

## CHAPTER 26

### HOME SCIENCE

#### Doctoral Theses

01. AMARYA (Shilpa)  
**Weight Status and Obesity related Co-Morbidities among Free Living Elderly in Delhi**  
Supervisor : Dr. Kalyani Singh and Dr. Manisha Sabharwal  
Th 23388

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

02. ARORA (Shreya)  
**Inter-generational Differences in Food Consumption Pattern of Middle Income Group Families of Urban Delhi.**  
Supervisor : Dr. Pulkit Mathur  
Th 23390

#### *Abstract (Verified)*

Food consumption patterns are changing in India and have been responsible for the increased incidence of Diet Related Non-Communicable Diseases. The present study aimed to assess the intergenerational differences in food consumption patterns in the middleincome households (n=255) of urban Delhi. Families with three generations living together (grandparents, parents and children) were selected from 15 colonies from 4 geographical zones (north, south, east and west) of Delhi. The survey included assessing food habits, physical activity (using pre-tested questionnaires), height, weight, body mass index and body fat (using bioelectrical impedance analysis) was completed by 1236 respondents. Changes in diets over the years and the factors affecting food choices were explored through focus group discussions. Nutritional quality of the most commonly consumed ready to eat, ultraprocessed foods was analyzed using the traffic light signpost nutrient profiling model. Food and nutrient intake was assessed using 24-hour recall method for 3 days on 1038 respondents. Differences were seen among three generations in their food habits, food consumption, food choices, and physical activity. Many of the participants were consuming high calorie diets with >100% adequacy for energy intake and >30% of calories as fat. About 47.9% of grandparents, 41.7% of parents and 49.2% of children were overweight-obese. Imparting nutrition education to families is important for addressing the problem of obesity and associated co-morbidities through alterations in food behavior and food environment. Media and health care professionals have the responsibility to communicate the right information to consumers. The food industry needs to develop food products which are healthier.

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03. B AHL (Deepika)  
**Screen and Identify Metabolic Syndrome Among Adolescents (12-15 years) From Private Schools in Delhi and Assessing the Impact of a Nutrition Education Program.**  
 Supervisors : Dr. Kalyani Singh and Dr. Manisha Sabharwal  
Th 23728

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1. Introduction 2. Review of Literature 3. Methodology 4. Results and Discussion 5. Summary and conclusion. References and list of published articles in journal.
04. CHOPRA ( Mansi)  
**Association of Inflammatory Markers, Cardio-Metabolic Risk Factors, Body Composition, Diet and Physical Activity with Weight Status of 13-18 Year Old Urban and rural Adolescents.**  
 Supervisors : Dr. Anupa Siddhu and Dr. Nikhil Tandon  
Th 23729

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1. Introduction 2. Review of literature 3. Methodology 4. Results and discussion 5. Summary and conclusion 6. References 7. Annexures
05. KOHLI (Aparna)  
**TG/HDL Ratio as a Risk Factor for CHD in Indian Males: Responsiveness to Interventions.**  
 Supervisor : Dr. Anupa Siddhu and Prof. K. Srinath Reddy  
Th 23387

*Abstract  
(Not verified)*

The present research examined independent and incremental effects of diet intervention on triglyceride-to-HDL cholesterol ratio (TG/HDL ratio), after meeting ethical obligations and examining the intrinsic sufficiency of other known HDL-C elevating lifestyle measures. The primary objective was to estimate the success rate of an iso-caloric prudent diet intervention in reducing participants' TG/HDL ratio to levels of <4.0. Participants were urban Indian males aged 25-44 years with baseline abnormality of TG/HDL ratio >4.0 and HDL-C <40 mg/dL. The effectiveness trial was conducted in two phases, lasting 12 weeks each. Phase-I involved advice on tobacco cessation and exercise. Phase-II involved isocaloric prudent diet advice. To measure change in diet pattern a 100-points scoring system, Diet-iPACE Score, was developed. 242 participants were initially screened. Based on baseline biochemical analysis, 105 participants were recruited for trial phase-I. 57 participants who were unresponsive to advice on tobacco cessation and exercise qualified for trial phase-II. Success(%) of exercise /tobacco cessation advice in reducing TG/HDL-ratio was estimated at 39.1 [95% CI: 29.8-48.4], and that of diet intervention at 31.6 [95% CI: 19.5-43.7]. The latter indicated a point estimate of one-third, a conservative estimate of one-fifth and best-case estimate of nearly one-half participants. Phase-I demonstrated 11.2% reduction and phase-II demonstrated 13.1% reduction in mean TG/HDL ratio. HDL-C and TC/HDL ratio showed significant improvement in both phases, and

