

CHAPTER 3

ANTHROPOLOGY

Doctoral Theses

01. AYASHA PARVEEN
Study on Menstrual Hygiene and other Reproductive Health Issues among Muslim Women of Delhi.
Supervisor: Prof. M. P. Sachdeva
Th 26546

Abstract

Adolescence is a critical time for girls due to menstruation-related health problems. Management of menstrual hygiene is a neglected and unspoken issue and the poor menstrual hygiene have direct effect on women's health. Menstrual hygiene is often neglected, leading to reproductive tract infections (RTIs) with drastic consequences. RTIs have severe consequences including pelvic inflammatory disease, dysmenorrhea, uterine prolapsed, infertility, cancer and female mortality. Therefore, the aim of the present research to study the menstrual hygiene and other reproductive health issues among the Muslim women of Delhi. A cross-sectional study of 502 Muslim females aged 12 to 50 in Delhi was conducted to assess menstrual hygiene and reproductive health. Data on socio-demographics, knowledge, attitudes, and practices related to menstrual hygiene, marriage, family planning, RTI awareness, and treatment seeking behavior were collected using an online survey. The mean age at menarche was 12.13(±3.39) years. Many respondents lacked pre-menarche awareness about the physiology of menstruation, and there were significant differences in reading languages and education levels of respondents and their parents. Sanitary napkins were the preferred absorbent for 49.74% of respondents, while 43.26% washed their genitalia four times a day. Majority of the respondents were unaware of RTI symptoms and causes, and religious practices were prohibited during menstruation, with significant differences in performing Istenja and Ghusl. Clothwearing women had a higher risk of RTIs compared to sanitary napkin users, especially in low socioeconomic status. The prevalence of RTIs was increased in low socioeconomic status. In conclusion, the findings highlight a lack of awareness about menstruation and suboptimal hygienic practices among Muslim women in Delhi.

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02. GRET GULSHAN
'Home' 'Hope' and Resilience: An Anthropological Study of Tibetan Culture and Identity at Mainpat (PHENDELING), Chhattisgarh.
Supervisor: Dr. Mitashree Srivastava
Th 27200

Abstract

The present study aims to understand the significance and role of Mainpat (Phendeling), India's oldest and smallest Tibetan refugee settlement, in the protection, preservation, and promotion of `Tibetan` culture and identity. The Tibetan refugees at Mainpat (Phendeling) struggle for their survival, visibility, and representation indicating their marginal yet significant presence in the `center-periphery` discourse of Tibetan diasporic culture (since 1962). The main objectives of the research include understanding the cultural history, socio-demographic aspects, space, and settlement patterns at Mainpat (Phendeling), Chhattisgarh, and attempts to explore the everyday lived realities and challenges faced by the Tibetan refugees at Mainpat (Phendeling) in post-modern times. The research is based on ethnographic fieldwork of eight months and considers pertinent secondary information obtained from the available literature, such as books, national/international journal articles, government reports, and Central Tibetan Administration's website. `Narrative & discourse analysis` has been used to bring out the voices of Tibetans and their relationship to the power dynamics that operate from the Central Tibetan Administration (CTA) to the settlement and camp level. The study's theoretical underpinnings rest upon the Foucauldian approach to `bio-politics` and `governmentality`. Findings reveal that the intertwining of religion and politics plays a crucial role in the lives of Tibetan refugees. After their arrival in Mainpat (Phendeling), Tibetans have reinstated their educational, political, and religious institutions. This has helped them foster `Tibetan-ness` and `sense of belongingness` to Tibet in a second `home` (i.e. Mainpat) far from their `homeland`. As Tibetans are recognized as `foreigners` under Indian law, they encounter various challenges related to citizenship, migration, and development issues. The Mainpat's population has declined over time as the area is in the remotest corner of the Indian state of Chhattisgarh and lacks in terms of development and employment at the local level, and Tibetans are migrating from the settlement. Despite being one of the smallest, and located in the isolated part, the `hope` and `resilience` of Tibetan refugees have helped them retain their culture and identity and help them to contribute to the larger cause of `Free Tibet`.

