity were developed for different classes and implemented for 4 months. Baseline and endline assessment for experimental group was done on 391 and 375 subjects respectively and in control group on 349 subjects. There was a greater increase in mean weight, height, WC, %body fat, fat mass, BMI and WHtR among control group as compared to experimental group ($p < 0.05$). For all fitness parameters, at endline the mean scores of experimental group increased significantly. A significantly greater increase in mean knowledge and practice scores was seen in experimental group. Hence, implementation of such programmes at school level would help to not only

improve the fitness and health of children but also improve wellbeing later in life by reducing the risk of lifestyle related chronic diseases.

Contents

1. Introduction 2. Review of literature 3. Methodology 4. Results and discussions 5. Summary and conclusion. Bibliography.

295. JASLEEN KAUR

Social Competence of Adolescents with Learning Disability : Role of Peers.

Supervisor : Dr. Neerja Sharma

Th 22218

Abstract

Research emanating from Western contexts has reported difficulties in social adjustment of children and adolescents with learning disability, particularly with reference to peer relations. However, there is dearth of research work in this area in India. The present exploratory research was undertaken to understand the social profiles of adolescents identified to have learning disability, with emphasis on the role of peers. The objective was to study the social competence in adolescents with learning disability, their peer relations and self-concept. To achieve the objectives delineated for the study, 45 adolescents with learning disability (LD) were selected from seven private co-educational schools in Delhi. The sample of adolescents consisted of both boys and girls in the age range of 11 to 16 years. The adolescents' peers, teachers and parents were also participants in the research. The data from the informants was gathered using both qualitative and quantitative approaches. It was found that most of the adolescents had deficits in social competence with respect to their relationships with peers and teachers. This seemed to be closely related to their difficulties in areas such as interpersonal skills, social cognitive skills, problem behaviours and task-related behaviours. Adolescents with LD had low acceptance and high rejection among their peers. The peers took into account two aspects, academic performance and their behaviour with classmates, to like or dislike the adolescents with LD. It was concluded that there is a cyclical relationship between self-concept, social competence and peer relations where each aspect has an effect on the others and is in turn influenced by them. Poor academic record sets the beginning of this cycle. There are important implications of this research for intervention at the school level.

Contents

1. Introduction 2. Method 3. Results and discussion 4. Conclusion. Reference and appendices.

296. KATARIA (Ishu)

Metabolic Syndrome and Its Risk Factors Among Business Process Outsourcing Industry Employees in the National Capital Region and Development of a Nutrition Education Program.

Supervisors : Dr. Ravinder Chadha and Dr. Renuka Pathak

Th 22549

Abstract

The aim of the present study was to map the occurrence of Metabolic Syndrome (MetS) and its risk factors among business process outsourcing (BPO) industry employees in the National Capital Region and to develop a nutrition education program for them. This cross-sectional analytical study was carried out in seven BPO companies among 415 employees (274 males; 141 females) working at the calling level. MetS was present among 11.8% employees according to the Adult Treatment Pattern III criteria (14.6% males; 6.4% females) and 18.3% according to International Diabetes Federation criteria (22.3% males; 10.6% females); and was significantly higher in males compared to females ($p < 0.05$). It was significantly associated with being single, having monthly income more than 20,000 INR, having waist to height ratio ≥ 0.5 , BMI $\geq 23 \text{ kg/m}^2$, positive family history, alcohol consumption, current and daily tobacco use, physical inactivity during leisure time, perceived depression and certain food habits. Phase II involved development of a worksite nutrition education program for BPO employees using the ecological approach focusing on healthy eating habits and physical activity. The program was based on results from phase I, focus group discussions with BPO employees and key informant interviews with human resource, administrative and catering managers of BPO companies. It targeted three levels of the ecosystem viz. intrapersonal, social and cultural, and physical environment. A total of 20 employees from one company participated in the feasibility trial of 'Eat Healthy – Be Active' program. Feedback of the trial revealed that it was considered to be useful by all the employees as it had instilled in them the importance of healthy diet and physical activity. Since MetS is reversible at this age, there is an urgent need to initiate appropriate screening and intervention strategies so that these young adults do not fall prey to chronic diseases in the near future.

