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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 Abstracts of these published and unpublished studies/ articles are compiled to present the vital information in a compact, encapsulated form to facilitate its users through its publication "DCWC Research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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Women Welfare

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A. Research Abstracts on Child Development

CHILD WELFARE

1. Singh R et al. (2015)

Awareness about Female Feticide among Adolescents in Rural Areas of Haryana: A School Based Cross-Sectional Study. *International Journal of Basic and Applied Medical Sciences*, Vol. 5(2):71-77
G19611

INTRODUCTION: The girl child discrimination has garnered a down sex ratio that leads to many crimes in India as child trafficking, female foeticide, sexual assaults, polygamy and dehumanization of society. The issue of female child has always been a question. There is a string preference or “Son syndrome” as male child is considered assets while female child is considered a liability.

OBJECTIVE: To study the awareness regarding female foeticide in blocks Beri of district Jhajjar, Haryana.

METHODOLOGY: A cross-sectional descriptive study was conducted over a period of one year i.e. September 2013 to August 2014 with a sample size of 1080 students selected simple random sampling.

RESULTS: Out of total, 518 (48%) were boys and 562 (52%) were girls. Minimum age of subjects was 13 years and the maximum age was 19 years. Awareness about female foeticide was found to be 940 (87%) amongst the respondents. In respect to sex wise, majority of girls (91.5%) and boys (82.3%) were aware about female foeticide. The difference in awareness about female foeticide among boys and girls was found statistically highly significant ($p=0.00$). Out of those who were aware about female foeticide, nearly half (47.4%) of the respondents got awareness from teachers and school activities as drama, competitions and awareness rallies followed by electronic media (46.1%), print media like newspaper/magazine (20%), from peer group (10.5%), subjects knew from family/relative (8.9%) while wall writing and hoardings was least source of information among adolescents. Sex wise source of information, the study found that electronic media was the major (54.1%) source of information among girls where as teachers/school activities was the major (42.3%) source of information among boys. Majority of subjects (86.1%) was aware about adverse sex ratio. Sex wise awareness, the majority of girls (92.3%) were aware about adverse sex ratio as compared to boys (79.3%). Two-third (62.5%) subjects were aware about PC and PNDT Act while rest of the subjects (37.5%) were not aware about this Act. Sex-wise awareness about PC and PNDT Act and demonstrated that two

third girls (66.5%) and maximum boys (57.7%) were aware about this Act. More than half (58.2%) of subject did not know about punishment whereas some (23.3%) subjects knew that there was a provision of imprisonment for this crime while other (16.8%) subjects responded that there was both imprisonment and fine and a few(1.7%) subjects knew that there was fine only for this crime in the PC and PNDT Act. sex wise knowledge about punishment was found to be known to a quarter (26.3%) girls that only imprisonment was the punishment and a fifth (20.7%) boys knew that there was both imprisonment and fine for this crime.

KEYWORDS: 1.CHILD WELFARE 2.GIRL CHILD DISCRIMINATION 3.SON SYNDROME 4. FEMALE FOETICIDE 5.SKEWED SEX RATIO 6.PC AND PNDT ACT 7.ELECTRONIC MEDIA

2. Sween and P. Brar (2015)

A Study Attitude of Urban and Rural Parents and Grandparents towards Girl Child. *Indian Streams Research Journal; Vol. 4(12): 1-11.*

G19575

INTRODUCTION: The gender parity in India and the social attitude and neglect towards girl child has been distinctly visible in census data, since some last decades. According to Census of 2011, the sex ratio is 943/1000. Despite the improvement in the economy and provision of basic services in India, the sex ratio has been deteriorating by the decade; from 972 in 1901, it dropped to 933 in 1981, to 929 in 1991 and to 943:1000 in 2011. It has been estimated that every sixth female death is specifically due to gender discrimination.

OBJECTIVES: To study the attitude of urban parents towards girl child; to study the attitude of rural parents towards girl child; to study the attitude of urban grandparents towards girl child; and; to study the attitude of rural grandparents towards girl child.

METHODOLOGY: A total sample of 200 parents and grandparents each from urban and rural geographic areas were selected randomly.

RESULTS: In the sample size of 100, more than half (54%) urban parents preferred male child, whereas a little higher proportion (59.5%) of urban grandparents think so. However, this percentage was quite high for rural population, at 69 percent for rural parent and 70 percent for rural grandparents. It was observed that 70 percent urban parents and 58 percent urban grandparents were inclined towards knowing the sex of the child before birth, if legal. The corresponding figure was little less (22%) for rural parents and rural grandparents (8%). Majority (69.5%) of urban parents, and rural parents (48%) serve the same food to son and daughter without any discrimination, whereas for grandparents this percentage was lower, for urban (50%) and for rural grandparents (32%). Majority (70%) of urban parents were in favour of immunization, vaccination and taking the girl child to doctor in case of need. But for rural parents, less than half (46%) were of this opinion. For grandparents it was low among (48%) urban grandparents and even lower (34%) for rural grandparents. It was observed that majority (70%) of urban parents and urban grandparents (54.5%) do not differentiate between education of boy and girl child in the family. But for rural areas, there was a significant difference for parents (43%) and grandparents (19%), as well. More emphasis was laid on Science stream (54%) among urban parents on the selection of subjects for girls, than on Arts (24%) and Commerce (22%). For rural parents, only a few (10%) advocated for Science Stream and for Commerce (12%), while bulk of them desired that their daughters should study Arts (78%). The grandparents, 20 percent of urban and least preferred Science stream (4%) among rural, followed by Commerce stream urban (18%) and rural (2%) and the most grandparents in urban (62%) and (94%) rural indicate Arts as

preferred stream of study for girls. About a third (34%) urban parents and a quarter (22%) urban grandparents opined to send their girls out of station for higher education. For rural, the value was much less for parents (8%) and grandparents (2%). Most of urban (84%) and rural parents (88%) expect their daughters to do household work. Similar findings were revealed for urban grandparents (88%) and for rural grandparents (90%). Only 22 percent of urban parents 12 percent of rural parents were in favour of providing a vehicle to their daughters. While a few urban grandparents (18%) and least rural grandparents (02%) advocated for this. Only a fifth (20%) urban and even lesser (12%) of rural parents were inclined to allow their daughters to go out within friends in evening/late evening. As for grandparents none were in favour of this. For 46 percent of urban parents and a quarter (28%) of rural parents valued the opinions of girls. As for urban and rural grandparents it was a little lesser at 38 percent and 22 percent respectively. Majority (68%) of urban and rural parents (92%) wanted their daughters to be married before the age of 20 years. It was found to be quite high among urban grandparents (80%) and rural grandparents (100%). Just a fifth (20%) of urban and even lesser (12%) urban grandparents put career above marriage. Similarly, a few rural parents (04%) and of grandparents (02%) see career above marriage. It was observed that majority (68%) of urban and rural parents (84%) were of the view that girls were mentally weaker than boys, whereas according to four-fifth of urban (84%) and of rural grandparents (92%), girls were mentally weaker than boys. Almost 82 percent urban and 88 percent of rural parents and 84 percent urban and 92 percent rural grandparents were of the opinion that their girl child was weaker than boy.

CONCLUSION: An overwhelming majority of respondents believe that girls are physically weaker than boys clearly making it evident that the gender biasedness remains a major part of the society. More urban parents and grandparents were inclined towards in giving same diet to daughters and sons as compared to rural families and high percentage of urban parents and grandparents believe in educating their daughters.

KEYWORDS: 1.CHILD WELFARE 2.SEX RATIO 3.GENDER DISCRIMINATION 4.GENDER PARITY 5.STUDY ATTITUDE 6.GIRL CHILD 7.RURAL-URBAN 8.PARENTS 9.GRANDPARENTS 10.SCIENCE STREAM 11.MENTALLY WEAK 12.SEX DETERMINATION.

3. Rajpurohit, A.C. et al. (2016).

Behavioural disorders Amongst Children of a Rural Community of Lucknow, India. *Indian Journal of Community Health*, Vol. 28(2):192-195. G19576

INTRODUCTION: Behavioural disturbances are notable child health problem, the importance of which is increasingly recognized in most countries. A behaviour problem is nothing but a deviation from the accepted pattern of behavior on the part of the child when he is exposed to an inconsistent social and cultural environment.

OBJECTIVES: To assess the prevalence of behavioural disorders in children of a rural community.

METHODOLOGY: A village based cross-sectional study done among 1157 children for assessing the behavioural disorders.

RESULTS: Of the total, 195 (16.9%) showed one or the other behavioural disorders. Various disorders elicited were bed wetting (11.6%), thumb sucking (3.1%), nail biting (1.6%) and food fad (0.5%). The disorders were more common in preschool children (34.2%) compared to school going children (11%). More than one third of the children were in age group 10-14 years (38.1%) followed by 5-9 years (36.8%) and 2-4 years (25.1%). The various behavioural disorders were observed to be higher among the children age 2-4 years (33.4%) than 5-9 (18.3%) and 10-14 (4.5%) years. The bed wetting disorder was much higher among children of age 2-4 years (25.9%) than 5-9 (12.2%) and 10-14 (1.6%) years. Behavioural disorders were more frequent in children at extremes of birth orders (birth orders I & V) compared to others. About one fourth children were in birth order II (28.2%) followed by IV (22.1%), I (17.2%), V (16.7%) and III (15.8%). The behavioural disorders were observed to be higher among the children of birth order V (26.4%) than IV (18.3%), III (15.8%), I (15.1%) and II (11.6%) The prevalence of disorders did not differ much in boys (16.2%) and girls (17.6%).

CONCLUSION: The present study has reported a relatively higher prevalence of behavior disorders in children in a rural setting. The pattern of behavior problems was studied in terms of age, sex and birth order. In such children, there is a need for health education and counseling by psychiatrist/ social worker at the primary care level and must be worked out.

KEYWORDS: 1.CHILD WELFARE 2.BEHAVIOURAL DISORDERS 3.BED WETTING 4.THUMB SUCKING 5.PRESCHOOL CHILDREN 6.NAIL BITING 7.BIRTH ORDERS 8.RURAL SETTING 9.HEALTH EDUCATION.

EDUCATION

4. NCAER/ University of Maryland. (2015).

Educational Inequality in India: An Analysis of Gender Differences in Reading and Mathematics.

G19577

INTRODUCTION: Gender inequality in education is a persistent problem in Indian society, especially for girls from rural areas and lower socioeconomic backgrounds. During the past several decades, India has achieved success in moving toward universal school enrollment and in enacting policies to address educational inequalities such as those based on gender.

OBJECTIVES: to identify the factors through which educational gender inequality operates and the social contexts that are associated with those girls who may be left behind academically.

METHODOLOGY: A descriptive study that administered India Human Development Survey (IHDS) to collect data from 17,061 children between the ages of 8-11 years, among 41,554 households within 1,503 villages, as well as 971 urban neighborhoods located throughout India.

RESULTS: There were majority (76.3%) students from rural areas, with girls and boys both well-represented in the survey, with boys representing a slightly higher proportion (53%) of the sample. The majority of the sample was predominantly enrolled in government schools (69.1%). The significant full model odds ratio for being female is 0.682 ($p < 0.05$), which translates to girls being less likely (32%) than boys of moving from one mathematics assessment category to the next. Most of the girls (84.7%) went to schools that were within 1 km of radius from their homes.

CONCLUSION: The study revealed the importance of attitudes that prioritize girls' education, and the positive consequence that these may have for learning. Gender gaps remain for girls with many younger siblings who are faring worse academically than similarly situated boys. In addition, the results show that household asset level is associated with girls advancing in reading, and that having a positive attitude towards girls' education may be an important contributor to learning outcomes, especially for the reading achievement of girls.

KEYWORDS: 1.EDUCATION 2.GENDER INEQUALITY 3.READING ASSESSMENT 4.EDUCATIONAL INEQUALITY 5.GOVERNMENT SCHOOLS 6.INDIA HUMAN DEVELOPMENT SURVEY (IHDS) 7.LEARNING OUTCOMES.

5. State Council for Educational Research and Training, Chhattisgarh. (2014).
Study of Impact of Mid-Day Meal (MDM) Programme on School Enrolment
and Retention.
G19578

INTRODUCTION: Government of India launched National Programme of Nutritional Support to Primary Education (known as Mid-Day Meal Scheme) on August 15, 1995 to provide mid-day meal to the children studying at primary stage. Mid-Day Meal programme became an essential part of elementary education and due to the successful outcome of the programme enrolment, retention and attendance has increased phenomenally in Primary and Upper Primary schools.

