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A. Research Abstracts on Child Development

CHILD WELFARE


**BACKGROUND:** Any intentional, repeated negative (unpleasant or hurtful) behavior by one or more persons directed against a person who has difficulty defending himself or herself may be defined as bullying. These undesirable actions may be in various forms as verbal, physical or in other ways such as making faces or mean gestures, intentional exclusion from a group etc. The short term effects of being subjected to bullying includes school absenteeism, having low self-esteem, lack of confidence, poorer grades in school; whereas, in the long term, they are prone to suffer from depression, anxiety and even suicidal ideation.

**OBJECTIVES:** To assess the prevalence of bullying, identifying bullies, victims and their associations.

**METHODOLOGY:** Questionnaire having ‘Peer Interaction in Primary Schools’ and ‘Strength and Difficulty Questionnaire’ scales, and demographic information was administered to 7th, 8th and 9th graders (N=1106).

**RESULTS:** The prevalence of bullying was measured using Peer Interaction in Primary School Questionnaire (PIPS) subscale and Strengths and Difficulties Questionnaire (SDQ) to administer the psychological bully behavior of the victim and the bully. PIPS subscale scores were significantly higher in victims (n=328) compared to non-victims (n=778) [5.64 vs. 3.34, P <0.001] and bullies (n=331) compared to non-bullies (n=775) [4.10 vs. 2.73, P<0.001]. The overall prevalence and differences in the psychosocial behavior of any form of bullying was found to be 49 percent, with bullies being 29.9 percent and victims being 29.7 percent. Being teased (0.68) and made fun of (0.63) were the most frequently reported experiences by victims. Bullies reported Teasing (0.75) and making fun of others (0.45) as the most frequently used behaviors. Males reported significantly higher bullying experiences (both bullying others and victim experiences). Age had no association with either being a bully (P=0.07) or being a victim (P=0.37). Overweight/ obese (P=0.02) and students having less friends (P=0.001) were more likely to be victims. Victim and bully-victim groups had higher total difficulties score compared to the non-affected group on SDQ (P<0.001).

**CONCLUSION:** The prevalence of bullying among school children correlates with knowledge that bullying peaks in middle school years having significantly with the short-term and the long-term consequences. Since the parents and teachers may be many a times unaware of the prevalence, it may raise serious concern to
address this problem. Role of schools in bullying prevention in Indian context needs to be explored further and appropriate guidelines needs to be developed.

**KEYWORDS:** 1. CHILD WELFARE 2. PEER PRESSURE 3. BULLY-VICTIMS 4. PEER INTERACTION 5. SDQ 6. TEASING 7. OBESE 8. OVERWEIGHT.
INTRODUCTION: Child marriages are widely prevalent in some states and districts of India. Child marriage arises out of lack of free and informed consent and leads to the violation of basic human rights, bonded lives, sexual slavery and economic and social vulnerability. It also affects the survival and development of the child, by denying the right to continue education, thus stunting her growth as a person; and at the same time exposes her to the risks of early pregnancy and delivery leading to even death.

OBJECTIVES: To assess the progress achieved in the elimination of child marriage in India; and to study the prospects and future challenges.

METHODOLOGY: Secondary data from the National Family Health Survey (NFHS 1, 2, 3) and the recent India Human Development Survey II (IHDS II).

RESULTS: A significant proportion (14%) of girls are married by the age of 15 years. Out of 28 child marriages happening in the world every minute, more than two occur in India. Although, urban areas account for a significant percentage of child marriage, a major proportion (around 75%) comes from rural areas among those who married by March 1, 2011. The number of child marriages in India (103 million) is more than the total population of the twelfth largest country in the world (the Philippines with a population of 100 million). The percentage of women in India in the 20–24 years age group married before the age of 18 was declining from 56.8 percent in 1992–93 (NFHS I) to 36.2 percent in 2011–12 (IHDS II). The rural areas accounted for 75 percent of the total child marriages as on 2011; and 82 percent for the period 2007 to 2011.

