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DCWC Research Bulletin

About the Document

Documentation Centre for Women and Children(DCWC), NIPCCD collects valuable research material in the area of women and children from different sources. Abstracts of these published and unpublished studies/ articles are compiled to present the vital information in a compact, encapsulated form to facilitate its users through its publication “DCWC Research Bulletin” brought out every quarter. The digital version is posted on NIPCCD website (www.nipccd.nic.in) on the slot dedicated for Documentation Centre on Women and Children for reference of readers.

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A. Research Abstracts on Child Development

CHILD WELFARE

1. Toutem, Shraddha and Singh, Vanya. (2021).
Meta-Parenting: An Indian Perspective. *International Journal of Advanced Research and Review*. Vol.6(2) : 29-38.

Introduction: Meta-Parenting is defined as “a class of evaluative parental thought concerning the child-rearing domain that typically occurs before or after parent-child interaction”. Whenever parents interact with their child, they enter this interaction with their own set of cognitions known as parental-cognitions and act positively or negatively towards their children. These cognitions act as good predictors of parenting behaviour. Parental cognition have an impact on a child, his cognition, development and parent-child communication. Meta-Parenting indicates that parents deliberately evaluate their thoughts regarding their parenting and children, which in turn leads to higher level of awareness on childrearing practices and a change in parent-child interaction. Meta-Parenting is a new concept is needs further research to explain impact of parental cognition on the child.

Objectives: To ascertain difference between male and female adolescents on Meta-Parenting; to ascertain relationship between socio-demographic profile of adolescents and Meta-Parenting.

Methodology: A cross-sectional, correlational design was used in the study to evaluate parents, both male and female parents, of adolescents aged 13-17 years going to various schools and private tuition centres in New Delhi and NCR.

Meta-Parenting Questionnaire (MPQ) with items on six domains was used as tool in the study. The data was analysed using the SPSS version 20.0.

Results: A total of 422 parents participated in the study, out of which 242 (56%) were mothers and rest were fathers. Mean scores of parent population on MPQ subscales were: assessing (M=17.45, SD= 3.531), anticipation (M=10.88, SD= 2.303), reflection (M=9.82, SD= 2.655), rumination (M=8.82, SD= 2.536) and total score (M=64.41, SD= 10.938). However, mothers scored slightly higher on the subscales assessing, anticipation, reflection, rumination, and total score whereas the fathers had scored slightly higher on the subscale problem solving of MPQ. MPQ subscale Assessing was found negatively correlated with adolescent’s class 11 ($r = -0.098, p < 0.05$), firstborn adolescents ($r = -0.096, p < 0.05$), adolescent’s aged 15 ($r = -0.107, p < 0.05$). Subscale Anticipation correlated with adolescent’s gender ($r = 0.101, p < 0.05$). Subscale objective was correlated positively with single adolescents ($r = 0.114, p < 0.05$). Subscale Rumination was found negatively correlated with Adolescent’s class 10 ($r = -0.113, p < 0.05$), Adolescents aged 15 ($r = -0.121, p < 0.05$) and it also correlated positively with Adolescent’s class 12 ($r = 0.132, p < 0.05$), and Adolescents aged 17 ($r = -0.161, p$

<0.001). MPQ subscale total score was negatively correlated with Adolescent aged 15 ($r=-0.117$, $p< 0.016$).

Conclusion: It was concluded that there was no significant difference between mothers and fathers on the Meta-parenting scale. Adolescent age, class, and birth order correlated to meta-parenting subscales.

KEYWORDS CHILD WELFARE; ADOLESCENTS; META-PARENTING.

EDUCATION

- Hirani Z Nusrat. (2021). Is 'E- Learning' a Sustainable Solution to COVID-19 Induced Education Crisis in India? *International Journal of Research and Review*. Vol.8 (3): 540–543.

Introduction: On the basis of changing demands of the industry and economy, the education system in India and world over has evolved occasionally in order to adjust with the changing needs. Likewise, in COVID-19 pandemic situation when real classes were unfeasible, education regained through E- Learning or virtual classes to at least have face to face interaction with students through different apps like Zoom, Google meet, Cisco Web Ex etc. However, the move to online learning has been unplanned-with no training, insufficient bandwidth, and little preparation.

Objectives: To understand whether 'E-learning' is a viable option in times of crises and whether it can be taken up as a permanent feature in India in the near future.

Methodology: Information was collected from secondary sources of data such as journals, reports, search engines, research papers, and other academic publications to understand the importance of online learning in pandemic and identify the key factors that hamper the concept of inclusive learning i.e. education for all.

Results: It was inferred from the data that a large section of students are devoid of required gadgets for digital education due to financial constraints. Online education allows only lecturing as a medium of demonstration which is often without discussion, debates and quizzing leading to passive learning. It was difficult to teach practical subjects in virtual learning. A teacher's body language, gestures, tone of voice, facial expressions, mood, punishment, pampering etc that all contribute in enhancing learning were found missing during digital education. Extracurricular activities, team spirit, development of a child's hidden skills, and group work were also not part of E-learning. Apart from all these hindrances, some other factors like power cuts, connectivity issues, lethargy due to being constantly in home set up, teacher's inability to make effective use of digital tools also pose a deterrent in making education totally digital.

Conclusion: The absence of human touch and environment of friends and peers and unequal distribution of sources make practical use of E-Learning a debatable issue.

KEYWORDS: EDUCATION; CHILD EDUCATION; E-LEARNING; EDUCATION CRISIS; NON-INCLUSIVE.

3. Topno Ignatius. (2021).
Self Esteem of Secondary School Tharu Students of West Champaran.
International Journal of Advanced Research (IJAR). Vol. 9 (2) 354-358.

Introduction: Self Esteem is the way individuals think and feel about themselves and how well they do things that are important to them. In children, self-esteem is shaped by what they think and feel about themselves. Many factors affect the self-esteem of children at different stages of development. Parental attitude and behavior is heavily responsible for the development of self-esteem in young children. Supportive parental behavior, including encouragement and praise for accomplishments, as well as the child's internalization of the parents' own attitudes toward success and failure, are the most powerful factors in the development of Self Esteem in early childhood. Older children are mostly influenced by their experiences outside the home, in school, and with peers, in determining their self-esteem. Schools also play a major role in building of self-esteem of the students.

Objectives: To find whether there is any significant difference between the mean scores in their Self Esteem of secondary school students among the following pairs: male and female students; private and government employee's students; less than 14 and more than 14 years students; single and nuclear family students; Std. IX and Std. X students.

Methodology: A self-constructed and validated tool on Self Esteem was applied to do the survey of secondary school Tharu students of West Champaran District of Bihar. Mean, Standard Deviation and 't' test were used for analyzing the data.

Results: The study revealed no significant difference between the mean scores of male and female Secondary School Students in their self-esteem. Similarly, no significant difference between the mean scores of Private and Government employee's students, children of single and nuclear family was found in their self-esteem. However, significant difference between the mean scores of less than 14 and above 14 years and IXth and Xth Standard secondary school students was noted in their self-esteem.

Conclusion: It is concluded from the study that self-esteem is not dependent on gender of the student, parent's job and type of family. However, self-esteem is influenced by age and class of the child.

KEYWORDS: EDUCATION; CHILD EDUCATION; CHILD HEALTH; SELF ESTEEM; SECONDARY SCHOOL; THARU STUDENTS.

4. Yadav Srishti and Khokhar, Anita. (2020). Effect of information, education, and communication activity on health literacy of obesity and physical activity among school-going adolescents in Delhi. *Indian Journal of Community and Family Medicine*. Vol. 6 (1) : 22-27.

Introduction: Health literacy is the ability to obtain, read, understand, and use health-care information to make appropriate health decisions for one's own health and family and community health and follow instructions for treatment. School is a prime platform for imparting education and interventions regarding health to promote awareness about non-communicable diseases (NCDs). Risk factors such as obesity and lack of physical activity contribute majorly to the development of NCDs which include cardiovascular diseases, cancers, chronic respiratory diseases and diabetes. Adolescence is the age when eating practices, healthy or unhealthy starts developing and these habits are maintained as they age. These habits may become risk factor for NCDs in adulthood; hence preventive intervention should start at an early age.