hs-CRP and BMI recorded significant improvements in phase-II but not in phase-I. The most substantial and independent beneficial impact on TG/HDL ratio was predicted by decline in added sugar intake. For optimum and sustained benefit, the entire spectrum of diet pattern changes should be targeted. The study demonstrated independent incremental benefits of changes in diet-pattern and provided evidence in favor of all three non-pharmacological interventions. Further, it highlighted responsiveness of TG/HDL-ratio to non-pharmacological advice, thus demonstrating its importance in public health.

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1. Introduction 2. Review of literature, gaps and the research question 3. Design and methodology 4. Results and discussion 5. Summary and conclusion. References and appendices.

06. MANPREET KAUR

**Effects of Vitamin D Supplementation in Infancy on Bone and Lean Mass Growth During Childhood**

Supervisor : Dr. Geeta Trilok Kumar and Prof. Harshpal Singh Sachdev  
Th 23389

*Abstract  
(Verified)*

The long term effects of vitamin D supplementation in early infancy are unclear. Delhi Infant Vitamin D Supplementation (DIVIDS) study, a double blind randomized controlled trial established that weekly vitamin D supplementation during first 6 months of life at one RDA (200 IU/day) to term low birth weight infants (n=2079) increased weight, length and arm area at 6 months. The present study (DIVIDS-2) followed up DIVIDS children during their childhood years, aged 3-6 years to determine the long term effects of early vitamin D supplementation. Of 1489 infants who completed 6 months vitamin D supplementation in DIVIDS- 1, we followed-up 912 children in DIVIDS-2 (vitamin D arm: 446 and placebo arm: 466). Outcome measures included detailed anthropometry, body composition (deuterium dilution technique in 229 children), gross motor development, bone structure and strength (quantitative ultrasound), blood pressure and vitamin D levels. During childhood, no significant group differences were evident between vitamin D and placebo arms for some anthropometric measures (weight, height, waist- and hip-circumferences, triceps- and subscapular skinfold thickness), body composition, motor development, bone structure and strength, blood pressure and vitamin D. However, body mass index (BMI) (adjusted difference; P-value) (-0.20 kg/m<sup>2</sup>; P=0.006) and BMI Z scores (-0.18 SD; P=0.003) were significantly lower in the vitamin D arm, likely due to a combination of slightly lower weight and greater height. Also, vitamin D supplemented infants had significantly lower thigh circumference (0.34 cm; P=0.02), arm muscle area (0.32 cm<sup>2</sup>; P=0.04) and mid-upper arm circumference (0.15 cm; P=0.070). In conclusion, vitamin D supplementation in the first half of the infancy was associated with thinner children at age 3-6 years with no difference in other anthropometric measures (weight, height, waist and hip- circumferences, triceps and subscapular skinfold thickness), body composition, motor development, bone strength, blood pressure and vitamin D levels.

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1. Introduction 2. Objectives of the study 3. Review of literature 4. Methods 5. Results 6. Discussion 7. Summary and conclusion 8. Bibliography 9. Annexure

07. MUTREJA (Radhika)  
**Women's Reproductive Health Behaviour and Socio-Cultural Determinants: A Study Among Urban Poor**  
 Supervisor : Dr. Geeta katarya  
Th 23701

*Abstract*  
*(Verified)*

The present study, Women's Reproductive Health Behaviour and Socio-cultural Determinants, has been conducted amongst the urban poor in Delhi, India. The sample consisted of 150 married Hindu urban poor women between the age of 15 to 45 years in North-West, South and West Districts of Delhi. The study uses quantitative and qualitative research methods. A variety of tools such as interviews, case studies, observations, focused group discussions and free listing were used. The data was analyzed using Microsoft Excel and SPSS. This study attempts to assess the reproductive health seeking behavior and socio-cultural factors that influence the utilization of healthcare services. The conceptual framework focused on themes such as menstruation – a social phenomenon, marriage and fertility, pregnancy and role of family, Inter-spouse communication, planning for family, family dynamics and involvement of men, healthcare seeking and Intersecting behaviours such as Miscarriages, Abortions and HIV/AIDS. Cultural pressures, beliefs, values, taboos and societal norms influence women's behaviour. Women's equality is the major social change necessary at individual, family, community and institutional level. Interventions are needed, focusing on women's rights, empowerment, education and employment opportunities to create a positive impact on their lives. Peer to peer health interventions can help initiate behaviour change and enhance utilization of health services. The initiatives of involving communities in health interventions, emphasizes the need for effective partnerships between the governments and NGOs to add to the success of ongoing reproductive health programs. Also, Public-Private Partnerships can be an important means to synergise multifarious sectors to improve the effectiveness of reproductive health care services. In the future, conducting socio-cultural research on women's health and integrating it into the population policies and programmes especially amongst the underserved such as the urban poor, will lead to meeting their needs.