CONCLUSION: A high level of socio-economic development of a state is not necessarily a check on the prevalence of child marriage and it can be concluded that tradition and culture still play a dominant role in the operation of the practice of child marriage in India.

KEYWORDS: 1.CHILD WELFARE 2.CHILD MARRIAGE 3.GIRL CHILD 4.EARLY MARRIAGE 5.MATERNAL DEATH 6.EARLY PREGNANCY 7.NFHS.
BACKGROUND: In recent years India has made significant progress with respect to strengthening the policy framework for early childhood. The Government of India released the National Early Childhood Care and Education (ECCE) Policy in 2013, and subsequently a National Curriculum Framework and Quality Standards. Together, these documents provide a comprehensive framework for promoting access, equity and quality in ECCE.

OBJECTIVES (i) Institutions where children participate between ages 4 and 8, and how do these patterns vary over time and across locations? (ii) What is the impact of these participation trajectories on children’s school readiness at age 5? (iii) Does higher school readiness at age 5 improve children’s learning outcomes at age 6, 7 and 8? (iv) Is the relationship between preschool participation and subsequent learning outcomes similar for all children, or do the outcomes vary depending on children’s personal and household characteristics? (v) Are there specific dimensions or characteristics of preschools that improve children’s readiness for school, and that can therefore be identified as components of ‘quality’ early childhood education in the Indian context?

METHODOLOGY: About 10 villages from each selected district, randomly sampled from three states viz. 2 districts each from Andhra Pradesh, Assam and Rajasthan. The Early Childhood Education Quality Assessment Scale (ECEQAS) and ABS, an interview-based rating scale, and School Readiness Instrument (SRI) were used to collect detailed information on the quality of preschool programmes in the study.

RESULTS: Every village had at least one preschool (Anganwadis, privately managed preschool facilities integrated with primary schools and – in a handful of cases - centres run by voluntary, religious, or other kinds of organizations). Preschools were most widely available in Rajasthan, where more than 80 percent of sampled villages had four or more preschool options. In all three states the majority of preschool centres in sampled villages were government. Anganwadis, which existed in every village. States varied substantially in the availability of privately managed preschools. While just 7 percent of preschools in Assam were privately managed, villages in Rajasthan had the highest private provisioning amongst these states with 40 percent of privately managed preschools. Of a total 1,796 centres listed across these villages, the maximum number of centres were located in Rajasthan (627), followed by Assam (616) and then Telangana (553). Over one-third of 4-year-olds in Rajasthan did not participate in any institution, compared to less than 10 per cent in Assam and Telangana. Among children in
Rajasthan who were participating in preschools, the majority were going to
privately managed facilities. In Assam, most were participating in government-run
preschools (Anganwadis or Ka-shrenis). In Telangana, while over half of all
sampled children were in Anganwadis, a large proportion also participated in
private preschools. Even at age 4, large proportions of these very young children
were observed in primary schools in Rajasthan (12%) and Telangana (8%). As
children grow older (5-8 years), their participation in an institutional setting
becomes almost universal. But participation trajectories during these early years
vary across states. Even at age 4, large proportions of these very young children
were observed in primary schools in Rajasthan (12%) and Telangana (8%). As
children grow older (5-8 years), their participation in an institutional setting
becomes almost universal. But participation trajectories during these early years
vary across states. In Assam and Telangana, far smaller proportions of 4-year-
olds are not participating (11% in Assam and just 6% in Telangana).42 percent
of Anganwadis, however, had no open space available for children. The situation
in Rajasthan was somewhat better, where nine of the ten centres had space,
although no play equipment. About 64 percent of Anganwadis had some indoor
play material but it was insufficient in quantity and therefore rarely seen in use.
Among private preschools, only 3 percent of private preschools in Telangana and
20 percent in Assam were observed to have manipulative material for children.
The adult-child ratio in Anganwadi was found to be positive in Telangana and
Rajasthan with more than two-thirds of the all centres having less than 25 children
per two adults (Anganwadi Worker and a helper). In Assam which had limited
private provisioning, Anganwadis were found to be more crowded with about 30
to 40 children per centre. Private preschools across all states were found to be
overcrowded with more than 50 children to a class and an adverse teacher-pupil
ratio. Preschool classrooms in private schools rarely had any displays - only 13
percent private preschools had some displays on the walls and only 1 percent
had children’s artwork displayed. As many as 43 percent of private preschools
were also observed be following a weekly schedule with a subject wise timetable,
thus reflecting a planned approach to curriculum transaction. Most Anganwadi
workers had completed secondary schooling, while about 12 percent were
graduates. About 95 percent of teachers had academic qualifications above the
secondary level. Of these, about 28 percent had completed graduation or post-
graduation. About 90 percent of the Anganwadi workers reported receiving job
training. Almost 80 percent of schools had spacious classrooms, clean and non-
hazardous surroundings and were often protected with a boundary wall and gate.
Around 57 percent of the teachers were observed using text books to teach
children by reading aloud from the book, while only a small proportion of teachers
(in Assam) used the textbook as a reference or resource book for teaching
children. In about 22 percent of the cases, the classrooms were observed to be
print rich with print on the wall which could be used to initiate learning. A schedule
or a plan was observed to be followed by 40 percent of the teachers in
government schools in Assam and Telangana, whereas this proportion was as
low as 14 percent in Rajasthan. About one-third of the teachers had done a formal
pre-service diploma as Junior Basic Training (JBT), D.Ed., B.Ed. etc., whereas
more than half of the government school teachers had received pre-service
training and one third had JBT training to teach primary grade children. On the other hand, about three-quarters of the private school teachers had not received any kind of training. In Rajasthan and Assam, there is a difference in the mean scores of about 14 percentage points between children whose mothers are illiterate and whose mothers have education beyond primary level; in Telangana, the difference is much smaller at around 5 percentage points.