Objectives: To assess the health literacy of school-going adolescents regarding obesity and lack of physical activity as risk factors for lifestyle diseases and assess the improvement in their knowledge after different information, education and communication (IEC) activities in two schools..

Methodology: It was a school-based interventional study conducted in two schools in Najafgarh, New Delhi. Students of Class 6, 7, and 8 from both the schools were included in the study. A pretested semi-structured, self-administered questionnaire for baseline and post-IEC activity assessment of health literacy of risk factors like obesity and physical inactivity in lifestyle diseases was used for the study. The intervention was given with the help of posters and pamphlets. Post intervention data was collected at two weeks after the first intervention and three months after the last intervention by administering the same questionnaire. Responses were scored and categorized as satisfactory and unsatisfactory using Chi square test which was applied to compare the proportion of scores at baseline, two weeks and three months.

Results: About (64%) students in school one and (69%) students in school two were aware about the concept obesity. 79 percent of students of school one and (69%) students of school two were familiar with the minimum duration of physical activity required to prevent lifestyle diseases. Very few students of both the school knew about the concept of BMI. Effect on musculoskeletal and digestive system was known to maximum students in school one and two respectively, as the harmful effect of obesity, whereas, Stroke and irregular menses due to obesity were the least known harmful effects of obesity in school one and school two respectively. Obesity was considered as the most known effect of lack of physical activity by students of both schools, whereas, diabetes and hypertension were the least known effects of lack of physical activity among students of school one and school two respectively. Among measures to avoid obesity, taking balanced diet was response of maximum students of both the schools.

Least known measures included avoiding spicy food and avoiding eating when not hungry by school one and school two respectively. Similarly, decreased weight and decreased blood sugar were quoted as benefits of physical exercise by maximum number of students in school one and two respectively. Least known benefits included decreased blood pressure and body fat in school one and decreased stress in school two. There was a higher proportion of students with a satisfactory level of knowledge in both the schools after two weeks and three months of IEC activity, and the differences were statistically significant ($P < 0.05$).

Conclusion: IEC activities improved the level of knowledge of risk factors – obesity and physical activity among students of both the schools studied both at two weeks and three months. Hence, IEC activity in various forms may be used as one of the tools to improve health literacy regarding NCDs among school-going adolescents.

KEYWORDS: EDUCATION; HEALTH EDUCATION; CHILD HEALTH; HEALTH LITERACY; INFORMATION EDUCATION AND COMMUNICATION; OBESITY; PHYSICAL ACTIVITY; SCHOOL ADOLESCENTS

GROWTH AND DEVELOPMENT

5. Murki, Srinivas and Kallem Reddy Venkat. (2020). Growth and Neurodevelopmental Outcomes at 12 to 18 Months of Corrected Age in Preterm Infants Born Small for Gestational Age. *Indian Pediatrics*. Vol.57(4): 301–304

Introduction: Neonates who are born preterm at small for gestation age (SGA) are more vulnerable to growth and neuro developmental abnormalities as compared with neonates born at appropriate for gestation age (AGA). Preterm infants born SGA are more prone to prenatal and perinatal complications, along with lower cognitive scores and poorer growth during first years of life.

Objectives: To compare the growth and neurodevelopmental outcomes at 12 to 18 months of corrected age in preterm infants (gestation < 35 wks) born appropriate for gestation (AGA) with those born small for gestation (SGA).

Methodology: A cross sectional study was conducted over a period of 2 years from May, 2016 to May, 2018 in outpatient follow-up clinic of Fernandez hospital, Hyderabad. Though, all preterm infants (till 346/7 days of gestation) born after May, 2015 with a corrected age of 12-18 months were eligible for enrollment, however, Infants with major congenital malformations were excluded from the study. A predesigned Proforma was used to collect the antenatal, perinatal and neonatal details of enrolled infants. The growth of infants was assessed in terms of underweight, stunting, microcephaly, overweight and obesity by measuring weight, length, head circumference and mid upper arm circumference and analyzed using WHO AnthroPlus software. Developmental assessment was done by using Developmental Assessment Scale for Indian Infants (DASII). The data obtained was analyzed using software SPSS ver.20.

Results: Out of 178 infants enrolled in the study, 119 were AGA and 59 were SGA. The study revealed similar neonatal morbidities, duration of exclusive breast-feeding in infants of both the groups, and early initiation of complementary feeding in SGA infants. Comparison between SGA and AGA infants disclosed more underweight (59.3% vs. 37.8%, RR: 1.57 and CI 1.15 - 2.14) and stunted (62.7% and 30.25%, RR: 2.07 and CI 1.48-2.90) infants in the SGA group. Frequency of wasting (17.6% and 22.03% RR: 1.25 and CI 0.67-2.3), microcephaly (8.4% and 8.4%, RR: 1.0 and CI 0.36-2.81) and overweight (5.8% and 3.3% RR: 0.57 and CI 0.12-2.68) were similar in both AGA and SGA groups. Considering the birth gestation, gender, multiple pregnancy, mode of delivery and resuscitation at birth SGA independently predicted long term undernutrition (odds ratio: 2.5, 95%CI: 1.25-5) and significantly lower motor and mental developmental quotients as compared to infants of AGA group.

Conclusion: Preterm SGA infants are at an increased risk of underweight, stunting, motor and mental development delay when compared with preterm AGA infants in early childhood and need early and appropriate interventions to improve their development and growth.

Keywords: *GROWTH AND DEVELOPMENT; CHILD HEALTH; PRETERM INFANTS; SMALL FOR GESTATION AGE (SGA); APPROPRIATE FOR GESTATION AGE (AGA)*

HEALTH

6. Banerjee, Subhanil, et. al. (2020). Improved yet Unsafe: An Aquatic Paradox: The Infant Mortality in India. *Journal of Health Management. Vol. 22(3) : 466-471.*

Introduction: After the National Health Survey 3 and 4 were out, UNICEF and academicians such as Sahu et al. (2015), Arun et al. (2017) and Tripathy and Mishra (2017) analysed the data and concluded that households with better access to improved water sources have a better chance of infant survival. A theory was coined that better access to improved water sources leads to lowering the Infant Mortality Rate (IMR). However, a different analysis was proved by Banerjee et.al (2020) that with increase in better access to improved water sources, IMR tend to increase. They have made a comment based on assumptions that it might be complacency that develops with access to improved water sources that refrain the people to consider any type of water treatment before passing it to infants for drinking. Such a comment might be valid, but neither is it built upon a sound literature review nor does it stand on strong empirics.

Objectives: The study is aimed to prove the relation between better access to improved water sources and infant mortality rate.

Methodology: Data from Annual Health Survey 2010-11 was used for the purpose of study. This survey had the relevant data on two variables: access to improved water sources and treatment of water before drinking of nine high priority states of India. Data from 281 districts of these states was analysed taking both variables into consideration and correlation was assessed.

Results: From the data it was explored that the correlation between better access to improved water sources and treatment of water before drinking were negatively correlated. This implies that households having better access to improved water sources assumed it safe to drink and were not willing to treat the water before drinking. This finally validates that there might be complacency among the people having better access to improved water sources that they are not treating the water before drinking. Hence, this practice increases the IMR with better access to improved water sources.

Conclusion: Better access to improved water sources is only worthwhile if that water is treated before drinking or passing to infants. Simple treating the water, boiling, before giving it to infants would reduce the IMR to great extent.

KEYWORDS: HEALTH; CHILD HEALTH; INFANT MORTALITY RATE (IMR); WATER SOURCES; ANNUAL HEALTH SURVEY; CORRELATION.

7. Meena, Pinky. et. al. (2020).
Screen Time in Indian Children by 15-18 Months of Age. *Indian Pediatrics*.
Vol.57(11): 1033–1036.