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1. Introduction 2. Methodology and study design 3. Socio- Economic, demographic and geographical profile 4. Menstruation: A social phenomenon 5. Marriage and fertility 6. Pregnancy: Role of family and food beliefs 7. Inter-spouse communication and planning for family 8. Health seeking behaviour 9. Reproductive health; intersecting health risks and emerging trends 10. Conclusions and recommendations. References and appendices.

08. SAILO (Ngurdingliani)  
**Television Viewing by Children in Mizoram: A Case for Educational Television**  
 Supervisor : Dr. Asha Singh  
Th 23391

*Abstract*  
*(Not Verified)*

The emergence of media technology, especially television is central to children's lives. Research supports its power to transform children's behaviour. With such propensity, television industry has been reaching the tribal areas of Mizoram and undoubtedly rooted itself in their lives. The purpose of the study was to document the socio-physical presence of television and investigate on the viewing pattern of children in Mizoram. Tools were designed to identify children's preferences for content and examine the trigger that engages their attention in four districts of Mizoram. The sample comprises 160 children; 80 early childhood children (4-7 years) and 80 middle childhood children (8-11 years). There were also 120 parents with 60 parents of younger and 60 parents of older children. 20 families with one TV were also selected. Screen responses to selected educational programmes were conducted with 40 children from 2 private schools. It

utilized eyes on screen data sheet, behavioural coding sheet, story narration and pre-post test. The quantitative and qualitative data which were obtained was analyzed using appropriate software whenever necessary. The responses of the participants were also translated and transcribed verbatim. The study revealed the extensive presence of television, the dynamics of viewing pattern and content preferences. It denoted some significant benefits of educational programme and identified the involvement of family in children's viewing. The present study indicated the immense presence of television in the lives of children in Mizoram and its influences. Exemplify the benefit of educational television and shows certain criteria which engages and triggers children's interest. It also denoted the needs for awareness amongst the Mizo people for positive use of the medium. I hope this study would benefit the Mizo people and bring educational television to a next new level.

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

09. SUNEJA (Shipra)

#### **Ecology of Care of Children by Siblings**

Supervisors : Dr. Nandita Chaudhary and Dr. Bhanunmathi Sharma

Th 23392

#### *Abstract (Not verified)*

The present study is an exploration of everyday lives of children, with a specific focus on care of children by siblings. Framed by an ecological perspective to development, sibling care was studied and documented in the natural settings of two distinct locales: Delhi and Rajasthan. The objectives of the study were: to study the perceptions of children about siblings, sibling care and schooling, to investigate adults' perceptions about sibling care, schooling and education, and to explore the interactions between school and home settings with regard to care and education. The principal unit of the study was the family. Forty families participated in the study with 20 families in each locales. A total of 170 children in the age range of 3 months to 14 years, participated in the study. An ethnographic approach was used to engage with the daily lives of the participants. Children's voices were integral to the descriptions of the cultural processes around them. Families revealed the belongingness to their ecological context through roles and relationships in their families and networks they built in the neighbourhood. Children were carers as well as companions to their siblings. They participated in activities together that also included taking care of: children, adults, animals, plants (farms) and the household. Care of siblings was ubiquitous. Children also reflected on their capabilities to take care of siblings and the instances when they did not wish to. According to the parentd, Growing up entailed developing physically, being competent and responsible with respect to one's ecology; caring for children was seen as one of the competencies. School education was seen as only one of the learning grounds for children. In conclusion, it can be said that care by siblings was viewed on a spectrum with a kaleidoscopic expanse that included caring as well as non-caring behaviours.

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1. Play: a child's endearing quality 2. Interplay of ecologies of schooling and child care 3. Method 4. Socio-cultural context of child care by siblings in the different settings 5. Sibling care practices and children's perception of sibling care 6. Adults perceptions on care of children by their siblings 7. Conclusions , references and appendices.