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03. GUPTA (Urvashi)
Biosocial and Psychological Aspects of Adolescent Health.
 Supervisor: Dr. Meenal Dhall
Th 26986

Abstract

Adolescence is a peculiarly shorter period but has a significant long-term impact on one's life as it ascertains the direction for the future as adults while simultaneously coming across and administering general wellness, social wellness, and sexual

wellness. In other words, well raised adolescents of today are healthy adults of tomorrow contributing in improving societies. Adolescence features profound changes across multiple domains constitutive of physique & physiology, cognition, emotional and behavioural attributes. Since adolescent development has implications for health and cognition throughout life, this stage of human development forms a crucial time for laying the foundations of sound health, and appropriate living patterns and behaviours. The due course impacts their feelings, thinking, decision-making and interaction with the world around. This being the backdrop, the present study strived to assess various 'bio-psycho-social' aspects impacting adolescent health. Present study has been carried out in Delhi among 1318 participants (826 boys and 492 girls). Cross-sectional study design was used for present work. Non-probability convenient, purposive sampling design had been used for data collection. Data was gathered from school-going adolescent groups belonging to 10 to 17 years of age (at the time of data collection). Investigation was conducted only after obtaining the ethical clearance certification from the Institutional Ethical Committee, Department of Anthropology, University of Delhi. Two schools from the New Delhi region of India were approached and asked for their permission to undertake data collection for the present study. Informed-written, voluntary consent was taken (in advance) from the parents of participants as the participants were minors. Therefore, only the students whose parents had voluntarily allowed them to participate were included in the study.

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04. JOYCY VUNGNEIHCHOI
Anthropological Study on Risk Factors of Cardiometabolic Diseases among Two Tribal Communities of Manipur.
 Supervisor: Prof. M.P. Sachdeva
Th 26552

Abstract

Non-communicable diseases are considered a global emergency as the mortality and morbidity rates are high. There are several contributors to this disease and among them the cardiometabolic disease is the leading cause of death globally. Also, the tribal communities of India, especially the Northeast tribals have a huge paucity in understanding the role of environment and socio-culture on cardiometabolic disease. This study attempts to bridge the gap by trying to understand the role of socio-demographic, lifestyle variables and common mental disorders on cardiometabolic risk factors. The main aim of the study was to provide an insight into the cardiometabolic risk factor among two tribal populations of Manipur, Northeast India. The present study is a cross-sectional study which is conducted among the Kuki and Paite tribal communities of Manipur. A total of 1460 participants were recruited with 730 participants each from the two communities irrespective of their sex. The study was conducted in a rural setting and the age groups ranged from 30-65 years. Data pertaining to personal identifiers, socio-demographic, lifestyle (alcohol, smoking and dietary) were recorded using interview schedules. Somatometric measurements following standard protocols were taken for height, weight, waist circumference and hip circumference from which body mass index, waist to height ratio and waist to hip ratio was calculated. Physiological measurements such as blood pressure and random blood glucose level were taken to assess hypertension and type 2 diabetes mellitus. In this present study common mental disorders (stress, anxiety and depression) were