OBJECTIVES: Contribution of MDM in enrolment; Contribution of MDM in retention; Status of daily attendance due to the implementation of the program; Status of attendance before and after MDM; Status of continuity of education due to the implementation of the program; Perception of teachers and students towards MDM as learning enhancement programme; Perception of Parents and community towards MDM as learning enhancement programme; Role of MDM in elimination of discrimination; Participation of SMDC / PRI and parents in MDM; Best Practices / Constraints.

METHODOLOGY: Total sample size was 96 schools (48 primary schools and 48 upper primary schools) from two blocks in 6 districts each were randomly selected for the study.

RESULTS: In total, 2880 students of 96 sampled primary and upper primary schools were surveyed to assess the benefits of MDM program. More than 40 percent of the students were above 9 years of age in all districts except Rajnandgaon. Around 7-13 percent of the students belong to 6 to 8 years' age group. Around half (50%) students were girls except in Baloda Bazaar district where there were (36%) females. It was found that majority of the parents in Kondagaon (39%, Koriya (35%) and Rajnandgaon (43%) districts were from farming community followed by self-employed parents in Baloda Bazaar (35%) and Janjgir Champa (32%). In all districts except Durg, majority (51%) of the parents had annual income of less than Rs1 Lakh. About 37% and 47.9 % of the students in Janjgir Champa and Kondagaon stated that they bring the utensils such as plates from home. Most (71%) of the students in Rajnandgaon stated that the quality of food was good as it tastes good with proper ingredients and is served hot. While in Kondagaon, the students opined it to be of average quality.

Almost all (90%) students in all sampled districts opined that they do not have any major issue with the quality of food. Majority (80%) students in all sampled districts did not have any issue with the quantity of food served. Majority of Headmasters and teachers in Baloda Bazaar (62%) and Rajnandgaon (56%) opined that the meal was served between 1:30 to 2:30 PM while in other districts it was served in between 12:30 to 1:30 PM. More than two-fifth (42%) of the Headmasters and Teachers stated that the food grains were stored in a separate room within the school premises in all the six districts. A third (33%) responded that they were keeping food grains at PRI member's house in Durg district. About four-fifth (79%) in Durg and Baloda Bazaar (38%) stated that they have sufficient number of utensils for serving the MDM. Majority (61%) of Headmasters and teachers in each district opined that the attendance is taken once a day before MDM was served; however in Koriya district (41.7%) said that attendance was taken twice. As high as 81 percent teachers of district Koriya perceived an improvement in attendance rate due to MDM followed by 77 percent of the teachers of Koriya who perceived improvement in enrolment rate as well. More than 70 percent of the teachers perceived increase in retention rate due to MDM scheme. Most (95%) of the community members were aware about the MDM program and its implementation in school. Majority (85%) of the community members in all sampled districts opined that they do not have any major issue with the quality of food. More than 40 percent of the Headmasters and Teachers stated that the food grains are stored in a separate room within the school premises in all the six districts. One-third (33%) responded that food grains were kept at PRI members' house in Durg district and in Kitchen Shed in Kondagaon district. While comparing Gross Enrolment Ratio with Net Enrolment in Upper Primary schools it was found that there has been a steady increase since 2002-03 with Koriya experiencing an increase of about a fourth (22.7%) in 2010 -11 followed by Rajnandgaon (20%), Durg (19.5%) and Janjgir Champa (15.9%).

CONCLUSION: A capacity building module must be provided to all executive committee members of the SMC on a bi-annual basis. There needs to be concerted efforts to ensure food safety, quality as well as optimum utilization of resources. There is an urgent need to ensure that all necessary information is shared with all the stake holders in this programme.

KEYWORDS: 1.EDUCATION 2.CHILD EDUCATION 3.MID-DAY-MEAL (MDM) 4.SCHOOL MANAGEMENT COMMITTEES (SMCS) 5.RETENTION 6.PRI MEMBERS 7.WOMEN SELF HELP GROUP (WSHG) 8.ATTENDANCE RATE 9.ENROLMENT RATE 10.GROSS ENROLMENT RATIO 11.NET ENROLMENT 12.KITCHEN SHED.

6. Nayak, P. et al. (2016).
Determinants of School Enrollment of Children in Slums of Varanasi.
Indian Journal of Community Health; Vol. 28(01): 71-77.
G19579

INTRODUCTION: Education plays a vital role for the development of the nation. In India, urban slums constituting about 22.6% of the urban population are poor and socially disadvantaged. This slum community is least concerned for school enrollment of their children in spite of the fact that primary education is compulsory and is free in public schools. In urban areas schools available are mostly of private sector that are not free and beyond affordability to slums; government and corporation schools are few and at times beyond reach. Motive of the parents is to involve children in income generating activities and the girls are more deprived of school enrollment in poorer society.

OBJECTIVES: To assess the enrollment status of slum children; and; to determine the factors influencing school enrollment.

METHODOLOGY: The data was collected during 2011-12 from 15 randomly selected slums out of 227 in which a total of 893 families were contacted and mothers with children aged 5-15 years interrogated, with a sample size 1145 children.

RESULTS: Out of total, male and female were equally represented; mostly (90.9%) were Hindus and half were SC/ST class. Male and female children were almost half and equally distributed in the age groups 5-6, 7-9 and 10-15 years. Nearly one third father (29.3%) and three fifth mothers (57.2%) of children were illiterate. More than half (54.8%) fathers of these children were unskilled worker and almost all (96.0%) mothers were house wives. Nearly one third (31.3%) children were not enrolled in the schools; two-fifths (45.1%) among aged 5-7 years and a fifth (20.8%) among aged 8-15 years. Non enrollment in schools of the children aged 5-7 years was almost same irrespective of their sex, while among children of age 8-15 years significantly much higher female children (24.3%) than male children (17.3%) had not been enrolled ($p = 0.033$). Compared to Hindus (43.5%), in both the age groups children not enrolled were higher in Muslims (61.9%) in the age group 5-7 years and also in the age group 8-15 years in Muslims (41.9%) and in Hindus (18.5%). Non enrollment of 5-7 years children was highest among illiterate fathers (60.1%), followed by upto middle level (43.2%) and among above middle level (32.9%) while among children aged 8-15 years these were 32.8 percent, 16.4 percent and 14.5 percent respectively. More than half (56.2%) children of age 5-7 years among illiterate mothers and a quarter

(26.2%) among above middle pass mothers were not enrolled, while these children age group 8-15 years were 26.9 percent and 6.8 percent respectively.

CONCLUSION: Findings suggest that education of father and mother had significant role to play in enrollment but not the age and occupation of father and mother. Slum community as a whole is the pocket constituted by habitats of socially disadvantaged class has to be promoted with attitudinal change to schooling of their children without discriminating child sex.

KEYWORDS: 1.EDUCATION 2.SCHOOL DROPOUTS 3.SLUM POPULATION 4.SLUM CHILDREN 5.SCHOOL ENROLLMENT 6.CHILD ENROLLMENT 7.FEMALE CHILD ENROLLMENT 8.NON ENROLLMENT 9.INCOME GENERATING ACTIVITIES.

HEALTH

7. Kapavarapu, P.K. et al. (2012).

Growth Patterns and Anaemia Status of HIV-Infected Children Living in an Institutional Facility in India. *Tropical Medicine and International Health*; Vol. 17(8): 962-971.

G19580

INTRODUCTION: According to an estimate (UNAIDS 2010) the number of children <15 years of age living with HIV infection is approximately 100000 and another 50 000 infants are perinatally infected with HIV in India annually (NACO 2010). An estimated 2.3 million adults live with HIV infection while about 170 000 adults die of HIV related causes per year (NACO 2010–11). These data clearly dictate that the burden of HIV orphans in India is substantial.

OBJECTIVES: To understand the health status of HIV orphans in a well-structured institutional facility in India.

METHODOLOGY: Prospective longitudinal analysis of growth and anaemia prevalence among these children, between June 2008 and May 2011. A total of 85 HIV-infected orphan children residing were included in the study.

RESULTS: Mean age of the 85 HIV-infected children was 9.2 (range, 4 – 14) years and 60 percent (n = 51) were boys. Double orphans constituted 37 percent, paternal orphans 42 percent maternal orphans 12 percent and the remaining 9 percent had parents who had either abandoned or were unable to care for their child. All deceased and living parents were infected with HIV. All children had documented HIV infection acquired by the perinatal route of transmission. In all, 70 (82%) had mild disease (WHO clinical stages 1 and 2). At the end of this study period, 46 percent of the children were taking regular ART (23 on zidovudine-based ART, and 16 on stavudine-based ART). The median (p25, p75) absolute CD4 count was 736 (418,1079) cells/mm³, and median CD4 percentage was 24 percent (18, 31). Severe immune suppression (defined as absolute CD4 count < 250 cells/mm³ or CD4 percentage (< 15%) was seen in 14 percent. At the beginning of the study period, median (25th percentile, 75th percentile) WAZ was -2.75 (-3.73,-2.05), HAZ was -2.69 (-3.06, -1.94) and WHZ was -1.30 (-2.29, -0.56). Overall, children showed improvement in their growth patterns over time as demonstrated by an increase in Z-scores. Median WAZ increased from -2.75 (-3.73,-2.05) at baseline to -1.74 (-2.46, -1.03,) over 36 months (P < 0.001). Median HAZ also increased from -2.69 (-3.06, -1.94) at baseline to -1.63 (-2.19, -0.77). With respect to WHZ scores, although there was an increase observed in all the three groups, none of them reached statistical significance. A 24-h dietary

recall revealed that children <7 years received 75 percent of the RDA for energy, and older children received 93–107 percent of RDA for energy. All children received adequate (>100% RDA) amounts of both protein and fat. Iron intake was low in all age groups, ranging from 38 percent to 69 percent, and the other micronutrients such as folic acid and vitamin B12 intake were appropriate for age and gender. The prevalence of anaemia at baseline was 34 (40%). However, the cumulative incidence of anaemia during the period of study was 72 (85%). Unless other features were present, aetiology of anaemia was presumed to be nutritional and related to iron deficiency. Zidovudine induced anaemia was present in 7(30% of total on zidovudine) and all recovered to having normal Hb levels once their ART regimen was switched to a stavudine-based regimen. Pulmonary tuberculosis was seen in 7(8%) of the children living in the facility.

CONCLUSION: These findings suggest that good nutrition even in the absence of ART can bring about improvement in growth. The holistic approach used in the Home may have been helpful in combating HIV and poor nutritional status in severely malnourished orphaned children.

KEYWORDS: 1.HEALTH 2.HIV 3.UNAIDS ORPHANS 4.ANAEMIA 5.INSTITUTIONAL FACILITY 6.GROWTH 7.NUTRITION 8.ANTIRETROVIRAL THERAPY 9.STAVUDINE-BASED REGIMEN 10.PULMONARY TUBERCULOSIS 11.IRON DEFICIENCY 12.FOLIC ACID 13.VITAMIN B12.

8. Dhyani, A. et al. (2016).
Clinical Profile of Children with Diarrhoea Admitted in Pediatric Intensive Care Unit of Bal Chikitsalay, M.B. Hospital, RNT Medical College, Udaipur, Rajasthan, India. *International Journal of Contemporary Pediatrics*, Vol. 3(4):1371-1374.
G19586

BACKGROUND: In India, diarrhoea is the third most important cause of under-five mortality after pneumonia and complications of prematurity. According to a study, 22% of rotavirus associated deaths worldwide were from India. Two most important consequences of diarrhoea in children are malnutrition and dehydration. Malnutrition and diarrhoea form a vicious cycle, as malnutrition increases risk and severity of diarrhoea. Impaired absorption, loss of nutrients, increased catabolism and improper feeding aggravate severity of malnutrition. Significant dehydration with abnormal electrolytes and acid base status occurs, which may be fatal.

OBJECTIVE: to know prevalence of malnutrition and diarrhoea along with various acid base disorders associated with it.

METHODOLOGY: Children of age group 1 month to 60 months of age, 164 in number were enrolled in the study. Relevant investigations were carried out and recorded.

RESULTS: A total of 164 children were enrolled, out of which 86 were males and 78 females. Maximum numbers of children were infants. Rotavirus alone was responsible for (42%) of children with severe dehydration. Nutritional status of children with diarrhoea showed high prevalence of malnutrition in children with severe dehydration, as one third of children had mid upper arm circumference less than 11.5 cm. Most common complication was uremia.

CONCLUSIONS: Rotavirus diarrhoea was a major cause of severe dehydration in children. Malnutrition was associated in majority of children.

KEYWORDS: 1.HEALTH 2.DIARRHOEA 3.ACIDOSIS 4.ELECTROLYTES 5.MALNUTRITION 6.PICU.