Introduction: Other than watching television, screen exposure includes use of new digital or social media, smart phones/tablets, use of videos and computers for recreational activities, video and computer gaming, mobile phone applications, internet use etc. Children are getting introduced to screen at a very young age. American Academy of Pediatrics (AAP) has suggested only video-chatting for children less than 18 months of age. Screen exposure may have significant adverse outcomes during early phase of development leading to impaired quality of life of children such as language delay, depreciated motor skill development and delayed cognitive development.

Objectives: To determine the prevalence and practices of exposure to screen-based media in children by 15-18 months of age.

Methodology: An observational descriptive study was conducted in the Department of Pediatrics at a public hospital in Delhi, from March to August, 2019. Mothers of 370 healthy developmentally normal children (15–18 months of age) were enrolled from the immunization clinic of the hospital. A semi-structured questionnaire on one-to-one basis was administered to collect data on sociodemographic characteristics of the family and usage of screen-based media. Information was gathered regarding approximate age of initiation of screen viewing, frequency and duration of screen exposure, and related parental perceptions. Mothers' responses for their concern on their child having excessive screen time were graded on a 5-point Likert scale.

Results: In majority families (99%) Primary caretaker of toddlers was mother and 93 percent mothers were homemakers. Most of the households had one television, and in 224(68%) families television was placed in the room where child used to sleep. 361 families had smart phone, whereas, in 180 families (49.9%) both parents owned separate smart phone and access to other screen-based devices, including computer/desktop/laptop was low in respondents. All, but one, 369 (99.7%) children were exposed to screen-based media till 18 months of age, starting from as early as 2 months of age (median (IQR) age of 10 (8, 12) months). Smartphone and television were being viewed by 354 (96%) and 328 (89%) children, respectively. For 328 children (88.7%) screen time was >1 hour/day in and >2 hours/day in 209 (56.5%) children. Parents of 275 children (74.3%) supervised their screen viewing. Most (72%) parents were not concerned with their child's screen time, only 10 (2.7%) were 'very much' concerned with excess screen time of their child. 196 parents (53%) favored screen activities as helpful in stimulating learning behavior and beneficial for the toddler. According to 366 parents (95%) the most common reason to handover screen-based device to toddlers was to engage them in play activities while the caretaker was busy

and/or to console the child. 257 (69%) parents considered effect on vision and tendency of child to be involved in play rather than academic activities as main damage done by screen exposure.

Conclusion: Almost all young children seem to be extensively exposed to screen-based media by 18 months of age in the urban setting. It calls for formulation of guidelines on toddlers' screen use and their dissemination to parents.

KEYWORDS: HEALTH; CHILD HEALTH; COMPUTERS; SMART PHONE; TELEVISION; TODDLER; VIDEO GAME.

8. Karmakar, Soumen and Sarkar, Sharmila. (2020). Beneficial aspects of autism stemming from enhanced visuospatial skills: Result from a comparative study in India. *Indian Journal of Psychiatry*. Vol.62(5): 540–543.

Introduction: Autism spectrum disorder (ASD) is a neuro developmental disorder which is characterized by impairment in social interaction and communication, restrictive and repetitive behaviors, interests, and activities. However, certain positive character traits such as honesty, decisiveness and nonjudgmental behavior toward others are also present among individuals suffering from ASD. They are also reported to have excellent attention to details, which have been ascribed to their enhanced visual search skills. Effective visual search is a demanding cognitive task comprising of visual attention, scanning, processing speed, reaction time, and visual memory, utilized in everyday life

Objectives: To assess visuospatial perception skills among children with autism and compare the results with that of typically developing (TD) children in the Indian population.

Methodology: A comparative observational study was conducted between November 2018 and April 2019. Children with ASD were selected from the psychiatry outpatient department of a tertiary care hospital of eastern India, whereas the TD children were chosen from various schools of the same state after age, gender, and education matching. Normal visual acuity and normal color vision were ensured using the Snellen Chart and Ishihara Chart in both sets of children. Disjunctive visual search or feature search test, Conjunction visual search test, Inverted letter search test and Visual working memory test were given to both the groups of children and results recorded. Data from both the group were compared using statistical software.

Results: A total of 47 ASD and 47 TD children were included in the study. Children with ASD took lesser time in completing visual search tasks as compared to TD children; the differences in mean time taken by these two groups to complete the tasks were statistically significant ($P = 0.038$ for disjunctive test and 0.022 for conjunction test). This group of ASD children performed significantly faster than the TD children group ($P = 0.047$) in inverted letter search task. However, in the test for visual working memory, no significant difference was observed among the two groups. ($P = 0.181$) as TD children took slightly less time in completing the test compared to children with autism.

Conclusion: Our study showed that children with autism have enhanced visuospatial skills in the form of superior attention, scanning, reaction time, and discrimination of stimuli. This quality can be utilized in jobs for people with autism that demand a methodical approach, keen observation, and attention to details.

KEYWORDS: HEALTH; CHILD HEALTH; AUTISM SPECTRUM DISORDER; VISUAL ATTENTION; VISUAL MEMORY; VISUAL SEARCH

9. Mukhopadhyay Kanya. et..al (2020).
Cognitive, Language, and Visuomotor Abilities of Very Low Birth weight Infants at Corrected Age of Two Years. Indian Pediatrics. Vol.57(4) : 296-300

Introduction: Very low birth weight, ≤ 1250 g (VLBW) infants have significant morbidities in neonatal period, which may affect their development and increase their risk of developmental delays in childhood among all the domains of development or a particular domain. For early identification of the delays, developmental assessment of all children is an essential step. Harmful consequences can also be prevented by early identification. The Cognitive Adaptive Test/Clinical Linguistic and Auditory Milestone Scale (CAT/CLAMS) is developed for cognitive, language and visuo motor development assessment of children.

Objectives: To assess the prevalence and predictors of language and visuomotor delay in very low birth weight (≤ 1250 g) children at corrected age (CA) of 2 years.

Methodology: The study was conducted from April 2012 to April 2015. All babies born from April 16, 2012 to April 15, 2013, with birth weight ≤ 1250 g and discharged alive ($n=164$) were followed up till 2 years corrected age (CA) for language and visuomotor assessment. All children were followed at neonatal follow-up clinic of a tertiary center at CA of 40 weeks, 3 months, 6 months, 9 months, 12 months, 18 months, and 2 years. During these visits, development, neurological status, and language/visuomotor cognitive skills were assessed by Cognitive Adaptive Test/Clinical Linguistic and Auditory Milestone Scale (CAT/CLAMS). Development Quotient (DQ) was calculated. SPSS version 20 software was used for analysis of data.

Results: Out of 164 discharged VLBW infants, 126 were available for the study. At 2 years ($n=123$ CAT, 126 CLAMS), 21 children (17%) had low average score (80-89) on Cognitive adaptive test, 84 children (68.3%) had average (90-109) and 10 (8.1%) had above average score. In full scale CLAMS test 21 children (16.7%) scored low average (80-89), 68 children (54%) were average (90-109) and 19 children (15.1%) scored above average (110 or more). 19 children (15.4%) were found low average (80-89), 85 children (69.1%) were average (90-109) and only 8 children (6.5%) above average (110 or more) on Developmental Quotient. Small for gestation infants ($n=86$) have higher risk of below average DQ ($P=0.036$). Gestational age and socioeconomic status have a positive correlation with language development at 9 months and 2 years, respectively.

Conclusion: In VLBW (birth weight ≤ 1250 g) infants, the prevalence of language/visuomotor delay is high. Small for gestational age infants are at higher risk for language and visuomotor development delay at 2 years corrected age. Structured language assessment, and speech stimulation, should be a part of the routine follow up in high-risk clinics.

KEYWORDS: HEALTH; CHILD HEALTH; CLINICAL LINGUISTIC AND AUDITORY MILESTONE SCALE; COGNITIVE ADAPTIVE TEST; LANGUAGE DELAY; OUTCOME; VISUOMOTOR DELAY.