also considered and it was assessed using standardized questionnaires- perceived stress scale for stress, generalized anxiety disorders for anxiety and patient health questionnaire-9 for depression. Data were firstly entered in microsoft excel sheets, coded and imported to SPSS software version 22 where analysis was done. The analyses performed consist of test of normality, frequency distribution, correlation, binary logistic regression. In the study $p < 0.05$ was considered to be statistically significant. The prevalence of cardiometabolic risk factors among the Kuki community are- general obesity (overweight-19.2% and obese-41.1%), high waist circumference (41.6%), high waist to hip ratio (87.5%), high waist to height ratio (87.9%), hypertension (stage-I-36.8% and stage-II-35.2%) and type 2 diabetes (5.2%). Similarly among the Paite community, the prevalence of cardiometabolic risk factors are- general obesity (overweight-18.8% and obese-31.0%), high waist circumference (37.0%), high waist to hip ratio (77.7%), high waist to height ratio (65.5%), hypertension (stage-I-39.3% and stage-II-36.8%) and type 2 diabetes (5.8%). Sex wise distribution of these cardiometabolic risk factors revealed that the prevalence of general and central obesity was higher among females than males in the studied communities but significant ($p < 0.05$) in case of central obesity. In case of hypertension, males were significantly ($p < 0.05$) more hypertensive than females in both the studied populations. Type 2 diabetes mellitus was higher among males in case of Kuki and in case of the Paite, it was higher among the females but not significant. Among the Kuki community, the studied risk factors were found to have early onset (30-39 years) but the prevalence decreased with age except for type 2 diabetes which was found to have late onset. While among the Paite community, the prevalence was found to fluctuate slightly but was persistent throughout the age group. This means that the Paite have long exposure to the risk for obesity, hypertension and type 2 diabetes mellitus related morbidity and mortality unlike the Kuki community. The association of socio-demographic (age, sex, marital status, occupation, monthly income, literacy) and lifestyle variables (alcohol, smoking and dietary habits) were found to posed a risk for the studied cardiometabolic risk factors. This study found that alcohol and smoking have a reduced risk on the studied cardiometabolic risk factors. In case of common mental disorders, the prevalence was found to be significantly higher among females than males in both the studied communities except in case of Paite perceived stress scale which is not significant. The common mental disorders were found to have more than 1-fold increased risk of high BMI in both the communities and significant only for the Paite. It was also observed that common mental disorders posed more than 1-fold significant ($p < 0.05$) increased risk of high WC in both the study groups but not significant in case of stress. Again, the studied common mental disorders were found to have more than 1-fold significant ($p < 0.05$) increased risk of developing WHR. Also, the studied common mental disorders were found to have more than 1-folds increased risk of developing high WHtR in both the studied communities. The common mental disorders were found to have more than 1-folds increased risk of developing hypertension in the Kuki and Paite groups and significant ($p < 0.05$) only for the former group. The association between common mental disorders and type 2 diabetes give reduced risk and not significant. It was also found that the studied cardiometabolic risk factors were associated as they posed an increased risk with each other.

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05. KAMBOJ (Navjot)
Infertility and Common Mental Disorders: A Cross-Sectional Study among Females of Delhi NCR.
 Supervisor: Prof. M. P. Sachdeva
Th 26547

Abstract

Infertility is a chronic struggle for couples and it affects about 10 to 12% of couples worldwide. Infertility in women can be caused by many different factors such as a damaged or blocked fallopian tube, endometriosis, PCOS, and hormonal imbalance. It may work as a painful emotional experience and cause a lot of psychological issues or mental disorders such as stress, anxiety, depression, diminished self-esteem, and reduced quality of life. Studies revealed that most infertile women were found to have higher levels of stress, anxiety, and depression and these disorders were found to be more associated with infertility as compared to other mental disorders. The association between stress and infertility has been debated for years. Recent studies highlighted if the stress is continued and prolonged in infertile women it can result in anxiety and depression. Numerous studies in literature have highlighted the relationship between psychological factors (stress, anxiety, and depression) and infertility is rather complex, multifactorial, and bidirectional. In the light of these findings, the present study has three objectives: To understand the prevalence of common mental disorders among infertile and fertile women To understand the distribution of demographic profile (socio-economic status, household composition, occupational status, family structure) reproductive trajectories and life style variables (physical activities, sleep pattern and exercise). □To understand the association of biosocial variables with common Psychological variables among infertile and fertile women. The infertile women attending gynecology OPD for treatment need to be counselled regarding reproductive trajectories mainly in terms of less bleeding during menstruation and infrequent intercourse during the fertile period. There is a need to strengthen the infrastructure to educate and eradicate the myths around infertility by providing necessary guidance and counselling to both husbands and wives and incorporating mental health screening and treatment in the routine care of infertile women in India. We should try to build an ecosystem where women are encouraged to start discussing infertility-related issues and concerns openly without any apprehensions. The results of the present study suggest that attempts by health care providers to increase patients' sense of control, optimism (within realistic limits), and social support should reduce stress.