9. Vaidya, A. et al. (2016).
To Study the Prevalence of Attention Deficit Hyperactivity Disorder (ADHD) Amongst Adolescent Children Referred for Behavioural Problems to Tertiary Care Rural Medical Institute in Central India. *International Journal of Current Research Review*, Vol. 8(8): 27-31.
G19587

INTRODUCTION: Attention Deficit Hyperactivity Disorder (ADHD) is a neurodevelopmental disorder characterized by inattention, disorganization, and/or hyperactivity/impulsivity. Hyperactivity/impulsivity involves over activity, fidgeting, inability to stay seated, intruding into other people's activities, and inability to wait, symptoms that are excessive for age or developmental level. The effect of ADHD/behaviour problem occurs at home, school, workplace, relations, physical and educational aspects of life.

OBJECTIVES: To study the prevalence of ADHD in adolescents referred for behavioral Problems to rural tertiary health care center; to identify the gender difference, if any, in the prevalence of ADHD; to identify the presence of any co-morbid factors associated with ADHD.

METHODOLOGY: A cross-sectional study with a sample size of 148 adolescents (80 boys, 68 girls) was enrolled at a tertiary care rural medical institute, Nagpur.

RESULTS: Amongst study population, 21 participants (14.2%) were diagnosed with ADHD, 73 (49.3%) were diagnosed with inattention, 58 (39.2%) with impulsivity/hyperactivity, 112 (75.7%) with learning problems, 62 (41.9%) with aggression, and 103 (69.6%) with family relation problems. There was significant gender difference in occurrence of ADHD; 16 boys and 5 girls had ADHD, 53 boys and 20 girls had inattention, 43 boys and 15 girls had hyperkinetic/ impulsivity, 67 boys and 45 girls had learning problems, 47 boys and 15 girls had aggression, 52 boys and 51 girls had family relation problems. Amongst MHS-Conner's score, mean score in ADHD group was 42.14 for boys and 46.79 for girls, 50.34 for boys and 42.49 for girls in inattention group, 49.44 for boys and 47.56 for girls in learning problem group, 53.35 for boys and 46.53 for girls in defiance/aggression group, 52.23 for boys and 57.69 for girls in family problem group. Amongst socio-economic class according to modified Kuppaswami classification, 5 (3.3%) participants were of lower socio-economic class, out of which 1 (0.2%) was diagnosed with ADHD; 47 (31.7%) belonged to upper low class, out of which 5 (10.6%) were diagnosed with ADHD; 65 (43.9%) were of lower middle class, out of which 11 (16.9%) were diagnosed with ADHD; 28 (18.9%) belonged to upper middle class, out of which 4 (14.2%) were diagnosed with ADHD; 3 (2%) belonged

to upper socio-economic class and no participant in this class was diagnosed with ADHD.

CONCLUSION: The present study revealed that prevalence of ADHD was high amongst adolescents in rural health care setting. Therefore, there is a need to formulate policies in rural India for effective combating ADHD at early age.

KEYWORDS: 1.HEALTH 2.BEHAVIOURAL PROBLEMS 3.ADOLESCENT CHILDREN 4.ATTENTION DEFICIT HYPERACTIVITY DISORDER (ADHD) 5.NEU-RODEVELOPMENTAL DISORDER 6.HYPERACTIVITY 7.IMPULSIVITY 8. MHS CONNER'S -3 QUESTIONNAIRE 9.KUPPUSWAMI CLASSIFICATION 9.SOCIO-ECONOMIC CLASS 10.HYPERKINETIC/IMPULSIVITY 11. LEARNING PROBLEM.

10. Garg, D., Sharma, V.K. and Karnawat B.S. (2016). Association of Serum Vitamin D with Acute Lower Respiratory Infection in Indian Children Under 5 Years: a Case Control Study. *International Journal of Contemporary Pediatrics* Vol. 3(4):1164-1169. G19588

BACKGROUND: Acute lower respiratory infection (ALRI), primarily pneumonia and bronchiolitis, is a substantial cause of morbidity and mortality in children <5 years of age, particularly in developing countries. Vitamin D deficiency is a significant risk factor for severe ALRI in Indian infants and children <5 years of age.

OBJECTIVE: To determine the relationship, if any, between respiratory illnesses and serum vitamin D status.

METHODOLOGY: This study included 40 (22 boys, 18 girls) hospitalized children of 6 months to 5 years of age with ALRI as cases and 40 (25 boys and 15 girls) age and sex matched children with no respiratory illness and no clinical manifestation of vitamin D deficiency as controls.

RESULTS: Among vitamin D deficient and insufficient children, 71 percent and 74 percent were adequately exposed to sunlight respectively. 50 percent vitamin D deficient children were diagnosed of bronchial asthma and 33 percent of bronchopneumonia. Among vitamin D insufficient, 48 percent had acute bronchiolitis and 35 percent had bronchopneumonia. Among sufficient Vitamin D, bronchopneumonia and acute bronchiolitis were 36 percent each i.e. most of the cases of bronchial asthma (60%) had vitamin D deficiency whereas majority of acute bronchiolitis cases (73%) had vitamin D insufficiency. Statistically significant difference was seen between cases and control among vitamin D sufficient, insufficient and deficient groups with higher number of sufficient vitamin D controls. Low vitamin D levels were significantly correlated with ALRI.

CONCLUSIONS: Subclinical vitamin D deficiency is significant risk factors for severe ALRI in Indian children of less than 5 years of age.

KEYWORDS: 1.HEALTH 2.VITAMIN D 3.RESPIRATORY ILLNESS 4.ACUTE LOWER RESPIRATORY INFECTION (ALRI) 5.BRONCHOPNEUMONIA 6.PNEUMONIA 7.BRONCHIOLITIS 8.BRONCHIAL ASTHMA 9.ACUTE BRONCHIOLITIS 10.SUNLIGHT EXPOSURE 11.SERUM VITAMIN D

11. Kaur, S. (2016).
A Descriptive Study to Assess the Prevalence of Cardiovascular Risk Factors Among Adolescents in Selected Schools of Banga, District Shaheed Bhagat Singh Nagar, Punjab. *Asian Journal of Nursing Education and Research*, Vol.6 (3): 361-370
G19589

INTRODUCTION: Physical inactivity, unhealthy habits, eating fast foods, unhealthy competition and stress make today's adolescents vulnerable to coronary artery disease. Coronary artery disease is associated with the habit and lifestyle of people. WHO has recommended teaching school children about risk factors of coronary artery disease and introduction of early lifestyle modification in school curriculum by identifying risk factors among adolescents. The necessary modification in lifestyle can be introduced early.

OBJECTIVES: To assess the prevalence of cardiovascular risk factors among adolescents; to assess the level of BMI among adolescents; to assess the level of stress among adolescents; to determine the association of risk factors of developing cardiovascular disorders among adolescents with selected socio-demographic variables; and; to prepare and distribute the information guideline booklet on prevention of cardiovascular disorders among adolescents.

METHODOLOGY: Stratified cluster sampling technique was followed to select a sample of 100 adolescents in age group of 13-19 years.

RESULTS: The finding reveals that there were higher subjects among 17-19 years (38%), than in age group of 15-16 (32%) and in age group of 13-14 (30%). Majority of adolescent were males (52%). Majority of adolescents belonged to rural areas (63%). More than half (59%) of adolescent were vegetarian and some were non-vegetarian (47%). Less than fifth (17%) adolescents were underweight, third (33%) adolescents were normal, a quarter (28%) was overweight and another fifth (19%) were obese class-1 were at risk. Majority (53%) of adolescents were having mild risk and followed by having no risk (27%) and by those having moderate risk (13%) and least (7%) were having high risk of developing cardiovascular disorders. Majority (52%) of adolescents were having normal level and followed by (23%) having mild level of stress followed by those having moderate level of stress (16%) and least (9%) were having severe level of stress.

CONCLUSION: With regard to association of cardiovascular risk factors with selected socio-demographic variables such as age (in years), dietary pattern, sex, BMI, area of residence, type of family, family history of cardiovascular diseases, type of family , Association of cardiovascular risk factors with Dietary pattern, BMI,

life style, family history of cardiovascular diseases was found statistically significant.

KEYWORDS: 1.HEALTH 2.OVERWEIGHT 3.CARDIOVASCULAR RISK FACTORS 4.ADOLESCENCE 5.DIETARY PATTERN 6.BMI 7.LIFE STYLE 8.FAMILY HISTORY 9.CARDIOVASCULAR DISEASES 10.CORONARY ARTERY DISEASE (CAD) 11.OBESE 12.UNDERWEIGHT 13.PHYSICAL INACTIVITY 14.UNHEALTHY HABITS 15. MYOCARDIAL INFARCTION (MI) 16.HEART ATTACK.

12. Purushotham, S. and Nagesh, N. K. (2016).
Feasibility and Efficacy of Early KMC in Very Low Birth Weight Babies Receiving Noninvasive Respiratory Care in NICU: is it the Way Forward in Resource Limited Setting? *International Journal of Contemporary Pediatrics*, Vol. 3(4):1156-1159.
G19590

INTRODUCTION: Globally, India contributes to more than a quarter (27%) of neonatal deaths; two-fifth (40%) of low birth weight (LBW) babies and a quarter of preterm births. The underserved urban poor and those in rural areas still contribute to the overall high neonatal morbidity and mortality in India. In this regard, Kangaroo mother care (KMC) is a low cost method of care of low birth weight infants particularly less than 2000gm at birth. It consists of skin-to-skin contact, exclusive breastfeeding and early discharge with adequate follow up.

OBJECTIVE: to assess the feasibility and efficacy of early KMC in VLBW babies receiving respiratory care in NICU.

METHODOLOGY: A prospective observational study at a tertiary level 3B Neonatal Intensive Care Unit (NICU). A total of 19 babies on non-invasive respiratory support and partial parenteral nutrition through PICC line were included in the study.

RESULTS: Most of the babies (84%) had birth weight of less than 1250 gm. About half (48%) of the babies were less than 30 weeks of gestation at the time of commencement of KMC. Average weight gain was found to be 11.27gm/kg/day in the study. KMC was initiated at an average of 7.91 days of age and the average duration was 1.69 + 0.6 hour/day. Majority (84.2%) of the mothers did KMC for less than 3 hrs per day while rest (15.8%) of them did KMC beyond 3 hrs per day. Of the 19 babies, 17 of them were on High flow nasal canula Oxygen and 13 of them on CPAP during KMC. More than a third (35.7%) of the babies was on partial parenteral nutrition via PICC line at the time of KMC. Only one baby succumbed to Necrotising enterocolitis during the study. The most common reason for discontinuation of KMC in the study group was lack of confidence in the mother (31%) which was overcome by constant support from the nursing staff and the family members.

CONCLUSION: Kangaroo mother care was found to be safe, feasible and effective in VLBW babies on respiratory support in NICU. The implementation of KMC in babies shall further enhance on the mechanical ventilation.

KEYWORDS: 1.HEALTH 2.LOW BIRTH WEIGHT (LBW) 3.KANGAROO MOTHER CARE (KMC) 4.PARENTERAL NUTRITION 5.PICC LINE 6.NEONATAL INTENSIVE CARE UNIT (NICU) 7.HIGH FLOW NASAL CANULA OXYGEN 8.NECROTISING ENTEROCOLITIS.

ICDS

13. Chudasama, R.K. et al. (2016).
Evaluation of Integrated Child Development Services Program in Gujarat, India for the Years 2012 to 2015. *Indian Journal of Public Health, Vol. 60 (2): 124-130.*
G19593

INTRODUCTION: The Integrated Child Development Services (ICDS) scheme has been operational for more than three decades in India. It is a long-term development program for the community and all efforts should be continued to strengthen it in order to make it more successful. It serves the extreme underprivileged communities of backward and remote areas of the country. Services as, Non-formal PSE is imparted to children in the age group of 3-6 years and Nutrition and Health Education (NHED) to women in the age group of 15-45 years. The performance of the ICDS program is to a great extent dependent on the profile of the key functionary, the Anganwadi worker (AWW).

OBJECTIVES: To evaluate the various aspects of the ICDS program in terms of inputs, process and outcome (coverage), utilization, and issues related to the ICDS program.

METHODOLOGY: A total of 130 Anganwadi centers (AWCs) were selected including 95 AWCs from rural and 35 AWCs from urban areas from April 2012 to March 2015, from 12 districts of Gujarat and the union territory of Diu.

RESULTS: A majority of pregnant (94.7%) and lactating (74.4%) mothers, and adolescent girls (86.6%) were availing ICDS services. In majority (96.9%) of the AWCs, a growth chart was available and AWWs (92.3%) were using it accurately. Some (14.9%) children were found to be underweight including moderately (13.5%) and severely malnourished (1.4%) children. Two-third (66.2%) children were covered by supplementary nutrition (SN). Only a few (14.6%) AWCs reported cent-percent preschool education (PSE) coverage among children. More than half (55.4%) of the AWCs reported an interruption in supply during the last 6 months. Various issues were reported by AWWs related to the ICDS.