Contents

1. Introduction. 2. Review of literature. 3. Methodology. 4. Results and discussion. 5. Development of nutrition education program. 6. Summary and conclusion. References and annexures.

297. LISA LALMUANKIMI PACHUAU

Traditional Textiles and Costume of the Mizos : Lusei and Lai Tribes.

Supervisors : Dr. Ritu Mathur and Dr. Kiran Kapoor

Th 22665

Abstract

Mizoram, a state in North East India has numerous tribes of which Lusei and Lai tribes were the most prominent. Although weaving has always been apart of their culture, there is very little to review on textiles and costume. The Mizos had adopted western outfits and the traditional costume were worn very little. Hence, an urgent need for documentation was felt. Information was obtained from primary and secondary sources. Traditional and contemporised textiles and costume were subjected to detailed fabric analysis. Their socio-cultural significance was explored and

documented. Weaving of traditional and contemporary textiles was also studied. The awareness about the traditional textiles and costume amongst the local youth was increased by organising different activities. Detailed qualitative analysis of data was carried out. The first and foremost garments were made from bark of vaiza tree. Among the Lusei tribe, men wore very little, hrenpereng (loin cloth) and diar (headdress) were worn. Some of the textiles could be used only by men who had achieved high status. Among the women, hmaram was the first patterned skirt and puanchei was popular. Cawngnak, was a unisex outer garment used by Lai tribe. Lai men wore biar (loin cloth). Korsen (blouse) was worn by women with different types of hni (wrap around skirt.) Traditional textiles of Lusei tribe was woven in Thenzawl, while the Lai tribe still sourced them from Hakha (Myanmar). Awareness about traditional textiles was created by using different activities. The researcher gave the keynote address on a seminar organised by the Art and Culture Department. The group discussions also had positive response. Students showed a lot of interest in the talk shows organised in their schools. The guided tour activity at Mizoram State Museum helped the visitors to link themselves with the past. The bookmark and hand calendar designed by the researcher were supplemented during the activities.

Contents

1. Introduction. 2. Review of literature. 3. Material and methods. 4. Results and discussion. 5. Summary and conclusion. Bibliography and appendices

298. RASTOGI (Akanksha)

Conservation of Woollen Textiles and Costumes in Museums: Approaches Towards Pest Management.

Supervisor : Dr. Simmi Bhagat

Th 22223

Abstract

Indian woolen textiles narrate the history, culture and tradition of the past. India's often-severe climate is not ideal for preservation and with wool pest infestation becomes biggest problem. Ill effects of pesticides are well known to world. Indian museums and households have traditionally used plant materials to avoid wool pests. But their scientific efficiency in field of conservation is very limited. The present study makes an effort to document the different conservation practices followed for woolens in various museums as well as explore selected plant products for their possible use in wool conservation. The first phase documented different interventive and preventive conservation techniques used while conserving woolen textiles and costumes with focus on pest management practices. British museums hold magnificent Indian woolen textiles; therefore along with Indian museums, British museums were also selected. It was discovered that museums in Britain use various pesticide free techniques and strictly follow IPM. Museums in India lacked organized approach also pesticide free treatment options were not available. In second phase neem, black pepper, azadirachtin and piperine were tested against furniture carpet beetle and webbing clothes moth. This experiments were based on a standard AATCC test method 24-20004 'Insect, Resistance of Textiles to'. The data generated from the

experimentation clearly indicated the significance of selected plant materials in controlling pest damage for woollen artifacts. 15g neem leaf, 10g black pepper, 0.3% azadirachtin and 2g piperine were found to be efficient. Neem leaf, black pepper and piperine were efficient for 3 months and Azadirachtin pouches up to one month. Placing pouches on four sides of the box was found to be most effective. In last phase of the research pesticide free protocols were developed in form of an information booklet and workshop was conducted to disseminate findings amongst the conservation community .