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1. a: Introduction b: Review of literature 2. Area and people 3. Materials and methods 4. Results 5. Discussion 6. Summary and conclusion. References. Annexures. List of publications.

06. KEVINGU KHATE
Cognitive Impairment and Associated Risk Factors: A 6-Year Genetic and Epigenetic Follow-Up Study from Haryana.
 Supervisor: Dr. Naorem Kiranmala Devi
Th 26548

Abstract

Cognitive impairment (CI) is a severe loss in a person's cognitive ability that significantly affects how they operate in daily life. It might be moderate, when people start to notice a deterioration in their cognitive abilities but are still able to carry out everyday tasks, or severe, where the decline is so great that the affected person is unable to live independently. Although mild cognitive impairment (MCI) is a stage in between healthy aging-related cognitive decline and dementia, moderate to severe CI can be linked to a variety of dementias. CI is a serious global public health concern since it mostly affects elderly people and has been linked to greater rates of hospitalization, dependence, and death. In addition, as the elderly population has grown significantly over the past few decades as a result of an increase in the average human lifespan, so too has the population of people with CI. Given that there are currently no curative options for various kinds of CIs, the greater number of individuals must live dependent lives. In the past two decades, a number of genome-wide association studies (GWAS) have also been carried out in order to identify genetic markers that are associated with CIs; however, GWAS are by design hypothesis-free investigations. Studies like this are helpful in finding genetic markers, but to fully understand etiological mechanisms, hypothesis-driven studies that concentrate on particular biological pathways are needed. A number of biological processes have been postulated as potential pathways in cognitive decline, including neuroinflammation, oxidative stress, cholesterol and fatty acid metabolism, glucose energy pathways, etc. We must understand the genetic and environmental risk factors for CIs as well as how these risk factors interact with one another so as to develop effective treatments for CIs. Investigation is being done on a number of genetic risk factors (such the APOE gene polymorphism for sporadic AD) and environmental risk factors (including air pollution, aluminium, silicon, vitamin shortages, and pesticides) for CIs. Multiple risk factors that are considered to contribute to the onset and progression of CI, including low levels of vitamin B12, folate, and mutations in genes, are associated with the OMCP. All of the aforementioned elements may raise the risk of CI by interfering with OCMP's normal operation. While the effect of hyperhomocysteinemia, vitamin B12 and folate deficiency, and MTHFR gene polymorphisms in CIs has been thoroughly researched, the role of mutations pertaining to other genes (which includes MTR, MTRR, and CBS present at crucial steps of OCMP) hasn't been sufficiently addressed. Additionally, complex phenotypes like CI are driven by interactions (gene-gene and gene-environment/biochemical), rather than only the independent effects of genes and environmental factors, which makes the link between genotype and phenotype non-linear. In addition to these, longitudinal studies are far sparser globally and especially in India. Recently, studies beyond genetics in terms of epigenetic alterations have been shown to play a significant role in cognitive impairment. Although most of which are done in clinical settings and rarely among population-based community settings where this relationship is still relatively unexplored. Therefore, population-specific research on cognitive impairment is required based on these research gaps and the fact that India exhibits diversity at all levels, including ethnicity, cultural practices, dietary preferences, and socioeconomic position. Therefore, using a follow-up study design, the present study attempted to investigate the association of baseline risk factors namely obesity, hyperglycemia, dyslipidemia, hyperhomocysteinemia, micronutrient deficiencies (folate and vitamin B12), genetic mutations (*MTHFR C677T*, *MTR A2756G*, *MTRR A66G*, and *CBS 844ins68*) and global DNA hypomethylation (epigenetic mechanism) with incidence of cognitive impairment among the Jat community from Haryana.

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07. NAVEEN KUMAR

Overcoming Graft Rejection: Characterizing the Role of Donor Derived Cell Free DNA in Kidney Transplant Recipients.