CONCLUSION: The study has reported gaps in terms of infrastructure facility, different trainings, coverage, supply, and provision of SN, status of PSE activities in AWCs, and provision of different services to the beneficiaries.

KEYWORDS: 1.ICDS 2.ANGANWADI WORKER (AWW) 3. ANGANWADI CENTRE (AWC) 4.NUTRITION AND HEALTH EDUCATION (NHED) 5.PRESCHOOL EDUCATION (PSE) 6.NATIONAL INSTITUTE OF PUBLIC COOPERATION AND CHILD DEVELOPMENT (NIPCCD) 7.EVALUATION 8.SUPPLEMENTARY NUTRITION 9.SN

14. Sivanesan, S. et al. (2016).
Utilization of Integrated Child Development Services (ICDS) Scheme by
Child Beneficiaries in Coastal Karnataka, India. *Indian Journal of
Community Health; Vol. 28(02): 132-138.*
G19591

INTRODUCTION: Under nutrition affects cognitive and motor development and undermines educational attainment; with adverse implications like poor analytical skill, poor performance in school and hence likely school dropout. Even after adoption of National Health Policy for two decades, the scenario appears grim and dismal with more than a quarter (28%) of children are born with Low Birth Weight (LWB), about 43.5 percent under-five children are underweight; 47.9 percent are stunted; while 20 percent are wasted in the country. And, just a third (31.1%) of the intended child beneficiaries received supplementary nutrition out of total eligible children in the country.

OBJECTIVES: To assess the utilization of ICDS services from the child beneficiaries in the age group three to six years; to assess the perception of mothers about the services.

METHODOLOGY: Community based cross sectional study was conducted among 271 child beneficiaries attending the Anganwadi Centres (AWC) in the age group three to six years.

RESULTS: The findings reveal that more than half (57.6%) of the subjects were females. Among their mothers interviewed, majority (77.7%) was home makers; about a third (37.2%) was matriculate, and most (56.5%) belonged to Below Poverty Line (BPL) families. A larger proportion of the study subjects in rural areas belonged to middle class (66.7%) and in urban areas belonged to upper lower class (7%). The most common service utilized by the study subjects were supplementary nutrition (95.9%), followed by pre-school education (83.4%) and health check-up (66.1%). Almost all (99.3%) study subjects were immunized for age. Out of 163 mothers who were aware of growth monitoring, three-fourth (73.6%) of their children's weight was checked on a monthly basis. Less than half (48.7%) mothers of children were attending nutrition and health education sessions regularly. A larger proportion of child beneficiaries (53.5%) belonged to the age category 36 to 47 months. Only 204 (75.2%) children were regularly attending AWCs. Among children in the age group 36 to 47 months, the median duration of utilization of ICDS Scheme was about 8 months and median duration of absenteeism was about 3 months. The children in the age group 48 to 59 months had median duration of utilization of ICDS Scheme for about 18 months and median duration of absenteeism was about 5 and half months. Nutritional status remained well within normal range in nearly three-fourth (72.5%) study

subjects who had a median duration of utilization for about 1 year 5 months with inter quartile range (IQR) 0.5 to 2 years; deteriorated in 14.7 percent of study subjects who had median duration of utilization for 11months. Just two-fifth (43.3%) mothers of children were happy with the quality of food served to their children in anganwadis. Majority (82.5%) of mothers were of opinion that the food served was in adequate quantity. Majority of mothers were satisfied with the nutritional and pre-school education component of ICDS. Nearly half (50%) mothers were not aware of components like nutrition counselling, health, advocacy and village health and sanitation committee. A larger proportion of the study subjects' mothers were aware of supplementary nutrition (95.4%), followed by pre-school education (84%), immunization (76.2%), growth monitoring (58.7%), nutrition and health education (46.1%), health- checkups (37.5%) and referral services (6.9%).

CONCLUSION: The children in the age group three to six years were attending Anganwadi Centres for a median duration of only 12 months out of expected 36 months as children in the higher age groups were attending private nursery schools. Amongst the children whose weight was recorded and plotted accurately about three fourths children's weight remained well within normal range.

KEYWORDS: 1.ICDS 2.UTILIZATION OF ICDS 3. ANGANWADI 4. BELOW POVERTY LINE 5.LOW BIRTH WEIGHT(LWB) 6.GROWTH MONITORING 7.UNDER-FIVE CHILDREN 8.UNDERWEIGHT IMMUNIZATION 9.PRE-SCHOOL EDUCATION 10.NUTRITION COUNSELING 11.HEALTH 12.ADVOCACY 13.QUALITY OF FOOD 14.VILLAGE HEALTH AND SANITATION COMMITTEE 15.HEALTH- CHECKUPS 16.REFERRAL SERVICES 17.NUTRITION AND HEALTH EDUCATION.

15. Davey, S. et al. (2015).
Study of Impact of Socio Cultural and Economic Factors of Mothers on the Nutritional Status of their Malnourished Children in a Rural Area of Delhi, India. *International Journal of Medical Science and Public Health*. Vol. 4(2):162-167.
G19592

INTRODUCTION: Undernutrition is more prevalent in rural areas of India because of low socioeconomic status. National Family Health Survey-3 (NFHS-3) reveals the data in Delhi, the situation of underweight (27%), stunted (41%), and wasted children (15%) respectively, revealing that even metro cities were not spared by this problem. In such a scenario, Integrated Child Development Services (ICDS) scheme has a key role of well-placed and well-designed intervention at the community level through Anganwadi centers (AWCs) to address the problem of malnutrition.

OBJECTIVES: To study the impact of sociocultural and economic factors of mothers on the nutritional status of their malnourished children in a rural area of Delhi, India.

METHODOLOGY: A total of 80 mothers (40 from each of the AWCs: AWC (A) and AWC (B)) were selected randomly such that in each AWC, 20 members were mothers of healthy children and another 20 were mothers of malnourished children.

RESULTS: Among the total sample, 22 (27.5%) mothers were found to be illiterate and all those had children in malnourished category. Of the 15 (18.8%) primary-school passed mothers, 13 (86.6%) had malnourished children. Mothers who had passed high school 25 (31.2%) had their children in the normal category (100%), and was found statistically significant ($p < 0.05$). The majority of the mothers of malnourished children were working for some kind of income (33 (80.5%) vs 7 (9.5%)) and mothers' working status among normal vs malnourished category of children was also statistically significant ($p < 0.01$) in both AWCs. Regarding possible cause of malnourishment, 42.5 percent mothers had no idea how malnourishment is caused among children; 21.5 percent mothers stated frequent illness as a possible cause; while rest (18.5%) mentioned bad quality of food available at home as a cause, although these findings were not statistically significant ($p > 0.05$). The level of literacy of mothers was significantly associated with the type of feeding given to their children in all types of ceremonial, colostrums, exclusive breastfeeding, and semisolid feeding ($p < 0.05$). Majority of

mothers in unregistered category of children (52.5%) did not consult anybody in the community for malnourishment in their children as compared to registered category (47.5%), but this difference was not statistically significant ($p < 0.05$).

CONCLUSION: Repeated malnutrition management enforcement tips can be generated through periodic NHE sessions by the AWWs along with regular growth-monitoring activities directed toward mothers. AWWs can create curiosity among the mothers while imparting the NHE for nutritionally deficient children by informing on causes and proper treatment of malnutrition.

KEYWORDS: 1.NUTRITION 2.NUTRITIONAL STATUS 3.ICDS 4.AWW 5.AWC 6.MALNOURISHMENT 7.GROWTH MONITORING 8.NFHS3 9.NHE 10.MALNUTRITION MANAGEMENT 11.ILLITERATE MOTHERS.

16. Mittal, M. and Sharma, B. (2016).
Vitamin A supplementation for prevention of bronchopulmonary dysplasia in very low birth weight infants. *International Journal of Contemporary Pediatrics*, Vol. 3(4):1355-1357.
G19599

INTRODUCTION: Vitamin A maintains the integrity of epithelial cells of the respiratory tract and is an essential element for normal lung growth. Transfer of vitamin A to the fetus occurs throughout the pregnancy, and the accretion is maximum in the last trimester thus preterm neonates (especially those born before 32 weeks) are born with inadequate body stores of vitamin A. Vitamin-A deficient normal infants show pathological changes in the lungs similar to that seen in bronchopulmonary dysplasia (BPD).

OBJECTIVES: To assess the effectiveness of vitamin A supplementation in very low birth weight (VLBW) infants to prevent development of bronchopulmonary dysplasia (BPD).

METHODOLOGY: A retrospective cohort study with 142 VLBW infants weighing <1500 gm, < 32 weeks were undertaken for the study.

RESULTS: there is a statistically significant difference in the prevalence of BPD between the infants who were given vitamin A and those who were not (odds ratio 4.25: 95% confidence interval (CI):1.17-15.43). Serum levels of vitamin A were 62.15 mg/mL (standard deviation (SD):26.22) in the patients with BPD and (SD: 18.28) in those with no BPD, and there was a highly significant difference between the groups. Infants given vitamin A supplementation received oxygen treatment for significantly lesser periods to those for the infants who were not supplemented.

CONCLUSION: Vitamin A supplementation in VLBW babies is beneficial in bringing down the incidence of BPD and the number of days of oxygen therapy and mechanical ventilation. A regular supplementation in such babies will not only bring about a decrease in incidence of BPD but also reduce the morbidity and cost of therapy by reducing the number of days of oxygen therapy and mechanical ventilation.

KEYWORDS: 1.CHILD NUTRITION 2.VITAMIN A 3.VITAMIN A SUPPLEMENTATION 4.VERY LOW BIRTH WEIGHT (VLBW) 5.PRETERM NEONATES 6.BRONCHOPULMONARY DYSPLASIA 7.BPD 8.SERUM RETINOL 9.OXYGEN THERAPY 10.MECHANICAL VENTILATION.

17. Reddy, Ravichandra. Subba, Gangaraj and Dutta, Sudip. (2016).
Infant and Young Child Feeding Practices: a Cross Sectional Study in
Sikkim. *International Journal of Contemporary Pediatrics*, Vol. 3(4): 1244-
1248.
G19594

INTRODUCTION: Positive parental attitudes towards infant feeding are an important component in child nutritional health. The nutritional well-being of a population is both an outcome and an indicator of national development. Nutrition is therefore, an issue of survival, health and development for current and succeeding generations.

OBJECTIVES: To assess the breast feeding & complementary feeding practices in children between the age group of 6 months-5 years, to determine the nutritional status of children less than 5 years.

METHODOLOGY: A descriptive cross sectional observational study carried out among 200 children in the age-group of 6 months to 5 years attending under 5 clinics in Central Referral Hospital, SMIMS, Gangtok, Sikkim.

RESULTS: In this study, 41.5 percent and 30 percent of the children were in age group of 13-24 months and 6-12 months respectively. More than half (54.5%) were female and majority (64.5%) were lone child of the family. 68 percent were 1st child. Most (84%) children had birth weight were between 2.5-4 kgs at birth. As far as immunization is concerned, (100%) children were fully immunized as per National immunization schedule till their age. Majorities (90%) of the mothers was literate and were in nuclear family (78%). Almost all (98%) of the children received breastfeed and exclusive breast feeding (72.5%) till 6 months of age. Regarding the time of initiation of breast feeding majority (61.2%) of the children received within 1 hour of birth. It was observed that half (48%) received breastfed for 19-24 months of their ages while a fair numbers (34%) of children till 13-18 months respectively. More than a fourth (27.5%) of the children had early initiation of complementary feed that is before 6 months of age while remaining majority at appropriate age. The introduction of rice and dal as complementary feed were in 67.5 percent and 31 percent respectively. The introduction of traditional feed such as khole/khchidi and champa were seen among 61 percent and 13 percent of children respectively. The use of formula feed was found in most (99%) of all during infancy and less than half (46%) of the children received bottle feeding also. The nutritional status of children reveals that few (5.5%) children were moderately and severely wasted while some (10%) children were moderately and severely stunted (5%).

CONCLUSION: The breastfeeding rate was high in Sikkim as well as the majority of mothers were having appropriate knowledge regarding the complementary feed. Although the immunization schedule was strictly followed, the disadvantages regarding bottle feeding need to be addressed. It is important for the parents to know that feeding a child is a gradual process, which needs continuous trial and support. Misconceptions hindering feeding practices can be overcome only by imparting proper information and knowledge to the parents.