10. Kumar Ashok. et.al. (2020).

Prevalence of Non-Exclusive Breastfeeding and Associated Out-of-Pocket Expenditure on Feeding and Treatment of Morbidity Among Infants Aged 0-6 Months in an Urban Slum. *Indian Pediatrics*. Vol.57 (12): 1135-1139.

Introduction: Non-exclusive breastfeeding (NEBF) is not only the reason behind many conditions such as diarrheal disease, respiratory illness, malnutrition and mortality among infants, but it also leads to increased economic burden. Out-of-pocket expenditure (OOPE) like costs linked to non-breast milk feeding (formula feeding) and health-care utilization are higher in non-exclusively breastfed infants as compared to exclusively breastfed infants. Attempts have been made to measure actual cost difference between non-exclusively breastfed infants and exclusively breastfed infants.

Objectives: To estimate the prevalence of non-exclusive breastfeeding and quantify the out-of-pocket expenditure associated with NEBF and treatment of morbidity among infants up to six months of age.

Methodology: A community-based survey was conducted in an urban slum in East Delhi from November, 2017 to February, 2019. Sample included mother-infant dyads with the infant less than six months of age, from families residing in the area for at least six months. A semi-structured, pre-validated, pre-tested, interviewer administered schedule was used to collect the data over last one month about infant feeding and healthcare associated expenditures. The breastfeeding status assessment questions were adapted from the World Health Organization(WHO) recommendation. Independent sample t-test subsequent to bootstrapping was used to test the statistical significance of the difference in mean out of pocket expenditure between NEBF and exclusively breastfeeding (EBF) infants. The main outcome measure was non-exclusive breastfeeding rate and out of pocket expenditure associated with infant feeding and treatment of morbidity.

Results: 172 mother-infant dyads were included in the study. It was found in the study that 67 infants (38.9%) were non- exclusively breastfed. Out of these 67 infants, 28 (41.8%) were surviving on animal milk, 7 (10.5%) were given infant formula, 2 (0.3%) were fed powdered milk and juices respectably. Though, there was no statistically significant difference between the median monthly family income of the EBF and NEBF infants ($P=0.64$), however, the prevalence of morbidity and outpatient care visits was significantly higher among NEBF than EBF infants. The median (IQR) total monthly OOPE spent on non-breast milk feeding and healthcare was found to be significantly higher among NEBF infants than EBF infants [440 (80-982)vs [0 (0-290); $P<0.001$]. The median (IQR) monthly OOPE incurred on healthcare was also found to be significantly higher among NEBF infants than EBF infants [INR 140 (0-540) vs 0(0-150); $P=0.002$].

Conclusion: Non Exclusive breastfeeding is associated with two fold higher financial burden borne by the families. Hence, exclusive breastfeeding should be supported and promoted to reduce family and global economic costs.

KEYWORDS: HEALTH; CHILD HEALTH; NON-EXCLUSIVE BREASTFEEDING; OUT-OF-POCKET EXPENDITURE

11. Nambiar K. Sreepriya, Nayak, Sabitha, R Sujatha. (2020). Effect of Nurse-led Programme on Knowledge Regarding Identification of Warning Signs in Low Birth Weight Babies among Post-natal Mothers in Selected Hospitals of Mangaluru. *The Nursing Journal of India*. Vol.111 (2): 58-63.

Introduction: Baby weight below 2.5 kg at birth is considered as low birth weight (LBW) baby. India contributes 40 per cent in global burden regarding LBW babies. Out of 22 million infants born yearly, eight out of 50 are LBW babies. According to 2010-13 report, majority of infants died before they completed 28 days of life and about 48.1 per cent were LBW and premature birth. These babies are in need of more care and affection from parents and caregivers as they are more prone to many health issues. Mother is the best person to identify warning signs in LBW babies and their health status. LBW babies suffer from illness frequently during the neonatal period such as temperature instability, jaundice, breathing problem, diarrhoea and many other complications which can be easily recognized by the mother. Enhancing mother's knowledge can help in early detection and prevention of problems.

Objectives: To assess the knowledge of mothers on the identification of warning signs in LBW babies; to determine the effect of a nurse-led programme on the identification of warning signs in LBW babies among post-natal mothers; to find the association between pre-test knowledge score and selected demographic variables among post-natal mothers.

Methodology: Two hospitals in Mangaluru were selected for the study. A pre-experimental research design with pre-test and post-test was adopted for the study. 50 post-natal mothers who had delivered LBW babies were selected through purposive sampling. Knowledge of post-natal mothers regarding warning signs in LBW babies was taken as dependent variable and video teaching programme on warning signs in LBW as an independent variable. Questionnaires were used to obtain demographic characteristics and to assess knowledge of mother's on warning signs of LBW babies. Mothers were educated on identifying the warning signs in LBW babies on second day of delivery with the help of a video teaching programme.

Results: Of the selected sample, 36 percent mothers were of the age group 18-22 years, 62 percent had normal delivery. Birth weight status indicated that 76 percent of children were between 2.01- 2.49 kg and 24 percent were below 2.01 kg. It was informed that not a single mother had received information regarding the identification of warning signs in LBW babies before. During pre-test, 45 mothers (90%) had poor knowledge, 5 (10%) had average knowledge about warning signs identification in LBW babies, however, 3 mothers (6%) had good level of knowledge, 38 (76%) had average knowledge and 9 (18%) had a poor level of knowledge in post-test. The mean pre-test

knowledge score was 13.04 ± 1.97 and post-test score was 17.30 ± 2 . To find the effectiveness of video teaching programme paired “t” test was used. The obtained “t” value was -32.68 which was less than -2.042 and the p value was <0.001

Conclusion: It is concluded from the study that AV aid such as video teaching enhanced understanding of knowledge in mothers regarding identification of warning signs in low birth babies. This awareness among mothers is helpful in reducing the infant mortality rate.

KEYWORDS: HEALTH; CHILD HEALTH; WARNING SIGNS; LOW BIRTH WEIGHT BABIES; NURSE-LED PROGRAMME; VIDEO TEACHING

12. Sujatha, B and Jagatheesan, Alagesan. (2020).

Introduction: Developmental co-ordination disorder (DCD) is a hidden complex childhood disorder seen in school aged children. DCD has a developmental origin that interferes in coordination, voluntary movements in children in the absence of intellectual disability and neurological impairment

Objectives: To estimate the prevalence rate of DCD among school children between the ages 8 to 17 years, which is necessary for speculating appropriate interventions.

Methodology: A cross-sectional study was conducted in Matriculation schools at Thiruvallur district, Tamil Nadu for 3 weeks from 3-04-2019 to 24-04-2019. Convenient sampling method was used to derive sample size of 944, including 432 boys and 512 girls between the ages 8 to 17 years. The children included were regular school going children without major illness and without any musculoskeletal disorders. Diagnostic and Statistical Manual of Mental Disorders fifth edition (DSM V) was used for diagnosing DCD in children.

Results: In total 36 children (3.8%) were diagnosed with DCD, in which 14 (2.7%) were girls and 22 (5%) were boys. This signifies that male children were more affected as compared to female children. Age wise distribution showed a higher prevalence rate between the age group 9 to 14 years. The mean score of DCDQ'07 questionnaire in these children was 25.5 ± 0.89 in boys and 26.8 ± 1.67 in girls which indicates that boys can be more affected with DCD than girls. The mean and standard deviation for fine motor control was 6.2 ± 2.6 which indicates well below average; Body coordination was average with the score of 18.4 ± 0.55 ; strength and agility was 20.5 ± 2.80 which indicates an above average value; Gross motor composite being 7.56 ± 3.20 which was significantly well below average. The mean and standard deviation of the total motor composite was found to be 13.1 ± 7.32 which indicates that DCD children presented with average motor function.

Conclusion: Prevalence of DCD is found to be significantly greater which emphasizes the need of early diagnosis, and early interventional measures to bridge the gap between the parents and health care professionals of this disorder.