Supervisor: Prof. M. P. Sachdeva

Th 26987

Abstract

The present study investigates the utility of the donor derived cell free DNA (dd-cfDNA) in assessing graft rejection among the kidney transplant recipients via evaluating the applicability of 5 selected SNP assays for distinguishing the donor cell free DNA from the plasma of kidney transplant recipient. 5 ml of blood was collected from 100 kidney transplant recipients at Sir Ganga Ram Hospital, New Delhi. Semi-structured interview schedule was also administered on the participants to understand their life post-transplant in terms of the ways of care against the fear of graft rejection. Due to several shortcomings of the existing ways of monitoring graft health and rejection, dd-cfDNA due to its non-invasive nature and deliverance of timely results with high specificity and sensitivity, was investigated as a new biomarker for kidney transplant rejection. The graft post-transplant undergoes immune attack from the recipients' body, which prompts the administration of immunosuppressive therapies to protect the graft from rejection. This immune attack damages the cells of graft which leads to the release of donor DNA into the plasma of the recipient. Genomic DNA (gDNA) and cell free DNA was isolated from the buffy coat and plasma. gDNA was genotyped using the RT-PCR displacing probes method which informed us about the allelic discrimination of the recipient. Using the digital PCR approach, cell free DNA was genotyped to detect the informative assay that distinguished between donor and recipient DNA. An informative assay detected an SNP that was homozygous in the recipient and for which the donor carried the heterologous allele either in heterozygous or in homozygous state. The dd-cfDNA was quantified and dd-cfDNA% was calculated. The results showed that the major cause for kidney transplant was hypertension followed by diabetes, kidney atrophy and others. The selected assays were able to distinguish donor DNA in 94% of the participants. Recipients having dd-cfDNA% of <5% (stable graft) had mean±SD serum creatinine of 1.25±0.48. Further recipients having dd-cfDNA% of 0.5%-1% (graft dysfunction) and >1% (rejection) had mean±SD of serum creatinine of 1.75±0.56 and 4.09±3.24 respectively. With the increase in serum creatinine the dd-cfDNA% also increased. This is the first study on India population which investigated the role of donor derived cell free DNA in assessing graft rejection among kidney transplant recipients. Further, the kidney transplant recipients understood kidney as a spare part donated as a gift of life by the donors. Lastly, the recipients were under an ethical dilemma of subjecting a healthy donor to a surgery for their own benefits.

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08. SEHRA (Loveena)

Gender and Violence in a Domestic Space: An Anthropological Reflection.

Supervisor: Prof. Manoj Kumar Singh

Th 26988

Abstract

Violence in the domestic space has been extensively researched over the years by scholars across disciplines, and yet as academicians we find it difficult to define, conceptualize and theorize domestic abuse. As the subject of analysis is family, it has been challenging to provide a holistic understanding of the phenomenon due to the various socio-cultural subjectivities involved. The epidemiology of this shadow pandemic suggests a wide range of aspects that have a social impact on the lives of the people across cultures. In this view, it becomes an obligation for anthropologists to pursue it from a multidisciplinary lens. Going back to our roots, we can see that concealed in our classic anthropological ethnographies is knowledge where domestic abuse was mentioned in the socio-cultural context as an inherent part of the lives of the people. And yet, there are very few anthropological literatures that have explored it as a central subject of concern. Feminist scholars have talked about it in terms of agency and power relations that have beautifully explained the structural functioning of social institutes such as family and marriage. Inspired from their work, this qualitative research aims to voice the concerns of the survivors in their own voice. Anthropological methods of participant and non-participant observation, fieldwork, interviews, and case studies have helped in collection of data keeping in mind the cultural ambiguities and spatial contexts that provide a differential meaning to the experiences of abuse. The study has explored different causal factors of conjugal violence, its impact on the domestic sphere, coping mechanisms of survivors to deal with it, the role of NGOs and other stakeholders in helping survivors in distress through different aids made available by the Indian domestic violence policy framework. The study corroborates that women from urban poor neighborhoods are more vulnerable to violence because of socio-economic inequalities. These inequalities are both a cause and a consequence of domestic violence. Additionally, perspectives from men respondents highlight various lacunas in the laws that demand a gender-neutral approach to domestic abuse. The study thus recommends some fundamental changes that can be employed for implementation of strategies to curb domestic abuse.