KEYWORDS: 1.NUTRITION 2.BREASTFEEDING 3.IYCF 4.BIRTH WEIGHT 5.NUTRITIONAL STATUS 6.EXCLUSIVE BREAST FEEDING 7.EARLY INITIATION 8.BREASTFEEDING RATE 9.IMMUNIZATION SCHEDULE 10.BOTTLE FEEDING 11.COMPLEMENTARY FEEDING 12.FORMULA FEED.

18. Shukla, Y. et al. (2016).
Risk Factors for Severe Malnutrition in Under Five Children admitted to Nutritional Rehabilitation Centre: a Case-Control Study from Central India. *International Journal of Community Medicine and Public Health*, Vol. 3(1):121-127.
G19595

INTRODUCTION: Protein energy malnutrition is a major public health problem in India and it affects the growth and development of young children. The prevalence of underweight among children in India is amongst the highest in the world, and nearly doubles that of Sub-Saharan Africa. Fifty million Indian under five are affected by malnutrition. With maximum prevalence in central part of country known as Madhya Pradesh (60.3%), it is one of the leading causes of morbidity and mortality in under five children.

OBJECTIVES: To identify the risk factors for severe malnutrition in under five children admitted to Nutritional Rehabilitation Centre as compared to normal nourished children in the community.

METHODOLOGY: A case control study conducted at Medical College Jabalpur. The total no. of 700 subjects was taken for the study, of which 350 were severely malnourished children and 350 were well nourished controls.

RESULTS: The mean age of the cases were 21.46 ± 1.28 months and that of controls were 25.93 ± 1.73 months. There was a significant difference in mean weight, height/length and mid left upper arm circumference of cases and control. The risk of severe malnutrition was more in lower age group (0-2 years) as compared to higher age group (3-5 years) age group. Girls were 6.6 times more at risk as compared to boys (95% CI 3.0-14.4, $p < 0.0001$). Children who had birth weight less than 2.5 kg were 11 (95% C.I 3.8-32.4, $p < 0.0001$) times at risk of malnutrition as compared to children who had normal birth weight (≥ 2.5 k.g.). The children who live in rural area were 5.5 times at risk of severe malnutrition (95% C.I 2.1-14.3, $p < 0.0001$) as compared to the children who lived in urban area. ST (Schedule tribe) caste children were 3.4 times at risk of severe malnutrition as compared to other caste (95% CI 1.1-10.4, $p=0.02$). Paternal education is important factor associated with severe malnutrition. If father was illiterate the children were four times (95% CI 1.3-12.4, $p < 0.01$) at risk as compared to the educated father. Children who were partially immunized or unimmunized as per age were nine times more at risk (95% CI 3-27.2, $p < 0.0001$) as compared to completely immunized children. Mothers age at marriage if was

less than eighteen years, a child was 2.7 times (95% CI 1.2-6.0, $p < 0.01$) at risk of severe malnutrition as compared to normal nourished child. Inadequate calorie intake below 80 percent of requirement for age is 3.6 times (95% CI 1.4-9.3, $p < 0.008$) more likely to be associated with the cases as compared to control. Children whose mother has taken less than 50 iron folic acid tablets were 3.2 times at risk as compared to more than 50 tablets during pregnancy (95% CI 1.5-6.8, $p = 0.002$). Children who lived in kaccha house were 7.5 times (95% CI 2.5-22.1, $P < 0.0001$) at risk of severe malnutrition as compared to children who lived in semi- pacca and pacca houses. Poor hygiene was 7.3 times more associated with severe malnutrition as compared to normal nourished children (95%CI 2.7-19.7, $p < 0.0001$). If type of toilet facility utilized was open field defecation by household members the children were 2.4 times at risk as compared to the use of sanitary toilet (95% CI 0.97-6.1, $p < 0.05$). Infection of ARI predisposes 1.13 times (95% CI 1.05-1.22, $p < 0.0001$), fever predisposes 1.2 times (95% CI 1.1-1.2, $p < 0.0001$) and diarrhoea predispose 1.04 times (95% CI 1.0-1.08, $p = 0.04$) the risk of severe malnutrition.

CONCLUSION: There is evidence of strong association between severe malnutrition and some of the risk factors. Long delay in referral and admission of severe malnourished children is a major challenge.

KEYWORDS: 1.NUTRITION 2.MALNUTRITION 3.PROTEIN ENERGY MALNUTRITION 4.SEVERE MALNUTRITION 5.POOR HYGIENE 6.UNDER FIVE CHILDREN 7.MID LEFT UPPER ARM CIRCUMFERENCE 8.PATERNAL EDUCATION 9.NUTRITIONAL REHABILITATION CENTRE.

19. Sukhdas, G. et al. (2014).
Nutritional Status of Tribal Children in Andhra Pradesh. *International Journal of Medical Research & Health Sciences*. Vol.3 (1): 76-79.
G19597

INTRODUCTION: Young children in India suffer from some of the highest levels of stunting, underweight, and wasting observed in any country in the world, According to NFHS-3, 7 out of every 10 young children are anaemic. The prevalence of under nutrition is more in vulnerable groups like Tribal population. While Andhra Pradesh harbors nearly 9 percent of the Indian Tribal population, there are limited studies on the nutritional status of Tribal Children in Andhra Pradesh.

OBJECTIVES: To study the prevalence of malnutrition in the Under-Five years age group tribal children in the three regions of Andhra Pradesh; and; to compare the nutritional status of tribal children in Andhra Pradesh with that of national statistics.

METHODOLOGY: A cross sectional study with a total sample size of 1,013 tribal children under five years of age in Tribal areas of Andhra Pradesh was selected.

RESULTS: Out of the total, 544 were boys and 469 girls. Among the 1,013 tribal children who were assessed for malnutrition, 489 (48.3 %) were stunted, 239 (23.59%) wasted and 490 (48.4%) underweight as per WHO Growth Standards. The Prevalence of stunting was highest in Srisailam (51.2%), followed by Bhadrachalam (49.5%), and in Rampachodavaram (48.6%). The prevalence of wasting was highest in Srisailam (24.1%), followed by Rampachodavaram (23.4%) and Bhadrachalam (23.1%).

CONCLUSION: Malnutrition continues to be a persistent public health problem in India and more so among the Scheduled Tribes of the country. With a wide cultural diversity among tribes, like in AP, efforts to identify food taboos and fads and addressing the same through ICDS support may help in the long run to bridge the gaps.

KEYWORDS: 1.NUTRITION, SCHEDULED TRIBES 2.NUTRITIONAL STATUS 3.UNDER-FIVE 4.NFHS-3 5.UNDERNUTRITION 6.WASTING 7.STUNTING 8. UNDERWEIGHT 9.WHO GROWTH STANDARDS

20. Udayar, S.E. Kommula, D. and Prasad, D.V. (2016).
Study of Nutritional Status and its Relation to Morbid Conditions among Adolescent Girls Residing in Social Welfare Hostels in the Kuppam Mandal of Chittoor District, Andhra Pradesh, India. *International Journal of Community Medicine and Public Health*, Vol. 3(3):636-640.
G19598

INTRODUCTION: Adolescence period is very crucial since these are the formative years in the life of an individual when major physical, psychological and behavioural changes take place.

OBJECTIVES: To assess the nutritional status and morbidity conditions among adolescent girls residing in a social welfare hostel and to study association between nutritional status and morbidity conditions among these adolescent girls.

METHODOLOGY: A cross sectional study was conducted among 583 adolescent girls aged 10-19 years who were residing in the social and tribal welfare hostel in Kuppam mandal of Chittoor district, Andhra Pradesh, India.

RESULTS: Majority (86.3%) of the adolescent girls were Hindu. More than a quarter (28.8%) were suffering from reproductive problems either in the form of burning micturition, vaginal discharge, menorrhagia or pain during menstruation. 21.5 percent were having skin problems, 19.2 percent had dental problems, 12.9 percent were having signs of pallor and 8.2 percent of them had vitamin B complex deficiency. There was a high prevalence of undernutrition (70.5%), which was significantly associated with the early age. Out of the undernourished (70.5%) adolescents, majority (37.2%) were suffering from severe undernutrition followed by mild (18.5%) and moderate (14.8%), respectively. The problem of overweight and obesity was noticed in a few (2.8%) of the study population. Of the 62 adolescent girls in whom hemoglobin levels estimated a total of 46.8 percent were anaemic of which girls with moderate (24.3%) and mild (19.3%) were more when compared to severe anaemia.

CONCLUSION: The outcome of this nutritional assessment among adolescent girls can be used as the basis for policy-making decisions. Ensuring regular school health programmes for health education, early detection and proper treatment will bring down the burden of malnutrition among these populations.

KEYWORDS: 1.NUTRITION 2.MALNUTRITION 3.ADOLESCENCE 4.ANAEMIA 5.HOSTELS
6.RURAL 7.UNDERNUTRITION 8.NUTRITIONAL STATUS 9.HEMOGLOBIN LEVELS
10.SCHOOL HEALTH PROGRAMMES.

21. Zalavadiya, D.I. et al. (2016).

Evaluation of Growth Progress among Malnourished Children Attending Village Child Nutrition Centre (VCNC) under the Programme 'Mission Balam Sukham' in a Tribal Area of Western India. *International Journal of Current Research Review*. Vol.8 (9):31-39.

G19596

INTRODUCTION: To tackle the problem of malnutrition in Gujarat state ongoing interventions are mainly through Anganwadi centers under the "Integrated Child Development Services" (ICDS) Scheme. Under this, malnourished children are provided 800 kilocalories and 20-25 grams of protein per day according to ICDS norms. Government of Gujarat has started "Mission Balam Sukham" to combat the malnutrition in which integrated management of malnourished children is done through – 3 tier approach including Village Child Nutrition Center (VCNC), Child Malnutrition Treatment Center (CMTC), Nutrition Rehabilitation Center (NRC).

OBJECTIVES: To know the effect of Mission Balam Sukham programme on malnutrition status of children aged 6 months to 6 years and to record and compare the growth progress in ICDS anganwadis and VCNCs.

METHODOLOGY: a Prospective Cohort study conducted during the period from February 2014 to December 2014 in a tribal area of Gujarat as the programme was initiated in tribal area. 98 children in VCNC group and 95 children in Anganwadi group of 6 months to 6 years of age having moderate to severe malnutrition according to WHO growth chart from Naswadi block acted as a study group

RESULTS: There was large variation in weight gain among children attending VCNCs and Anganwadis over the first month. The findings reveals that 12(12.2%) children lost their weight, 4(4.1%) children not gained or lost the weight, 82(83.7%) children gained weight after 1 month of attending VCNC. While the figures from a different setting in Anganwadi reveals 9(9.5%) children lost their weight, 18(18.9%) children not gained or lost the weight, 68(71.6%) children gained weight after 1 month of attending Anganwadi. Average weight gain during 1st month among VCNC (VCNC group) children was 1.56 ± 1.61 gm/kg/day. Median was 1.45 gm/kg/day with the range of 8.33 to -1.96 gm/kg/day. Average weight gain during 1st month among AWC (Anganwadi group) children was 1.19 ± 1.60 gm/kg/day. Median was 0.87 gm/kg/day with the range of 8.09 to -1.77 gm/kg/day. There was no statistically significant difference for z-score in both groups over 2 months (P=0.992) and 3 months (P=0.756). Relative risk suggests that a chance

of improvement of malnutrition grade among VCNC children is 2 times higher than Anganwadi children (95% CI =1.2609 to 3.5662) over 1 month. In VCNC group according to weight for height criteria total 40 children out of 98 were malnourished. At the end of 3 months 21(52.5%) children improved their malnutrition grade and 7 children worsened the malnutrition grade according to weight for height criteria with average Z-score difference of 0.4612 ± 0.8558 for all children. In Anganwadi group according to weight for height criteria 47 children out of 95 were malnourished. At the end of 3 months 31(65.9%) children improved their malnutrition grade with average Z-score difference of 0.4907 ± 0.8088 for all children. There was no statistical significant difference for average MUAC difference over 3 months in both the groups. In VCNC group average increase in MUAC was 0.1489 ± 0.3347 cm as compared to 0.0926 ± 0.339 cm in Anganwadi group. (P=0.2467).

CONCLUSION: Parents/mothers should be encouraged to take actions for their children's malnutrition and to accompany their children for all meals during one month of VCNC and then after. Recommended medicines and articles for malnourished children under "Mission Balam Sukham" should be supplied to all VCNC on time.