Contents

1. Introduction 2. Review of literature 3. Materials and Methods 4. Results and discussion 5. Summary and conclusion. Bibliography and appendices.

299. SHARMA (Deepshikha)

Pigment Extraction from Fungus as a Novel Source of Textile Dye.

Supervisors : Dr. Charu Gupta and Dr. Jyoti Aggarwal

Th 22220

Abstract

There has been an increasing trend towards replacement of synthetic colourants with natural colourants because of the strong consumer demand for more natural products. Microbes like fungi produced varied pigments, the characteristic of which depends on the conditions of growth like culture, medium, pH, time, temperature as well as the dyeing variables. The present studies deals with screening and isolating pigment producing fungi and standardize its growth kinetics which can act as a potential source of textile dye. *Penicillium purpurogenum* screened out in this study can produce red colourant in suitable medium and can produce colour on wool and silk in unmordanted state, have good to excellent rub, wash and perspiration fastness properties. The optimized fermentation conditions for *Penicillium purpurogenum* on Potato dextrose medium was at pH value of 5, and 28⁰C temperature giving an optical density of 1.395. The tests for identification of dye confirmed that dye was acid class of dye. The dye has strong affinity for wool fabric but no affinity for cellulosic and synthetics. The pigment stability test revealed that pigment was not stable toward varying pH range however; it was stable towards temperature variations. Optimization of dyeing variables revealed that the dye ability was higher at pH value of 4 at temperature of 90⁰C for 60 minutes dyeing for wool fabric and pH value of 4 at temperature of 85⁰C for 45 minutes dyeing for silk fabric. Langmuir adsorption mechanism was predominant for this dye-fibre system. The nature of adsorption of the dye was similar to adsorption of typical acid class of dyes. The colourant has inherent characteristics like enzymes presence which was improving the fabric surface and better dye penetration, also the exhausted dye liquor was free of fungal spores and was invulnerable.

Contents

1. Introduction 2. Review of literature 3. Materials and Methods 4. Results and discussion 5. Summary and conclusions. References and appendices.

300. SHARMA (Garima)
Children's Right to Elementary Education : Transaction of the Right to Education Act in Himachal Pradesh.
Supervisor : Dr. Priti Joshi
Th 22348

Abstract

Objectives of the study entailed analysing situation of primary education in Himachal Pradesh (HP) in context of the Right to Education (RTE) Act (2009), exploring facets of operationalization of the Act and delineating factors that support an effective implementation of the legislation. The study was qualitative in nature and ethnographic methods were used over a period of two academic years (phase I: 2011-12; phase II 2012-13). 74 adult participants were selected from 30 institutions that existed at five levels of the education system. Twelve schools spread across three districts (Shimla, Kinnaur and Hamirpur) were the focus of the study. Districts were selected based on their literacy rates, population characteristics, geographical zones and languages spoken. Comparative analyses were done and transitions on teachers performance were mapped using the Advancement of Educational Performance through Teachers' Support (ADEPTS) Framework. The findings highlighted that HP offered strong foundations for implementation of the Act, owing to its policy commitment backed by appropriate budgets. The 38 steps identified in the course of operationalization of the RTE Act were clubbed under five strategic categories namely (i) governance reforms; (ii) establishment of institutions; (iii) quality related components; (iv) training and capacity development; and (v) monitoring mechanisms. Seven teachers were able to apply the principles of training in classrooms. Teachers' higher levels of performance were reflected in children's responses and overall participation. Support from sub-district level officials, encouraging school staff and availability of reading materials in the school premises were the systemic factors that contributed to better performance of teachers. Teachers were the backbone of the entire implementation process and were involved in 20 key steps like devising quality plans and writing textbooks. In terms of school-community linkages, a positive relationship was noticed between teacher's accountability towards community and their involvement in matters of school.