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09. SHIMRAH (Chonsing)

Musculoskeletal Disorders and their Associated Comorbidities among Farmers of Haryana: An Anthropological Study.

Supervisor: Dr. Shivani Chandel

Th 26549

Abstract

Musculoskeletal disorders (MSDs) are one of the leading contributors to disability and chronic illness worldwide. Musculoskeletal disorders are among the most common occupational diseases that cause discomfort and pain in various body parts. MSDs can lead to loss of accumulated wealth as it is one of the most expensive diseases to treat, at the global level. Every country spends millions on healthcare services. The chronic pain and disability associated with musculoskeletal disorders significantly reduce the quality of life and often result in early dependency and a sedentary lifestyle to form conglomerate with various other comorbidities such as obesity, hypertension, and weak muscular strength. The major aim of the study was to estimate the prevalence of MSDs, to understand their association with their comorbidities, and how MSDs along with their comorbidities affect the quality of life among farmers. To the best of our knowledge, this is the first study that finds the association between MSDs and associated comorbidities among farmers. The most effective method to prevent the development of chronic musculoskeletal disorders is early management of risk factors. Combined physical and mental health assessments are recommended for the surveillance of MSDs to accurately determine the level of risk for MSDs. Small improvements such as maintaining a healthy weight, and improving muscular strength (moving from the low to the middle tertile) may translate into great benefit in mortality risk reduction. Community-based awareness programs among farmers about the cost and effect of drugs and medication they consume for temporary relief are the need of the hour. A strategy should be developed in order to provide cost-effective treatment for MSDs among farmers.

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10. SINGH (Neha)
Genes and Nutrients of one Carbon Metabolic Pathway in Cognition: A Population Based Study Haryana, North India.
 Supervisor: Dr. Naorem Kiranmal Devi
Th 26989

Abstract

The prevalence of cognitive impairment (CI) and dementia are growing at an alarming rate globally, with a probable 4-6 million new dementia cases per year. Various environmental (vitamin B12, folate, homocysteine) and genetic (MTHFR, MTRR, MTR, CBS) risk factors that are linked to the One Carbon Metabolic Pathway (OCMP) are thought to play a role in the onset and progression of CI. Therefore, the major aim of the study is to study the dynamic interaction between selected gene polymorphisms and biochemical variables in cognitive impairment and cognition-specific hyperhomocysteinemia among the Jat population of Haryana. The present study has been conducted on 808 participants (334 male and 474 females; median age 52 years) belonging to the Jat community of Palwal district of Haryana. Data collection was done through the household survey method. Data on sociodemographic variables were collected from each participant using a pre-tested and modified

interview schedule. Cognitive impairment was assessed through the minimal state examination (MMSE) scale. Genotyping and biochemical analyses were performed using standard protocols. MTRR A66G gene polymorphism (with AG and AG+AA genotypes as risk genotypes), but not MTR A2756G or CBS 844INS68 polymorphisms, was found to be associated with CI in the studied population. Levels of studied biochemicals, especially vitamin B12, appear to modulate the association of MTRR A66G with CI, where normal vitamin B12 level seems to offset the additional risk posed by AG and AG+AA genotypes for CI. Large-scale promotion of locally available vitamin B12-rich food groups may help control the burden of CI in India. Hyperhomocysteinemia among individuals with different cognitive statuses may have varied aetiology. There is an urgent need to take up studies investigating the disease-specific relationship between blood biochemicals, gene mutations, and homocysteine. This will help better manage hyperhomocysteinemia among people with CI.

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11. SINHA (Shardhanjali)

Anthropological Study of the Role of Socioeconomic Status in Determining Pregnancy and Birth Outcomes.