KEYWORDS: 1.NUTRITION 2.MALNOURISHED CHILDREN 3.MISSION BALAM SUKHAM 4.WEIGHT GAIN 5.VILLAGE CHILD NUTRITION CENTER (VCNC) 6.CHILD MALNUTRITION TREATMENT CENTER (CMTC) 7.NUTRITION REHABILITATION CENTER (NRC) 8.SEVERELY ACUTE MALNOURISHED 9.SAM 10.WEIGHT FOR HEIGHT.

B. Research Abstracts on Child Protection

Child Labour

22. Child Rights and You. (2014).

Developing a new perspective on Child Labour: Exploring the Aftermath of Mumbai raids conducted from 2008 onwards.

G19600

INTRODUCTION: Poverty, low levels of literacy, debts incurred by parents are some of the causes of child labour. Also the absence of social security systems in India also contributes to child labour as does the indifferent and difficult to access educational system. There are a plethora of laws to stop child labour and raids are carried out to rescue the children. Yet, children continue to be employed and little is known about what happens to the children post the rescue and rehabilitation process.

OBJECTIVES: To study the current status of those arrested for the violation of JJ Act and Indian Penal Code the Child Labour (Prohibition and Regulation) Act, 1986 during the raids conducted from 2008 onwards in Mumbai; to determine the extent to which the penalty of Rs. 20000 as directed by the Supreme Court has been collected from the owners of units with child Laborers; to assess whether the collection of up to Rs. 20000 penalty as directed by Supreme Court in keeping with the Child Labour (Prohibition & Regulation) Act, 1986 from some of these owners acts as a deterrent to the employment of children; to examine the current status of selected communities in Mumbai where the raids were conducted from 2008 onwards; to ascertain the current status of a selected sample of children rescued post the 2008 raids Mumbai; to study emerging trends across selected geographic areas in Mumbai and map anti child labour initiatives in these areas.

METHODOLOGY: An investigative cum exploratory study which used a mixed methodology of quantitative and qualitative methods. Four police zones in Mumbai Dharavi, Byculla, Chembur and Antop Hill (Sion) were selected where maximum raids were conducted. The total number of children covered was 85 (Boys: 78, Girls: 7).

RESULTS: The 85 children surveyed had total of 172 siblings whose ages ranged from 3 to 22 years. More than half of the siblings (51.2%) had never been enrolled in schools. Information on the educational status of one sixth of the siblings (15.1%) was not known. The data revealed that more than half of the children resided with their parents (50.6%) while two fifths (42.4%) lived with the owners of the workshops. The remaining (7.1%) stated that they lived with relatives. Two sevenths of these (29.3%) were currently pursuing their primary education (up to Std. 4th) while close to two-fifths (41.4%) were attending upper primary school 4th

to 7th. Extremely few of the siblings (04 girls and 03 boys) were working. More than half the children reported that they lived with their parents (50.6%). More than half of these (53.5%) stated that both parents resided with them while close to a third reported that only their father (30.2%) stayed with them and around a sixth (16.3%) revealed that their mother resided with them. Nearly all the children stated that their mothers were not employed (92.2%) while more than half (56.3%) of the children reported that their fathers were not employed. More than 90 percent (90.7%) explained that they along with their parents resided in rented homes. Close to three fifths (58.9%) added that their houses were temporary in nature, while a fifth each (20.5%) resided in semi-permanent and permanent structures. Only one child who lived with his parents reported having a toilet in the home while 50 others (58.8%) made use of common toilets. The remaining 34 (40%) revealed that they used open public spaces. Nearly all children (94.1%) reported having electricity in their residences while more than half (51.7%) stated that they had ration cards. None of the children surveyed had completed their Class 10 partly due to the fact that only 19 of them were old enough to have written this exam. Over three-fourths (76.5%) reported that they were currently working full time while slightly less than a fifth (18.8%) stated that they were working and studying simultaneously. Most of the children (80%) revealed that they were not currently studying. Over a fifth (22.1%) declared that they were no longer interested in studying. About four fifths (83.5%) of the children stated that there was a municipal hospital in their area while two-fifths (48.2%) had a Community Health Center. The children were asked if they were covered by the Rashtriya Swasthya Bima Yojna (RSBY). Around five sevenths (70.6%) responded that they did not know anything about this program and hence were unable to tell whether they were covered by it or not. More than a third (35.3%) of the children stated that they were working in a hotel or other eatery prior to being rescued while less than a fifth (17.7%) were employed in the zari industry. An eighth (12.9%) were working in leather factories while under a tenth (9.4%) were employed in the pani-puri making industry. More than two fifths (45.9%) reported earning between Rs 501- 1000 per month while around a third (36.5%) earned between Rs 1001 – 2000 each month. Less than ten percent (9.4%) stated that they earned a monthly salary of Rs 500 or less. All except for four children (all boys) had access to drinking water when working. Three-fourth (71.8%) of the children mentioned that they were given tea during the working hours. More than four fifths (80.7%) of the children added that they were given two meals every day. Most of the children (87%) revealed that they were never given a health check-up when they were working.

CONCLUSION: Child labour is an infringement of the rights of a child and rehabilitative efforts need to reflect this. It needs to be holistic and child centered. A variety of interventions need to be developed and existing systems either modified or changed to stop children from working; including long term interventions, interim interventions and immediate interventions.

KEYWORDS: 1.CHILD LABOUR 2.RESCUE 3.PRIMARY EDUCATION 4. RASHTRIYA SWASTHYA BIMAYOJNA (RSBY) 5.LEATHER FACTORIES 6.ZARI INDUSTRY.

HEALTH

23. Anjum, R. Qayum, S. and A. Rashid. (2016).
Evaluation of BCG test in Diagnosis of Tuberculosis in BCG Vaccinated Children and its Comparison with Mantoux Test. *International Journal of Contemporary Pediatrics*. Vol. 3(4): 1339-1343
G19601

INTRODUCTION: The prevalence of active disease in India is 15-25 per thousand population, 1/4th of them being open cases. The incidence of disease is 2-3 percent per year. The children are particularly susceptible because of malnutrition, overcrowding and lowered immunity. The infection in children is primary whereas adults have reactivation or secondary tuberculosis which is characterized by hypersensitivity and immunity to previous exposure. Mantoux test has been a useful diagnostic test for tuberculosis since long, but it could be false negative in proved cases of milliary tuberculosis, tubercular meningitis and disseminated forms especially in malnourished children.

OBJECTIVES: Evaluation of BCG test in diagnosis of tuberculosis in BCG vaccinated children and to compare the results with mantoux test.

METHODOLOGY: A prospective study was conducted in a tertiary hospital of Northern India, included 100 children admitted in hospital with clinical suspicion of tuberculosis and having been previously and immunized with Bacillus Calmette-Guerin (BCG) in infancy as evidenced by BCG scar.

RESULTS: Of total number, 65 percent of the children were preschoolers and males (63%) outnumbered females (37%). Among factors affecting BCG induced immunity, majority (80%) of the children had history of contact with tubercular case out of which half (50%) had close contact. Malnutrition was observed in 70 percent (PEM) of total number of children. In present study, majority (72%) patients belonged to rural areas with low socioeconomic status and poor housing conditions. Overwhelming infections like measles and pertussis in preceding 3-6 months were noted in some (16%) of cases in present study. BCG test was positive in all 100 children (using modified Kenneth Jones criteria). About three-fourth (71%) cases showed an induration of more than 10 mm while rest (29%) showed induration of 7-9 mm. Most of case with 7-9 mm induration were either severely malnourished, having preceding history of pertussis/measles or longer vaccination intervals .The mean induration size observed was 11.0 mm.

CONCLUSION: Induration more than 10 mm with BCG or mantoux test can well be taken as indicative of fresh tubercular infection even in vaccinated children. The modified Keneth Jones criteria are useful clinical criteria for screening of suspected cases of tuberculosis

KEYWORDS: 1.HEALTH 2.BACILLUS CALMETTE-GUERIN (BCG) 3.BCG TEST 4.MANTOUX TEST 5.TUBERCULOSIS 6.BCG SCAR 7.VACCINATION 8.VACCINATED CHILDREN 9.MALNOURISHED CHILDREN 10.MODIFIED KENNETH JONES CRITERIA 11.TUBERCULAR MENINGITIS 12.PERTUSSIS/MEASLES.

C. Women and Gender Issues

HEALTH

24. Damke, S.S, Fule R. P. and Tankhiwale, N. S. (2016).
Utility of pH and Whiff Test for Screening of Abnormal Vaginal Discharge
Among Women of Reproductive Age in Rural Area. *International Journal
of research and review, Vol.8 (10):33-36.*
G19602

INTRODUCTION: Vaginal discharge is an extremely distressful condition for women, which can result from a variety of pathological conditions. Three vaginal infections are frequent cause of vaginal discharge as bacterial vaginosis, vulvovaginal candidiasis, and Trichomoniasis. Bacterial vaginosis is reported to be one of the most common causes of abnormal vaginal discharge or vaginal symptoms in women of reproductive age.

OBJECTIVES: To evaluate utility of pH test and Whiff test in terms of sensitivity and specificity individually and in combination in diagnosis of abnormal vaginal discharge considering microscopy as a gold standard.

METHODOLOGY: A cross sectional study includes 189 women of reproductive age group with vaginal discharge attending OBGY clinic from September 2010 to May 2012. Both pregnant and non-pregnant women were included in the study with chief complaint of vaginal discharge.

RESULTS: A total of 189 women of reproductive age with symptomatic vaginal discharge were screened for vaginitis/vaginosis using pH and Whiff test. The pH ≥ 4.5 was found in 136 (71.95%) and Whiff test positive in 120 (63.49%) women. Both pH ≥ 4.5 and whiff test positive was recorded in 118 (62.43%) cases. Laboratory testing of vaginal discharge by Gram's staining (Nugent's morphotypes criteria) as a gold standard revealed 86 (45.50%) patients suffering from bacterial vaginosis. Both pH ≥ 4.5 and Whiff test positive was recorded in 24 patients with trichomoniasis and negative in 71 cases of vulvovaginitis. Vaginal pH in diagnosing bacterial vaginosis was the most sensitive criterion, with the sensitivity of 97.05 percent and positive Whiff test was the most specific criterion with specificity of 47.57 percent.

CONCLUSION: Whiff test is most likely to be the best solution in resource poor settings because, although it is not the most sensitive and specific test, it offers a middle ground on sensitivity and specificity compared with technologically demanding Amsel's criteria. Thus pH and Whiff test can improve diagnostic value of speculum examination where microscope facilities are not available.

KEYWORDS: 1.WOMEN HEALTH 2.ABNORMAL VAGINAL DISCHARGE 3.BACTERIAL VAGINOSIS 4.SYMPTOMATIC VAGINAL DISCHARGE 5.PH TEST 6.WHIFF TEST 7.GRAM'S STAINING 8.GOLD STANDARD 9.AMSEL'S CRITERIA.

25. Kumari, M. J. (2016).
Assessment of Knowledge on Reproductive Health Among the Women.
International Journal of Research and Review, Vol.8 (3):19-22.
G19603

INTRODUCTION: Reproductive health of the women means that they have the ability to reproduce and to regulate their fertility and are able to undergo pregnancy and child birth safely. A woman's reproductive system is a delicate and complex system in the body. Half of the young women in India get married before legal age of 18 years. They are unaware about reproductive health and health reproductive practice.

AIM: To assess the level of knowledge on reproductive health among the women at Puducherry and find out relationship between the knowledge on reproductive health and the selected clinical variables of women.

METHODOLOGY: Consecutive sampling technique was used to select 500 women in multi-specialty Hospital, Puducherry. Data collection was conducted by face to face interview method using structured interview schedule.

RESULTS: Totally 245 (49%) women answered correctly that the changes in size and shape of the body will occur during puberty. One fourth (24.8%) of the women stated that uterus, ovaries and fallopian tubes are reproductive organs. Only 117 (23.4%) women stated that ovum and sperm are necessary to form a fetus and 63 (12.6%) women expressed that ovum was produced from ovary. Most (57.8%) of the women had knowledge on menstruation was a cyclic process, 359 (71.8%) women were aware about menstruation happens once in a month and 351(70.2%) women stated that normal interval of menstrual cycle was 28 days. Nearly 275 (55%) women reported that duration of menstrual bleeding was 3-5 days and 281 (56.2%) knew that menstrual bleeding starts from uterus. Most (77%) of the women said that above 21 years in female is the recommended age for marriage life. Less than two-fifth (36.2%) said that iron rich diet was very important for pregnant women, 158 (31.6%) women understand the dangers of premarital sex and it leads unwanted pregnancy and infections and 428(85.6%) women knew that pregnancy was conceived through sexual contact. The study findings revealed that the level of knowledge on reproductive health among 220(44%) women had inadequate knowledge, 253 (50.6%) women had moderately adequate knowledge and only 27 (5.4%) women had adequate

knowledge. The mean value of knowledge regarding reproductive health among the women was 6.8 with the standard deviation of 2.4.