KEYWORDS: HEALTH; CHILD HEALTH; DEVELOPMENTAL CO-ORDINATION DISORDER; PREVALENCE; SCHOOL CHILDREN; DIAGNOSTIC AND STATISTICAL MANUAL OF MENTAL DISORDERS (DSM)

13. Toutem, Shraddha and Singh, Vanya. (2018).
Morbidity profile of orphan children in Southern India. *International Journal of Contemporary Pediatrics*. Vol.5(5) : 1947-1951.

Introduction: In orphanages children are usually deprived of parental care and, basic necessities like food, education, and medical care. This lack of parental care and denial of a secure family life, congested and often unhygienic living conditions and poor nutritional status often results into high prevalence of multiple infectious conditions and co-morbidities among institutionalized children. Various social, political and economic factors lead to increase in the number of destitute children being admitted to orphanages. Along with these adversities, children at orphanages are at risk of cognitive and socio-affective development; and Physical and sexual abuse. The efficiency and quality of these organizations can be estimated through assessment of health status of the orphan children residing there.

Objectives: To assess the morbidity status of children aged 10-16 years residing in orphanages for more than six months, and to assess the knowledge of the orphan children about signs and symptoms of common childhood morbidities and their treatment-seeking practices.

Methodology: A cross-sectional study was done among the children aged 10-16 years residing in orphanages in the city of Hyderabad from 1st August 2014 through 31st January 2015. A questionnaire was deployed to collect sociodemographic background, awareness about common morbidities and treatment seeking practices. Anthropometric examination for each participant child was also conducted and recorded by trained investigators. Data was analyzed using SPSS 21 software.

Results: A total of 100 institutionalized children from five orphanages participated in the study, of which 80 were boys and 16 girls. Study revealed that 68 boys (80%) and 11 girls (68%) had low BMI. 78 percent of children suffered from multiple morbidities which majorly included skin infection (76%), upper respiratory infection (37%), ear problems (74%), Diarrhea (26%), injuries (23%) and B-complex deficiency (21%). The mean duration of all diseases was 7±1.1 days. Children were found ignorant about diseases and their complications. For most of the diseases, self-care was established as the preferred method of treatment. It was also found in the study that treatment seeking practices was not satisfactory, either they were given medicines without prescription and in some cases by the advice of local RMPs and pharmacists. Proper hospital care was sought in a very few cases which is a concern as it increases the chance of complications among children.

Conclusion: Poor knowledge, care and prevention of common childhood morbidities were observed among South Indian institutionalized orphan children.

KEYWORDS: HEALTH; MORBIDITY; CHILD WELFARE; ORPHAN; TREATMENT SEEKING; SOUTHERN INDIA.

ICDS

14. Dixit, Priyanka and Gupta, Amrita. (2018). Impact Evaluation of Integrated Child Development Services in Rural India: Propensity Score Matching Analysis. *Creative Commons Attribution*. April-June. 1-7.

Introduction: Integrated Child Development Services (ICDS) scheme was primarily launched in India to improve nutritional status of children and pregnant and lactating women. The program aims at holistic development of children below 6 years, expectant and nursing mothers and adolescent girls through providing six services-supplementary nutrition, immunization, health check-ups, referral services, non-formal preschool education, and health education as a package through the network of Anganwadi centers (AWC). The Anganwadi workers (AWW) are responsible for providing the supplementary nutrition, non-formal preschool education, and nutrition and health education. Whereas, immunization, health check-up, and referrals are provided by the primary health care infrastructure. However, studies have shown little or at times a negative impact of ICDS program on overall child and maternal nutrition status. Government has initiated various programmes to promote institutional delivery, still one fourth of the rural women did not deliver in an institution resulting in increase in infant and maternal mortality rate.

Objectives: To estimate the impact of Integrated Child Development Services (ICDS) on the institutional delivery and on the nutritional status of children in rural India.

Methodology: Women in the age group of 15 to 49 years were selected for analysis from the National Family Health Survey-3 (2005-2006). The criteria of selection involved at least one birth during the 5 years period preceding the survey and the children who were born during this period. Propensity Score Matching (PSM) was used to eliminate bias. Two individuals with similar observable background characteristics were paired, with one receiving the benefits of ICDS programme and another one not getting it, and their outcomes were then compared. In the study, the treatment variable was taken as “during pregnancy, received any nutrition and health education from the ICDS.” The main outcome variables were “Place of delivery” and the prevalence of undernutrition in children

Results: A sample of 32,072 women was taken into account for the study. It was found that there was a (7.7%) higher chance for those women who received any nutrition and health education during pregnancy to go for institutional delivery, before matching, as compared with those who did not. After matching, it increased to (12.3%) indicating a positive impact of the ICDS services on institutional delivery. In the case of undernutrition, before matching, children who received the benefits had (1.4%) higher chance of being stunted, (6.7%) higher chances of being underweight, and (4.5%) higher chance of being wasted as compared with children who did not get the services. After matching, children who received the benefits had (0.1%) higher chance of being stunted, (5.3%) higher chances of being underweight, and (4.0%) chance of being wasted as

compared with children who did not get the services, which revealed no positive impact on children's nutritional status.

Conclusion: It is suggested that along with supplementary feeding to children below three years of age, emphasis should be put on improving environmental hygiene and child feeding practices for effective implementation of the ICDS scheme.

KEYWORDS: *ICDS; INSTITUTIONAL DELIVERY; MALNUTRITION; MATERNAL AND CHILD HEALTH; CHILD WELFARE; PROPENSITY SCORE MATCHING; SELECTION BIAS; INDIA*

15. Kumar, Neelam and Kaushik, Jyotiet (2018).
Assessment of Basic Infrastructure In Anganwadi Centres Under Integrated Child Development Services Scheme In District Rohtak of Haryana. *International Journal of Scientific Research. Vol.7(9) : 2-4.*

Introduction: Integrated Child Development Services (ICDS) Scheme was launched in order to benefit children between 0-6years, pregnant and lactating mothers and women 15-49 years of age through a package of services. An Anganwadi Centre (AWC) is the basic platform for the delivery of services to the beneficiaries. However, poor and inadequate infrastructure can pose hindrances in the delivery of ICDS scheme, can create hazards and health problems for the anganwadi children and other beneficiaries.

Objectives: To evaluate the basic infrastructure available at the AWCs.

Methodology: A cross-sectional study was conducted in the block Lakhan Majra, Rohtak, Haryana from October 2016 to September 2017. AWCs were selected by adopting simple random sampling method. A pre-validated checklist was used to assess the basic infrastructure of AWCs. The data was compiled and analyzed by using SPSS 20.0 version.

Results: A sample of 20 AWCs was selected for the study. It was observed that three fourth (75%) of AWCs were located within the village. Sign boards were displayed in six out of ten (60%)AWCs, from which only three (25%) were visible from the road. Majority, Only 9 AWCs (45%) were running in rent free government building, followed by school building 6 (30%). Seven out of ten (70%) were pucca building and rest (30%) were operating in open space. Electricity was available in less than half (45%) of sample AWCs. 12 AWCs (60%) had adequate built size, 14 (70%) had availability of separate kitchen, whereas, cooking gas was available in 16 (80%) AWCs. Separate space for storage was found in only 12 (60%) of AWCs. Majority of AWCs (75%) had tap water supply for drinking and rest (25%) had deep hand pump facility for same purpose. Toilet was available in only four out of ten (40%) AWCs, out of which only one out of ten (10%) was usable by beneficiaries.

Conclusion: Adequate infrastructure of AWCs is an important step in preventing malnutrition. The basic infrastructure is better in Haryana as compared to other states. However, the government constructed AWCs are less in Haryana as compared to other states. More AWCs should be constructed in remote as well as in rural areas of Haryana.

KEYWORDS: ICDS; ANGANWADI CENTRE; CHILD WELFARE; BASIC INFRASTRUCTURE.