Supervisor: Prof. P. R. Mondal
Th 26550

Abstract

The socioeconomic status (SES) has a strong association with the health status, mortality, and morbidity rate pattern of an individual and at large of a nation. Low SES is a predictor of poor accessibility and utilization of health care services. It acts as a risk factor for adverse pregnancy and birth outcomes. All three indicators of undernutrition among children i.e. underweight, stunting, and wasting, have been influenced by socioeconomic resources possessed by the family. On the basis of such evidence, it can be argued that steps for reducing health inequalities must start before birth (i.e. during pregnancy) and continue throughout life to break the link between socioeconomic disparities and poor public health. High coverage of quality health care services during pregnancy, delivery, and after birth is the key to reducing maternal and infant mortality; however, addressing socioeconomic inequalities is crucial to eliminate the root causes of health disparities. The persistence of several pregnancy outcomes can be minimized by modifying these modifiable factors. Before addressing the health complications persisting in the area, an in-depth evaluation of socioeconomic disparities is required before addressing the health complications in the area. This will enable appropriate allocation of resources and effective policy formulation. This study aims to evaluate the impact of maternal education, occupation, family income SLI and composite SES score on pregnancy and birth outcomes. The study also attempts to compare scoring and principal component

analysis methods to evaluate SLI. The present study was based on the GaRBH Cohort study conducted in Sardar Patel Medical College (SPMC) Hospital Bikaner, Rajasthan, which aimed to study variation in metabolites levels in each trimester in relation to Gestational Weight Gain (GWG), its influence on fetal growth, and newborn anthropometric traits. This study included 100 pregnant women of the age group between 18-35 years with livebirth. Participants were recruited between 12-14 weeks of gestation. Only women of anthropological origin from Rajasthan were included in this study. Only those mother-offspring pairs whose babies had been delivered between July 1st 2019 and October 15th 2020 in PBM hospitals with a birth weight ≥ 500 g and a gestational age ≥ 20 weeks were enrolled in this study. Maternal education and occupation, family income, family type, caste, religion, SLI, and composite SES score were considered as SES parameters, the impact of which was examined using linear and multivariate regression using STATA software. A total of 100 singleton mother-offspring pairs were included in the present study. The mean age of pregnant women was 33.8 ± 5.6 years at enrollment. 93% of the women were under 30 years of age. The education level of 53% of the participants ranged from primary to senior secondary education, while 17% of the participants were illiterate. The majority of women (85%) were housewives and 15% of participants were employed, including 6% who worked in unskilled and 6% in semi-skilled occupations. The monthly income of 75% of families was $> \text{Rs. } 30000$. Out of which, 17% of families earn over $\text{Rs. } 10000$. 72% were Hindu, and the remaining were Muslims. 49% of the population falls into the SC category, and 26% lies in the OBC category. Only 3% of the population belong to the ST category. The assessment of the standard of living index (SLI) of participants was based on eleven parameters considered by the National Family Health Survey.

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12. VATS (Harsh)

Role of Maternal Gestational Characteristics in Determining the Birth Weight and Size of Newborns of Bikaner, Rajasthan.

Supervisor: Prof. Mohinder Pal Sachdeva

Th 26551

Abstract

This study reveals that the birth weight and birth length of the newborns were significantly influenced by specific first-trimester maternal factors. The birth weight showed to be significantly influenced by the first-trimester maternal height, weight sitting height, hip circumference, waist circumference, total fat-free mass, chest girth (inspiration and expiration), WBC, maternal BMI and alcohol consumption. On the other hand, the birth length was significantly influenced by maternal height, sitting height, total fat free mass, smoking status and physical activity. From the obtained results, it can be inferred that early maternal factors play a crucial role in the fetus's growth and development of the fetus in-utero. The present study points to the association between multiple maternal and neonatal adverse outcomes (LBW, Preterm birth, cesarean section, Stunting and underweight) with first-trimester maternal low physical activity, High physical activity and low platelet count, while high waist circumference while low haematocrit showed a protective effect for the same. Secondly preterm birth showed no significant association with first with first-trimester maternal factors. Thirdly, cesarean section showed a significant association with first trimester high household income, tobacco consumption

through smoking higher waist circumference, low WBC and high SGOT among mothers, While being underweight showed a protective effect for the caesarean section in this study. Fourthly stunting Showed a significant association with first-trimester maternal low physical activity, High physical activity, low RBC and Low platelet count. Moreover, being underweight showed a significant association with low and high physical activity, low platelet coun, high SGPT and high SPOT.

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