CONCLUSION: The study emphasizes on the improvement their knowledge on reproductive health to prevent reproductive disease and promote their health. The health care providers need to take right steps promptly to reduce mortality and morbidity of the women.

KEYWORDS: 1.WOMEN HEALTH 2.REPRODUCTIVE HEALTH 3.HEALTH PROBLEMS 4.PREGNANT WOMEN 5.UNWANTED PREGNANCY 6.SEXUAL DISORDERS 7.MORBIDITY.

26. NCAER/ University of Maryland. (2016).
Janani Suraksha Yojana and Declining Socioeconomic Inequalities in
Maternal Healthcare in Rural India.
G19604

INTRODUCTION: Janani Suraksha Yojana (JSY) is dedicated in reducing socioeconomic inequalities in the utilization of maternal health care services. The JSY program, initiated in 2006, is intended as a safe motherhood intervention in rural India, to reduce maternal and neo-natal mortality among pregnant women by increasing the incidence of institutional deliveries. A conditional cash transfer program provides incentives for hospital delivery while defraying some of the costs for prospective mothers and is thus expected to have a greater impact on poor households.

OBJECTIVES: To examines the patterns of maternal care usage and socioeconomic disparities in care before and after the initiation of the program among women in rural India.

METHODOLOGY: Using data from the India Human Development Survey Wave I (2004-05) and Wave II (2011-12).

RESULTS: The proportion of women availing full antenatal care increased from 19 percent during the pre-JSY period (IHDS-I) to 25 percent during the JSY period (IHDS-II). The number of institutional deliveries almost doubled over the period between the two rounds, going up from 32 percent in IHDS-I to more than 60 percent in IHDS-II. The proportion of deliveries being assisted by trained health personnel showed a significant increase from 43 percent in IHDS-I to 65 percent in IHDS-II. The results also indicate almost a twofold increase in the number of postnatal care check-ups over the two periods. Safe deliveries were significantly higher among Christian, Sikh and Jain women and they have significantly increased over the period from IHDS-I to IHDS-II (OR=2.305 in IHDS-I and OR=2.386 in IHDS-II). For each of these outcomes, the associations with household wealth and mother's education was weaker in IHDS-II, after JSY, than in IHDS-I, before JSY.

CONCLUSION: The findings indicate that the program has led to an enhancement in the utilization of health services among all groups but especially among the poorer and underserved sections in the rural areas, thereby reducing the prevalent disparities in maternal care.

KEYWORDS: 1.HEALTH 2.JANANI SURAKSHA YOJANA (JSY) 3.INSTITUTIONAL DELIVERIES 4.SAFE MOTHERHOOD 5.INDIA HUMAN DEVELOPMENT SURVEY (IHDS) 6.POSTNATAL CARE 7.ANTENATAL CARE.

27. Ade, A.D. and Patil, R. (2014).
Contraceptive Practices and Awareness of Emergency Contraception
Among Muslim Women of Urban Slum of Raichur, Karnataka. *International
Journal of Reproduction, Contraception, Obstetrics and Gynecology. Vol.3
(1):70-74.*
G19605

INTRODUCTION: Proper use of family planning methods is the key to preventing unplanned pregnancies. According to NFHS-2005, prevalence of female sterilization is lowest among Muslims (21 percent). Many women prefer not to use contraception and continue childbearing until they have at least one son.

OBJECTIVES: To assess the contraceptive practices and awareness about emergency contraception among married Muslim women in the reproductive age group (18-45 years).

METHODOLOGY: A cross-sectional study among 82 Muslim ever married women in a reproductive age (15-45 years) were attending OPD at Urban Health Centre in Raichur district were selected for the study.

RESULTS: Out of total 82 Muslim ever married women, majority of them were literate, 63 (76.8%). 50 (61.0%) of women had family size less than or equal to 5. 44 (53.7%) were married at 16-19 years of age and 8 (9.8%) women married between 12-15 years of age which is below legal age of marriage. Maximum numbers of births were 3-4. Those who wanted male child had births among 5 - 6. Majority of women 34 (41.5%) had a birth interval of 1 year while some (19.5%) women had no birth interval. 32 (39%) women didn't use any contraceptive till they completed family. Majority (86.5%) women were aware of all the methods of contraception. More than a third (36.6%) received information from doctors. Only a few (13.4%) women were aware of Emergency Contraception.

CONCLUSION: A persistent gap exists between awareness and practice. As observed in the study, awareness of emergency contraception was quite low among women. Emphasis has to be laid on delaying marriage and first pregnancy and education on planning and spacing children and reproductive contraceptive options, especially emergency contraception since all contraceptive methods can have potential failure; the use of emergency contraceptive plays an important role in preventing unplanned pregnancies. There is a need to improve women's education about EC. The primary health care providers can play a major role in informing their patients about emergency contraception.

KEYWORDS: 1.HEALTH 2.WOMEN HEALTH 3.FAMILY WELFARE PROGRAMME 4.FEMALE STERILIZATION 5.CONTRACEPTIVE PRACTICES 6.FAMILY SIZE 7.BIRTH RATE 8.BIRTH INTERVAL 9.METHOD OF CONTRACEPTION 10.EMERGENCY CONTRACEPTION 11.EC 12.MUSLIM WOMEN 13.PRIMARY HEALTH CARE.

NUTRITION

28. Geddam, J.J.B et al. (2015).

Diet, Nutrition and Cardiac Risk Factor Profile of Tribal Migrant Population in an Urban Slum in India. *Indian Journal of Community Health*; Vol. 27(1): 77-85.

G19606

INTRODUCTION: In India, migration of rural communities to urban areas is on the rise due to rural impoverishment, lack of employment opportunities, attraction for urban lifestyle, rapid industrialization and urbanization. In Andhra Pradesh urban population growth rate has increased from 1 percent during the period of 1991-2001 to 3 percent during 2001-2011 and a substantial increase is attributed to rural to urban migration. In a recent survey carried out by National Nutrition Monitoring Bureau in tribal areas, the prevalence of overweight and obesity among tribal men and women was 2.6 percent and 3.2 percent respectively.

OBJECTIVES: To understand if tribal migrants living in urban slums are more likely to develop NCDs, because of urban life style and environment.

METHODOLOGY: A cross sectional study was carried out on tribal migrants (n=138 men, n=137 women aged ≥ 30 years) of low economic status, living in an urban slum (Kondapur) of Hyderabad, Telangana, India.

RESULTS: The prevalence of overweight in men and women was 35.3 percent and 32.4 percent while general obesity was 14.3 percent and 24.3 percent respectively. Majority of migrants subsisted on inadequate diets ($<70\%$ of RDI) and the proportion of migrants not meeting even half ($<50\%$ of RDI) and was found highest for leafy vegetables (84-91%) followed by other vegetables, milk and milk products, pulses, sugar and jaggery. The consumption of milk and milk products, sugar and jaggery was significantly ($p<0.000$) higher in women than in men. Inadequacy of cereals consumption was significantly ($p<0.05$) higher in males than in females. Almost all (96-100%) people consumed adequate ($\geq 70\%$ of RDA) amounts of total fat, 64-98 percent energy, 61-82 percent protein and 69 percent consumed folic acid, while majority did not meet at least 50 percent of RDI of micronutrients such as iron (80-84%), vitamin A (81-83%) and riboflavin (67-84%). The deficit ($<50\%$ RDA) of nutrient intakes were significantly ($p<0.05$) higher among men than women with respect to protein, energy, thiamine, riboflavin and niacin. However 49.6 percent men and 56.6 percent women were overweight and 47 percent men had more than 25 percent fat. Men (39.1%) had significantly ($p<0.010$) higher levels of glycosylated haemoglobin than women

(18.3%). The prevalence of anaemia was significantly ($p < 0.000$) higher in women (69%) compared to men (10.9%). About 39% of men had higher (≥ 15) concentrations of homocysteine ($p < 0.001$), while none of the women had the same. The prevalence of obesity in terms of BMI was higher in women (24.3%) compared to men (14.3%), while the prevalence of abdominal obesity and hypertension was comparable between both genders. Hypertension in both men and women was significantly associated with total cholesterol (OR= 4.0 95% CI 1.8-10.8), waist circumference (OR =1.9, CI: 1.02-3.06), WHR (OR= 3.5, CI: 1.3-9.3) and BMI (OR=2.5, CI: 1.2- 4.4).

CONCLUSION: The tribal populations migrating to cities are more prone to obesity and are more on the verge of metabolic syndrome than those living in their natural habitats. The study results indicate that national and state campaigns are urgently needed to create awareness about lifestyle modifications in relation to diet, physical activity, and providing screening for non-communicable diseases which is crucial to prevent the onset of NCDs.

KEYWORDS: 1.NUTRITION 2.WOMEN NUTRITION 3.TRIBAL MIGRATION 4.CARDIOVASCULAR RISK FACTORS 5.NON-COMMUNICABLE DISEASES 6.METABOLIC SYNDROME 7.BMI 8.GLYCOSYLATED HAEMOGLOBIN 9.ABDOMINAL OBESITY 10.HYPERTENSION 11.MICRONUTRIENTS 12.FOLIC ACID 13.THIAMINE 14.RIBOFLAVIN 15.NIACIN.

29. Somane, S. (2016).

A Descriptive Study to Assess the Knowledge and Attitude of Third Trimester Antenatal Mothers Regarding Colostrum Feeding. *Asian Journal of Nursing Education and Research*, Vol. 6(3):292-300. G19607

INTRODUCTION: The first year of life is crucial in laying the foundation of good health. Nonetheless, one of the leading causes of neonatal mortality and morbidity owes to disproportional breastfeeding, which usually is followed by flawed breastfeeding technique, unawareness amongst mothers regarding feeding practices and lack of health education as provided by the health care providers. Many cultural belief and practices, all prevalent in postpartum period restrain mothers to feed the baby immediately after birth. The abandonment of colostrum in child feeding which is replaced by all of the traditional practices as sugar water, plain water, honey etc. leads to suppression of lactation as prolactin gradually ceases and the breast stops secreting milk.

OBJECTIVES: To assess the level of knowledge of third trimester antenatal mothers regarding colostrum feeding; to assess the attitude of third trimester antenatal mothers regarding colostrum feeding; to find an correlation between knowledge and attitude regarding colostrum feeding; to find an association between knowledge score with their selected demographic variables; and; to find an association between attitude with their selected demographic variables.

METHODOLOGY: A descriptive correlative design was adopted for the study, with a sample size of 100 third trimester antenatal mothers. Purposive sampling technique was used to select the subjects.

RESULTS: Maximum (61%) of the subjects was in the age group of 19-25 years and belonged to Hindu (67%) community. More than a third (35%) did not have any formal education. Mostly (68%) the subjects were Home maker. Maximum (85%) belonged to Nuclear family, and were drawing monthly income (46%) in the range of Rs. 7001 and above. Nearly three-fourth (73%) of the subjects belonged to Primigravida. Majority (71%) of the subjects have got information on antenatal care from family members. Majority (63%) of the subjects were conceiving for the first time. Nearly four-fifth (78%) of third trimester antenatal mothers had inadequate knowledge, a fifth (20%) of third trimesters had moderate knowledge and the least (2%) of third trimester antenatal mothers had adequate knowledge. The distribution on the level of attitude of the subjects reveals that majority (83%) of third trimesters had neutral score, followed by some (11%) with a favourable score while the rest (6%) carrying an unfavourable score. The relationship between knowledge of third trimester antenatal mothers and attitude of third trimester antenatal mothers regarding colostrum feeding was found to be significant.

CONCLUSION: The knowledge of third trimester antenatal mothers is inadequate and the attitude of third trimester antenatal mothers towards colostrum feeding was negative, whereby the third trimester antenatal mothers could be encouraged and motivated to enhance their knowledge and positive attitude towards colostrum feeding.

KEYWORDS: 1.NUTRITION 2.WOMEN NUTRITION 3.ANTENATAL CARE 4.THIRD TRIMESTER 5. COLOSTRUM 6. COLOSTRUM FEEDING 7.PROLACTIN 8.MILK SECRETION 9.LACTATING MOTHERS.

30. Musahar, Y. (2016).
Maternal Malnutrition in Urban India: A Study of Indian Cities (Mega, Large and Small). *International Research Journal of Social Sciences*, Vol. 5(1): 1-7.
G19608

INTRODUCTION: Malnutrition or under nutrition is one of the dimension of women's poor health. The problem of malnutrition has been linked to a substantial increase in the risk of mortality and morbidity. The state of maternal nutrition is one of the important environmental factors which might be expected to influence the course of pregnancy. Undernourished women are more likely to deliver low weight babies or undernourished babies. A low birth weight babies born of undernourished mother are more prone to disease and premature death which further diminishes the economic development not only of the family but also of society, and keep on the cycle of poverty and malnutrition.