16. Reddy, Kumar, Navuluri, Kranthi and Kishore Surekha. (2020). Assessment of Utilization of Integrated Child Development Services Scheme in Uttarakhand. *Indian Journal of Community Health. Vol.32(01) : 130–132*

Introduction: Integrated Child Development Services (ICDS) scheme was launched in India by Government to address issues like high infant mortality, malnourishment and poor learning outcomes among children. In Uttarakhand it has its presence among 13 districts with 105 ICDS projects in both urban and rural areas. Despite such vast coverage and implementation time, results are not satisfactory. Uttarakhand being one of the states with poor health indicators with respect to child and mother there is need to increase research on implementation of programs.

Objectives: To assess utilization of services of ICDS by beneficiaries in Uttarakhand; to assess factors affecting utilization of services of ICDS scheme.

Methodology: A community based cross sectional study was conducted from October 2018 to June 2019 in selected urban and rural areas of Uttarakhand. Total 505 households from 16 Anganwadi centers were included in the study. Interviews using a semi structured questionnaire were conducted for obtaining data on utilization of services by households and factors affecting it. Beneficiaries included pregnant and lactating mothers, children (0-6 years) adolescent girls (10-19 years), women of reproductive age group (15-45 years). To identify factors effecting utilization of services univariate analysis was done followed by binary logistic regression analysis.

Results: Supplementary nutrition service (94.5%) was reported as the most utilized service and least was immunization service (69.3%). Nutrition and health education services (88.3%), health and referral services (83.2%) and preschool education services (76.7%) were also reported as major utilized services. 61.8 percent beneficiaries preferred to send their children to private school instead of Anganwadi centre for pre-school education. Similarly, 91.7 percent beneficiaries chose sub centre for immunization service rather than Anganwadi centre. Overall utilization of ICDS services was highest among nursing mothers followed by antenatal mothers, children between 3-6 years age, children less than 3 years age, and least utilization was by adolescent girls and women of reproductive age group. 44.45 percent beneficiaries reported no advice given regarding nutrition and health education services by anganwadi worker. Area of residence, caste of beneficiaries, distance of Anganwadi centre from house, number of family members had significant independent effect on utilization of health and referral services under ICDS scheme.

Conclusion: Various factors independently affected utilization of services in Uttarakhand. Overall utilization of services is highest among lactating mothers and least among adolescent girls and women of reproductive age group.

KEYWORDS: ICDS; ANGANWADI CENTRE; UTILIZATION; CHILD HEALTH; SUPPLEMENTARY NUTRITION; PRESCHOOL EDUCATION.

NUTRITION

17. Kar, Subrata, and Sengupta, Pradip Kumar. (2018).
Role of Mid-Day-Meal In Social Inclusion In North- 24Parganas District of West Bengal. *International Education & Research Journal*. Vol.4(8) : 36-37

Introduction: The main purpose of introducing mid-day-meal programme in schools was to increase student enrollment and daily attendance of students in the school and curb the problems of malnutrition. However, its role in imparting social inclusion is a matter of research to evaluate its overall effectiveness.

Objectives: To study the effect of mid-day-meal for social inclusion through the student enrollment, total attendance and academic achievement; to determine how much influence of mid-day-meal in social inclusion, based on regularly done students health checkup; to know the perceptions of the teachers and students towards mid-day-meals a means of social inclusion; to study the perceptions of parents and cooking persons towards the essential role of mid-day-meal for social inclusion.

Methodology: For the study a descriptive survey method was used. A closed ended questionnaire with 38 questions on role of Mid- day-meal in social inclusion was used to collect the data. Parents, students and functionaries like head masters/ mistresses, assistant teachers, and, cooking persons of six schools from two blocks of North- 24 Parganas District of West Bengal were interviewed for the purpose of study.

Results: 57 percent of teachers reported that the students from general caste were not taking meal under the mid-day-meal scheme. About one-third (33%) of headmasters / headmistresses confirmed about irregularity in health check-up of the students. As per provision of mid-day-meal scheme, plates should be provided by schools, but, 1(7%) of students disclosed about bringing plates on their own from home. Due to caste barrier, 32 percent of students were found taking mid-day-meal separately from other students. 31 percent of students were not taking mid-day-meal everyday. 23 percent of Parents complained about wastage of time through mid-day-meal in school.

Conclusion: Factors like racial discrimination, prejudices and lack of proper attitude towards Mid-day meal are posing as obstacles in social inclusion through mid-day meal.

KEYWORDS: NUTRITION; MID-DAY-MEAL; CHILD WELFARE; SOCIAL INCLUSION; WEST BENGAL

B. Research Abstracts on Child Protection

CHILD ABUSE

18. Chatterjee, Satakshi. et.al.(2020).
Child Abuse: An Empirical Study Emphasizing on Child Health in Present Indian Socio-Economic Situation. *Indian Journal of Public Health Research and Development*. Vol.11(2) : 289–293.

Introduction: In low income countries children are subjected to social environment of violence, gender inequalities, health inequalities and low life expectancy leading to stress among children and child abuse, both physical and sexual. Factors like insufficient income, domestic violence, low socioeconomic status, other stresses like various socio-demographic factors, parental separation, illnesses, low maternal schooling, absence of mother's partner, parental death, maternal smoking, poor maternal mental health, unemployment, etc. make the children more vulnerable against child abuse. These factors also contribute to deprivation of children to basic amenities like nutrition, health and basic education.

Objectives: To identify the health related factors of Child Abuse in present Indian socio-economic situation.

Methodology: For the purpose of study, both primary and secondary data was used. The primary data was collected from the parents and eye-witness of the issues of child abuse. The respondents included guardians of the street children, the caregivers or caretakers of the children belonging from the low economic background, the hawkers and also from the railway stations, bus stops, market areas who had working children. Score of 0-5 was assigned for situational factors of the experienced issues. Multinomial logistic regression was used to calculate the odds ratio (OR) and their respective 95% confidence intervals (95% CI) for the associations between the factors and their score which was generated.

Results: A total of 193 respondents were included in the analysis. Five factors were taken into account to conclude the associations between the pairs of each of the factors experienced by the respondents. These were Health Related factors, Physical Abuse Related Factors, Education Related Factors, Income Related Factors and Family Related Factors. Strongest associations were noted between the Family Related Factors and Physical Abuse Related Factors. Highest positive associations were observed between Education Related factors and Health related factors and Income Related factors and Education Related factors. Negative associations could be found between Education Related factors and Health related factors and also between Educations related factors and Physical Abuse Related factors .It was concluded that a child experiencing undesirable situations due to Income Related factors were having 4.7 times

higher incidences of being affected by Education Related factors and vice versa. Income related factors had 4.3 times higher incidences of experiencing Health related factors and vice versa.

Conclusion: To curtail the incidences of child abuse, identification of factors responsible for it should be the first step of the authorities. These factors can be closely monitored to prevent such activities before they are manifested.

KEYWORDS: CHILD PROTECTION; CHILD ABUSE; INDIAN SOCIO-ECONOMIC SITUATION; ADJUSTED ODD RATIOS (OR).

Child Protection

19. Dutta, Nilika. (2018).
Street Children in India: A Study on their Access to Health and Education.
International Journal of Child, Youth and Family Studies. Vol.9(1) : 69-82.

Introduction: Global challenges like poverty, rapid urbanization, overcrowded cities, the uneven distribution of wealth, privatization, and the effects of globalization have resulted in an emerging migration of population. This in turn along with growing numbers of families are forced to confine themselves to street life. In India, with growing poverty and limited governmental support, children often serve as a source of family income. Children belonging to street dwelling families grow up to engage themselves in work from a tender age, to sustain themselves amidst the hardships of life and support the family financially. Hence, in spite of a law prohibiting child labour, there has been a rise in the number of working street children over the years.

Objectives: To study access to health and education in street children from 6 to 18 years old in the Indian metropolises of Mumbai and Kolkata; to assess the role of social work interventions in ensuring the rights of vulnerable children.

Methodology: A combination of quantitative and qualitative research methodologies was used for the study. It included 80 children who were living with or without their parents in either Kolkata or Mumbai and 20 children (girls) from a night shelter in Mumbai. A small number of social workers were also interviewed to understand their perspective on these children. Individual semi-structured interview schedules and nonparticipant observation were used to collect the data, which was further analyzed using SPSS statistical tool.