Contents

1. Introduction 2. Methods 3. Results and discussions 4. Conclusion. References and annexures.

301. SOOD (Radhika)
Portion Size Analysis of Mid-Day Meal Programme in National Capital Territory of Delhi.
Supervisor : Dr. Anupa Siddhu
Th 22215

Abstract

Mid-day meal (MDM) is one of the ways to ensure, children (Class I-VIII) have access to atleast one nutritious meal per day. We conducted a school based, cross-

sectional study to evaluate, the functioning of MDM scheme and portion size analysis of meal consumed by children in randomly selected schools of National Capital Territory (NCT) of Delhi. We selected 13 food service providers (FSP) and 26 schools, under the jurisdiction of Directorate of Education, NCT of Delhi, providing MDM to children from class I-VIII. We collected data for children consuming MDM (N=2,110), MDM in-charges (N=26), teachers (N=116) and mothers (N=118). Mean portion of food consumed by primary class was 214 ± 112 g/ child/ day and upper primary was 278 ± 134 g/ child/ day irrespective of the menu. Boys at all the ages consumed more food than girls ($t = 11.5$, $p = 0.001$). Factors correlated with continued MDM consumption were parents allowing child to eat MDM ($r = 0.234$, $p = 0.05$) and menu of the day ($r = 0.317$, $p = 0.01$). At FSP, amount of raw food allocated per child per day was deficient by 40%. Protein energy percent was deficit by 54.2% in primary class and 72.2% in upper primary class child /day, when calculated on raw weight basis. Portion size standardization of menu suggested, amount of food cooked as per the norms for primary and upper primary class child is more than the norms of cooked MDM served and consumed by the child. Protein estimation of MDM suggests protein requirements of children in all classes are not being met from standardized and non-standardized menu. Dietary intake of children clearly show that there is a huge gap in food group intake and nutrient intake which can be best bridged by school based MDM programme.

Contents

1. Introduction 2. Review of literature 3. Methodology 4. Results and discussion 5. Summary and conclusion. References.

302. VERMA (Lalita)

Consumption Pattern and Acceptability of Mid Day Meal Among 5-6 Year Olds : A Study in Government Schools of Delhi.

Supervisor : Dr. Anupa Siddhu

Th 22222

Abstract

This study was cross sectional, undertaken to assess the acceptability of Mid day meal program among 5-6 year children. Total 32 Delhi government schools were selected, under the jurisdiction of Directorate of Education. We collected data from 1353 subjects, 648 boys and 705 girls. Total 32 primary MDM teachers were interviewed and 10% children's mothers were interviewed. In longitudinal phase 25% data was revisited. Anthropometry was compared by WHO 2007, the prevalence of wasting was 73.1% and 68.2%, stunting rates was 70.8% and 69.1% and underweight was 38.3% and 27.8% in boys and girls. The data of 24 hour and FFQ revealed that total days nutrient intake of children was less than RDA in boys and girls. The maximum portion of MDM menu dhal rice(150gm) and the least portion (100gm) of halwa channa was consumed by the children. The highly significant differences were found in MDM portion consumed ($t=17.90$ ($p<0.001$)). Regularity of MDM consumption was 6.4%. Results on sensory evaluation shown that investigator acceptability results score were (2.10 ± 0.59 , 2.09 ± 0.46) for chole and kadhi. Sensory panel results scores were (2.25 ± 0.64 , 2.24 ± 0.62) for kadhi and chole . Chole and kadhi liked by investigator

as well as sensory panel. Multiple comparison on sensory results were $p < 0.001$. During the post visit the portion was increased. Children liked the aloo puri the most. Results on hygienic practices showed that 72% children did not wash their hands before and 45% after their meal. Perception of school initiating the young child to MDM it was revealed that 34% mothers reported that MDM is supplement while 61.3% reported MDM as substitute. MDM in charges felt MDM has positive impact on health, nutritional status, enrollment and attendance.

Contents

1. Introduction 2. Review of literature 3. Methodology 4. Results and discussion 5. Summary and conclusion. References and annexures.