OBJECTIVES: to examine the status of malnutrition among women in Indian cities delineated as Mega, Large and Small. It also examines the differentials in malnutrition among women by socio-economic factors.

METHODOLOGY: This study is based on the National representative data from the National Family Health Survey 2005-06 (NFHS-3). The Sample of ever married women aged 15-49 years from cities (mega, large and small) was taken into consideration. Two variables viz., Body Mass Index (BMI) and anemia level of women aged 15-49 years were taken to examine maternal malnutrition.

RESULTS: Overall, 23.2 percent women in Indian cities (Mega, large and small) were undernourished having BMI<18.5. Higher proportion of undernourished women was in small cities (25.6%) and that of the lowest in mega cities (18.7%). Large (p<0.001) and small cities (p<0.001) were more likely to have undernourished women as compared to mega cities. The highest proportion of undernourished women (42.5%) was in age group 15-19 years and that of the lowest (11%) was in the age group 40-49 years. The highest proportion of undernourished women (38.3%) was in never married group while the least proportion of under nourished women (17.8%) was in married group for cities as a whole. And, similar results were observed for each type of city. As per odds ratio, never married women were more likely to be under nourished (p<0.001) as compared to married women. The highest proportion of under nourished women was found among ST Category (33.9%) and the least proportion of malnourished women was found in others category (19.2%). Higher women from Muslim religion (24.4%) were under nourished and the least women from Christian religion (15.5%) were under nourished as a whole. Women with no education had the highest proportion of undernourished (26.1%) while the least proportion of undernourished women (14.9%) was observed among women with higher education. Higher proportion (39.9%) of malnourished women was observed from

poor group and that of the least proportion (20.9%) was observed among rich group of women. There was an inverse relationship between standard of living of women and proportion of under nourished women for cities as a whole and also separately for mega, large and small cities. Two-fifth (40.6%) of women from poor standard of living were malnourished while only a fourth (23.2%) woman from high standard of living were undernourished for cities as a whole. Overall, 48.8 percent women were anemic for taking cities as one unit. Separately, the highest proportion of anemic women were observed in small cities (50.4%) followed by large cities (48%) and the least in mega cities (46.4%). The highest proportion of anemic women (49.5%) was found in the age group 15-19 years and that of the least (48.2%) in the age group 40-49 years. Higher proportion of women from STs Category (56.6%) was anemic followed by SCs (53.7%) and the least from other category (46.5%).

CONCLUSION: A substantial proportion of women suffered from malnutrition in Indian cities. Widespread socioeconomic differentials were observed in maternal malnutrition. Maternal malnutrition is a very serious public health problem. It has lasting ill effects on maternal and child health. This problem should be addressed on priority basis due to its implications for public health.

KEYWORDS: 1.NUTRITION 2.WOMEN NUTRITION 3.MALNUTRITION 4.MATERNAL MALNUTRITION 5.ANEMIC WOMEN 6.UNDERNOURISHED 7.NFHS-3 8.BODY MASS INDEX (BMI).

SOCIAL WELFARE

31. Behera, J.K. (2016).
Economic Status and Development of Tribal Women. *The Eastern Anthropologist Vol. 69(2): 125-146.*
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INTRODUCTION: Women's role as wives, mothers, and organizers and as basic foundation of other dimensions of social life is of extreme importance. Working participation of tribal women can be defined as participation in the production of goods and services in the market, as well as in household production of goods for their own consumption. On an average 60 percent of tribal women are forced to migrate in search of jobs, after the completion of harvest season. They are prone to various forms of exploitation when they migrate. Migration also negatively affects their social status, health and overall development.

OBJECTIVES: To provide a profile of the area and socio-economic background of the respondents; to find out the constraints faced by tribal women in the study areas; to suggest measures for the better improvement of the respondents.

METHODOLOGY: 120 head of the households were randomly selected in the field survey in 15 remote tribal villages.

RESULTS: Nearly a quarter (23.3%) of the respondents were working in agriculture sector. An overwhelming majority of tribal men (85%) and women (91%) were involved in agriculture, there were more cultivators among tribal males while more tribal women were agricultural labourers. The findings reveal that more than two-fifth (43.3%) of the respondents have engaged themselves in the grazing of cows/goat and buffalos. 27.5 percent respondents were found to be working in collection of forest products, 20 percent of the respondents were in plantation work, 12.5 percent of the respondents were engaged in irrigation work, while 16.7 percent of the respondents were as agriculture labour. Some (12.5%) of the respondents were engaged in sewing work in leisure time, while others (17.5%) of the respondents were working in poultry farms. A few of the respondents engage themselves in dairy farm (15%) and handicraft work (11.7%). The research data reveals that majority (65%) of the respondents had given their opinion in favor of self consuming. A third (32.5%) of the respondents view in favour of sales only and 13.3 percent of the respondents have given their opinion in favour of both, i.e. of consuming the forest product and selling the remaining forest product in the market. Many tribal women were found working as labours in bauxite mines (45.8%), crasser mines (40.8%) and coal mines

(13.3%). Just a few (15%) respondents had positive attitude towards welfare schemes, while some (22.5%) had negative attitude, and residual (62.5%) were indifferent towards it. A fifth (20.6%) respondents were of the opinion that they had derived benefit of the welfare schemes often. More than a third (38.7%) opined that they availed it seldom. The residual 40.7 percent did not obtained any benefit of the schemes. Majority (40.8%) respondents have taken loan for the agricultural production purpose, a quarter (26.7%) for starting a business, another (22.5%) took loan to get rid of debts from money lenders and rest (10%) respondents obtained deposit facility. 91 percent of respondents in the surveyed village admitted that they regularly consume alcohol. 54.7 percent of the respondent's savings were in SHGs, 13.3 percent of the respondents have savings in banks, 7.5 percent of them saved their money in L.I.C, and 25 percent of the respondents don't have any kind of savings for their future.

CONCLUSION: Role of women is not only of importance in economic activities, but her role in non-economic activities is equally important. The economic cycle and division of labour in the tribal areas has given an important role to the women. The tribal women work very hard, in some cases even more than the men. However these women are not backward. They have power in their own sphere, no men tell them what to do.

KEYWORDS: 1.SOCIAL WELFARE 2.TRIBAL WOMEN 3.TRIBAL ECONOMY 4.EMPOWERMENT 5.MIGRATION 6.WORKING PARTICIPATION 7.ECONOMIC CYCLE 8.AGRICULTURAL PRODUCTION 9.HANDICRAFT WORK 10.AGRICULTURAL LABOUR 11.PLANTATION WORK 12.BAUXITE MINES 13.DAIRY FARM 14.WELFARE SCHEMES 15.SHGS 16.BANK SAVINGS 17.CRASSER MINES 18.COAL MINES.

WOMEN WELFARE

32. Ranjana Kumari. (~2013).
Surrogate Motherhood-Ethical or Commercial. New Delhi: Centre for
Social Research.
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INTRODUCTION: The urge for parenthood leads the prospective parents to seek alternative solutions like Artificial Reproductive Technology (ART), In-Vitro Fertilisation (IVF), Intra-Uterine Injections (IUI), etc., infusing hope into many childless couples who long to have a child of their own. Moreover, the women who engage in surrogacy are usually poor. They agree to conceive on behalf of another couple in return for a sum of money that would otherwise take many years to make.

OBJECTIVES: To examine the existing social and health protection rights ensured to surrogate mothers; to analyse the rights of the child in surrogacy arrangements so far; to study the rights and issues pertaining to commissioning parents; to suggest policy recommendations for protection of rights through legal provisions of surrogate mother, child and the commissioning parents based on the study .

METHODOLOGY: An exploratory research with a sample size of 100 surrogate mothers and 50 commissioning parents and their families in Delhi and Mumbai were taken into account.

RESULTS: Majority (66%) of surrogate mothers were between the age group of 26 years to 30 years. Most of surrogate mothers, both in Delhi (56%) and Mumbai (60%), belonged to Hindu religion. However, 42 percent respondents were followers of Islam in Delhi, as compared to 26 percent in Mumbai. Majority (82%) of surrogate mothers in Delhi and in Mumbai (69%) were married. However, some (12%) in each city were divorced. Almost half (54% Delhi; 44% Mumbai) of the total respondents were educated up to primary level. Many of the respondents, who were employed, work as housemaids or domestic help, in both Delhi and Mumbai (22% and 24% respectively). A considerable percentage, both in Delhi (32%) and in Mumbai (20%), said that they were jobless. Majority surrogate mothers in Delhi (88%) and in Mumbai (92%) came from nuclear family structure. Four-fifth (84%) of the respondents had one to four family members, both in Delhi and Mumbai. A fifth in Delhi (20%) and in Mumbai (36%) had one child of their own. Most (83%) of the respondents from both the cities of Delhi and Mumbai have experienced surrogacy first time; Delhi (80%) and Mumbai (86%). The research depicts that majority (81%) of surrogate mothers (80% Delhi; 82% Mumbai) didn't know the commissioning parents prior to surrogacy arrangement. Majority (93%) of the respondent were staying in rented accommodations (96%

Delhi; 90% Mumbai). In Delhi, 44 percent of the respondents had sanitary latrines; while in Mumbai it was 24 percent. Most (76%) of the respondents in Delhi and (44%) in Mumbai had access to supply water. Strikingly, a quarter (27.9%) respondents in Delhi and in Mumbai (46.9%) stated that it was poverty that had driven them to take the decision to enter into a surrogacy arrangement. Majority (73.7%) of surrogate mothers in Delhi and in Mumbai (73.2%) were approached by the agents. In Mumbai, some (19.6%) respondents were suggested by their family and friends about surrogacy. Long-term awareness of surrogacy (13.1%) and approach by clinic officials (13.1%) were other sources of information for respondents in Delhi. Although the decision to become a surrogate mother was taken by themselves (51.7% Delhi; 73% Mumbai), but it was found that the husband (48.2% Delhi; 26.9% Mumbai) who emotionally pressurized the wife to undergo surrogacy for family maintenance. Some of the surrogate mothers (36% Mumbai; 14% Delhi) stated that they faced resistance from family and relatives. A majority (80% Delhi; 96% Mumbai) stated that surrogacy agreement between all the involved parties took place in the form of a written contract. Most (85%) of the contracts were found to be signed around the second trimester of the pregnancy as it took some time for the commissioning parents to arrange their visit to India after being informed about the confirmation of pregnancy of the surrogate mother by the clinic/infertility physician. Most (92%) of the respondents in Delhi and in Mumbai (60%) said that did not have a copy of the contract. None of the government authorities were a part of the contract/agreement, and in very few cases the clinics (27% Delhi; 11.4% Mumbai) or agents (13% Delhi; 0.8% Mumbai) were a part of the contract. In many cases (50% to 60%) the surrogate mothers and their husbands were illiterate or with only primary education. Many (46%) of the respondents replied that maximum number of IVF sessions in Delhi was two times and in Mumbai (52%) they had experienced IVF sessions two times. Majority (71%) of the respondents stated that the child, if born with deformity, will remain in the clinic/centre/agency and they will find a solution as what would be the next step. Nearly half (46%) of the respondents in Delhi and in Mumbai (44%) stated that they received 3 to 3.99 lakhs for being a surrogate mother. Majority (76%) in Mumbai said that the clinics/centers were friendly and treated them well. Most (86%) of the respondents in Delhi and in Mumbai (94%) replied that the baby was immediately handed over to the commissioning parent. The research findings revealed that all (100%) of the commissioning parents opted for gestational surrogacy. Majority (78%) of the respondents didn't go for sex-determination test (76% Delhi; 80% Mumbai).

CONCLUSION: In recent years India has emerged as a very popular destination for surrogacy arrangement, due to low cost in comparison with other countries and surrogacy being illegal in certain European countries and in some states of USA. But practically the loopholes, as observed in the study as the surrogate mothers being pregnant with twins and were not entitled with the other norms. Regularization of surrogacy shall eventually make the process stride into its right direction.

KEYWORDS: 1.WOMEN WELFARE 2.SURROGATE MOTHERS 3.COMMISSIONING PARENTS 4.ARTIFICIAL REPRODUCTIVE TECHNOLOGY (ART) 5.IN-VITRO FERTILISATION (IVF) 6.INTRA-UTERINE INJECTIONS (IUI) 7.IVF SESSIONS 8.SURROGACY AGREEMENT 9.SEX-DETERMINATION TEST

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