Results: Most of the children taken into study were living on pavement with their families. Though, they were enrolled in formal schooling, supported by in-house informal education by NGOs. Children were found careless about their school belongings like bag or stationery as they were getting easy replacements from NGOs. Parents were often unavailable to assist their children with school work. Children who had orphaned at a young age and had grown up without any adult supervision were found more mature and self-sufficient than their peers. The study revealed that a majority of children, especially females, had no access to educational facilities, and those who had access were found studying below the required standard. However, social intervention was creating interest in education and dreaming big especially among the girls of night shelter. 91 children were living on streets with their illiterate parents who were working as daily wage earners or domestic workers. These parents did not motivate their children for education and self-development. In spite of all these hindrances, these children too had goals and interventionists were helping in fulfilling their goals of becoming a doctor (21%), teacher (18%), police force (12%) and pilots (5%). The study revealed that most children were suffering from ailments like malaria, tuberculosis, cold and cough, water-borne diseases, and skin diseases, due to their unhygienic living conditions. Lack of adequate sanitation facilities was also posing health and social hazards for them, especially for girls. Social

interventionists were providing regular medical examination to the children. They, mostly boys, were also found victim of physical abuse by parents, bullying by elder siblings and sexual exploitation in the case of girls. Social work interventionists expressed their views on working with these children as very difficult, though it seems easy to handle them.

Conclusion: social work interventionists have positive role for impacting and altering the lives of the children. Survival of street children could be improved by understanding their socioeconomic profile and deprivations.

KEYWORDS: CHILD PROTECTION; STREET CHILDREN; CHILD RIGHTS; SOCIAL INTERVENTION; HEALTH; EDUCATION; INDIA

HEALTH

20. Kumar, H.N. et.al. (2020)
Documentation and Reporting of Perinatal Deaths in Two Districts of Karnataka, India: A Situational Analysis. *Indian Pediatrics*. Vol. 57(11) : 1006–1009.

Introduction: In Karnataka, though the Infant Mortality rate (IMR) along with perinatal mortality rate (PMR) has reduced substantially, however, the contribution of PMR to IMR has increased. The reason for perinatal deaths is never documented in India. Audit system for perinatal death can help to understand and rectify the causes for perinatal deaths. Prior to start a perinatal death audit system, a preliminary study to identify the expected issues and problems is crucial.

Objectives: To study potential problems to start of perinatal death audit.

Methodology: A descriptive study was conducted in two districts of Karnataka in the year 2015 three-year through an interventional project. All government hospitals and private hospitals which provided maternal and child health services were considered for the study. In Dakshina Kannada and Koppal districts 31 and 63 medical hospitals and health centres respectively were taken into account for the study. The parameters of perinatal care documentation system included documentation and reporting systems; and the role of health care personnel involved in perinatal care in documenting and reporting of perinatal deaths. Details of the documentation and reporting systems included presence of registries for documenting deaths, death certificates, person filling the death certificates, case sheets, person preparing the case sheets, registries for documenting data from field area covered by that government hospital, routine reporting (like weekly reports, monthly reports, nil reports), and maintenance of records in the hospitals. Pre-tested semi-structured checklists were developed to record all the components.

Results: Majority hospitals in Dakshina Kannada maintained case sheets (95.2%), but in almost the records did not have clinical information necessary to carry out the audit. Nearly all hospitals in Koppal (93.5%) did not maintain case sheets. In Koppal district, 21 private hospitals (67.7%) did not document any perinatal deaths and subsequently did not report to the authorities. Government hospitals also did not report all the neonatal deaths. Register for documenting first information report (FIR) of neonatal deaths was found maintained in Dakshina Kannada district hospital but it was missing in Koppal district hospital. In both the districts majority of the doctors were not aware of the existence of a separate death certificate for documenting perinatal deaths. Medical officers in charge of government hospitals did not pay attention to weekly or monthly reporting of neonatal deaths, still births and perinatal deaths.

Conclusion: The healthcare workers should be trained for documentation and reporting, before introducing perinatal death audits. Starting a perinatal death audit would help in knowing causes and identifying 'preventable' perinatal deaths.

KEYWORDS: HEALTH; CHILD HEALTH; CHILD PROTECTION; PERINATAL DEATHS; DOCUMENTATION

C. Research Abstracts on Women and Gender Issues

CRIME AGAINST WOMEN

21. Rathi, Akanksha. et.al. (2019).

Sexual assault and associated factors among the cases reported in a tertiary care hospital of Delhi. *The National Medical Journal of India*. Vol.32(6) : 344–346.

Introduction: According to the National Crime Records Bureau data majority of alleged offenders of sexual assault are known to the victims and usually include friends and family members. Hence, Sexual assault is still an under reported and under-researched crime worldwide. The number of cases of sexual assault that are reported and medical care given is just the tip of the iceberg.

Objectives: To understand certain characteristics of the offenders and victims, circumstances of the sexual assault and factors associated with a delay in reporting the crime of sexual assault.

Methodology: The study was conducted in the Department of Forensic Medicine of a tertiary care hospital of New Delhi from 1 January 2014 to 31 December 2016. A retrospective analysis of forensic examination reports of alleged sexual offenders presented by the police was done. As these were medico-legal cases, strict confidentiality was maintained regarding information related to the victims and offenders. A value of $p < 0.05$ was considered statistically significant.

Results: A total of 312 case reports were screened for the purpose of the study. All 312 (100%) alleged offenders were males and majority (92.9%) were adults. Among the victims, majority (97.4%) were females and more than one-third (37.2%) were minors. The day of assault and reporting time was mentioned only in 213 cases. It was observed from case studies that sexual assaults with minors were committed more during the latter half of the week, while on rest of the days the cases against adults were reported more. In reports of only 73 cases the time of offense was mentioned. Nearly six out of ten (60.3%) cases occurred during daytime. 17.3 percent of alleged offenders had committed repeated assaults.

It was noticed that only (35.7%) of cases were reported within 24 hours of the crime. The adult victims (69.4%) reported later than 24 hours as compared to minors (55.7%). From all the reported cases, majority (92%) offenders were known to the victims. The minor victims were more likely to be assaulted by strangers and younger offenders and this difference was statistically significant. The difference between delay in reporting by minor and adult victims was found to be statistically significant ($p = 0.04$). It was inferred that victims (87.9%) who were assaulted by relatives and intimate partners reported late i.e. after more than 24 hours as compared to victims (57.6%) assaulted by other than relatives or intimate partners. Delay was significantly more when the alleged offenders were intimate partner or relatives ($p < 0.001$).

Conclusion: A large number of sexual assault cases were against minors and that too by known people. A major delay in reporting the crime was observed when the victim was known to the perpetrator. Sexual assault by intimate partners needs to be addressed by educating and empowering women.

Keywords: *WOMEN WELFARE; CRIME AGAINST WOMEN; WOMEN PROTECTION; SEXUAL ASSAULT*

HEALTH

22. Patel Najarana, Gracy Stella G, Ahmed Muhammedeazaz. (2020).

A retrospective Study to Identify the Causes of Post-Natal Depression among Post-Natal Mothers of a Selected Hospital at Bharuch, Gujarat. *The Nursing Journal of India*. Vol.111 (6): 274-278.

Introduction: Post-Natal mothers are prone to mood disorders, of which symptoms may include fearfulness, mood liability, generalized anxiety, irritability, and sleep and appetite disturbance. These conditions usually do not require any intervention and resolve within few days to few weeks. Globally its prevalence ranges from 0.89 to 2.6 percent per 1000 births. Factors responsible for postpartum depression include education level, poverty, poor social support, obstetric complications, previous history of depression, parous women, intimate partner violence, miscarriage, an unplanned pregnancy and stress full life events. Postpartum depression effect physical and mental health of mothers and their families. Depressed mothers are unable to form adequate mother-infant bonding and are engaged in negative parenting behavior. Children also suffer from impaired emotional, social and cognitive development.

Objectives: To assess the level of post-natal depression among post-natal mothers; to identify the causes of postnatal depression among post-natal mothers; to find out the association between causes of post-natal depression with demographic variables.

Methodology: The study was conducted in Immunization Department, Sevashram Hospital and Welfare Hospital, Bharuch. A quantitative approach with co-relational design retrospective in nature was considered for the study. Educational level of husband and wife, occupation, income, family history of psychiatric illness, type of family, place of residence and obstetrics factors were taken as research variables. Number of pregnancies, mode of delivery, sex of baby, health status of baby and planned pregnancy constituted obstetrical variables. The study population was selected based on probability sampling technique. Edinburgh Postnatal Depression Scale Score (EDPS) was used to interpret the level of depression among post-natal mothers.

Results: A total of 60 post-natal mothers were included in the study, out of which about one third (33.3%) had received higher education, 22 husbands (36%) had completed secondary education, 46 mothers (77%) were from nuclear family, 33 mothers (55%) were living in urban area, 54. In the study it was seen that a majority (89.4%) had no family history of psychiatric illness and most of them (80%) were married. 27 mothers (45%) were primi mothers, 36 (60%) underwent caesarean section, three fourth (66.6%) of delivered babies were female baby, majority (78%) babies were healthy and seven out of ten (70%) pregnancies were planned. From EDPS it was concluded that 39

mothers (65%) post-natal mothers had depression not likely, 12 (20%) had possible depression, 7 (11%) had fairly high possibility of depression and 2 (3%) had probably depression. From the study it was inferred that occupation of the husband, income, marital status, number of pregnancies, mode of delivery, sex of baby and health status of baby were significantly related to the level of depression, whereas, age, education of husband and wife, family history of any psychiatric illness, type of family and residing place were found irrelevant in regard to level of depression.

Conclusion: Training should be provided to nurses, family members and community health workers on screening post-partum depressive symptoms among mothers. Early identification and psychological support would enhance the attachment between mother and child, and further reduce the impact of depression among the mothers.

KEYWORDS: HEALTH; WOMEN HEALTH; POST-NATAL DEPRESSION; POST-NATAL MOTHERS

23. Venkatesh, G.M and Sundar, M. (2020). Breast Cancer Screening: Are 'At Risk Population' Known by Public Health Nurse Practitioners? *Indian Journal of Public Health Research & Development. Vol.11 (2) : 495–499.*

Introduction: In the world and India, number of women suffering from breast cancer is maximum than any other type of cancer. Increased age, early menstrual period, late or no pregnancy, starting menopause after age 55, not being physically active, being overweight or obese after menopause, having dense breast, using combination hormone therapy, taking oral contraceptives, personal history of breast cancer, family history of breast cancer, previous treatment using radiation therapy and alcohol consumption are some of the risk factors for breast cancer. Cancer detection techniques like breast self-examination(BSE) or clinical breast examination (CBE) or mammogram are helpful in reducing breast Cancer-related morbidity and mortality. Public Health Nurse are in regular touch with women, and hence can be utilized in providing the information regarding signs and symptoms of breast cancer. Knowledge of nurses can be enhanced with skills regarding early detection methods of breast cancer and their related benefits.

Objectives: To assess the knowledge of risk factors associated with breast cancer and screening for breast cancer among Public Health nurse practitioners.

Methodology: A cross-sectional study was conducted in seven Health centres of Department of Community Medicine of Hassan Institute of Medical Sciences. 30 Public Health nurses participated in the study for a period of two months. A pretested questionnaire for assessing their knowledge of breast cancer, risk factors, breast cancer signs and symptoms, breast cancer examination was used to collect the data. The data was analysed using epi info software.

Results: 13 percent of Public Health Nurse were aware that most common cancer among women was breast cancer, 36 percent were of the view that it is inherited, 43 and 30 percent reported obesity and large breast respectively as risk factors for developing breast cancer. 43 and 33 percent cited having 2 or more children and breastfeeding respectively as protective factors against breast cancer. 96 and 56 percent of Public health nurse were aware that a lump in the breast and discharge from the nipple consequently was a sign of breast cancer. Only three out of ten (30%) knew weight loss as a sign of cancer. All (100%) participants were aware about Breast Self-Examination as a screening method; however none (0%) had knowledge about mammography and only 20 percent knew about clinical examination as a screening method for identification of breast cancer.

Conclusion: District Health Authorities should periodically train public health nurses to enhance their knowledge regarding risk factors, early signs and symptoms of breast cancer and method of cancer screening.

KEYWORDS: HEALTH; WOMEN HEALTH; BREAST CANCER; RISK FACTORS; PUBLIC HEALTH NURSE.

24. Chakravarthy, Vasudha, et. al. (2019).

Does Menstrual Hygiene Management in Urban Slums Need a Different Lens? Challenges Faced by Women and Girls in Jaipur and Delhi. *Indian Journal of Gender Studies*. Vol.26 (1&2): 138–159.

Introduction: According to 2011 Census report more than 65 million people live in slums in India, with housing improper for humans, inadequate basic sanitation and without access to clean drinking water, drainage and electricity facilities. Moreover, poor access to toilets and sanitation services make living conditions unhygienic and insanitary. Women are the worst affected by various dimensions of urban poverty as they have to serve dual responsibility of contribution to the household income as well as household liability. Women and girls living in urban slums face many challenges in effectively managing menstruation such as unaffordability of menstrual products, poor access to water, sanitation and hygiene infrastructure and services, lack of privacy, safety and security and the lack of information and awareness on menstruation.

Objectives: To highlight the challenges faced in managing menstruation in the context of a slum/poor urban settlement; to ensure gender-sensitive, menstrual hygiene management-centric interventions involving key stakeholders including communities, civil society and government departments.

Methodology: Focus group discussions (FGDs) and in-depth interviews of different stakeholders were conducted in order to understand perceptions on menstruation and challenges in menstrual hygiene management (MHM) faced by women in the reproductive age (20–49 years) and adolescent girls (10–19 years) in five slum areas in Delhi and four in Jaipur. Besides this, input from three studies undertaken in Jaipur and Delhi between 2015 and 2017 were also undertaken. The studies focused primarily on (a) assessing a community-based intervention in urban sanitation in Jaipur and Delhi (Rajagopal, Mathur & Chakravarthy, 2017); assessing the impact of menstrual hygiene interventions in Jaipur (Rajagopal, Mathur, & Sharma, 2016); and analysing the awareness, perceptions and practices of adolescent girls on sexual and reproductive health (Joshi, 2015)

Results: Nearly all inhabitants of the slums were migrants from other states either recently or living in those locations for generations. The women were mostly engaged as domestic workers with average household income ranged from rupees 2,000 to 20,000 per month. Except 5–10% households most housing was pucca but congested across all locations. Community Toilet Complexes (CTCs) and public toilets (PTs) were available for the public in Delhi and Jaipur respectively. Poor systems for solid waste management were reported by respondents. Most of the adolescent girls reported of being unprepared for menarche with fear and panic as dominant reactions at the time of their first period. Mothers were reported as being primary sources of information regarding menarche but

their guidance was restricted only to inform girls about the use of cloth or a napkin rather than information regarding menarche. Their understanding of mensuration was limited to 'dirty blood' from the body and hence, some restrictions were also followed. Almost all adolescent girls, across slums in Delhi and Jaipur were reported to be using sanitary napkins and were aware of disadvantages of using a cloth piece. Location, distance, ill-maintenance and usage fee of toilet facility created safety issues for women and girls. Toilets were devoid of dustbins so disposal of menstrual waste was a problem raised by all respondents and open dumping of used menstrual waste increased health risks. Facing sexual abuse is another challenge for girls living in slums.

Conclusion: Women in urban slums are unable to break the silence around menstruation which in turn affects knowledge and awareness in use of products(type of product and frequency of changing), health of women and girls and hygienic conditions in the slums.

KEYWORDS: HEALTH; WOMEN HEALTH; URBAN SLUMS; MENSTRUAL HYGIENE MANAGEMENT (MHM); MENSTRUATION; POVERTY

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