CONCLUSION: The study focuses on the universal coverage of education so that it reaches every Indian child at the right age with a good quality preschool education programme that would enable the child to be school ready, as is his/her right. The study also recommends to enforce the RTE Act (2009) stipulation for Grade 1 to be atleast 6+ years; shift focus from access to quality enhancement in preschool and early primary education; and promote close linkages in every preschool programme with parents, families and communities.

INTRODUCTION:

OBJECTIVES: To describe the difficulty pertaining to composition writing and strategies to develop writing abilities of the students to write creatively.

METHODOLOGY: An action research (experimental designing) study. Sample of 15 students from a class VII was drawn using a simple random method in the age-group of 11-14 years. A pre-test followed by intervention and a post-test was conducted on the sample.

RESULTS: The data collected by the researchers in pre-test and post-test was analysed. The scores were compared to obtain the difference between the two tests. The data analysis of pre-test and post–test revealed that the children mostly improved their creativity as the result was increased by 41 percent. In all areas the improvement was noticed except a little bit. In spelling the post- test increased by 23 percent in punctuation the post-test increased by 12 percent whereas the text organized was upgraded (11%) and in Grammar the post-test was increased (23%). When the scores of these two tests were compared, the difference was clearly visible. In the post-test there was an increase in the content quality (28%) and vocabulary (21%). The greatest improvement was shown in the areas of creativity (41%) and content quality (28%). The development of creative writing among seven standard students is possible only by increasing their reading ability and thinking power. The tabulated value of ‘t’ at 0.01 and 0.05 level of significant was 2.14 and 2.3, respectively. Since the calculated t-value was more than the tabulated value at 14 degree of freedom, the difference between the average of pre-test score and post- test scores was significant. Hence it was clear that through different activity creative writing of students was developed.

CONCLUSION: The intervention proved to bring out significant improvement in enhancing the composition writing skills of the students. The findings of this research can be beneficial for the teachers of both elementary and secondary schools, pupil teachers and students. This may be very helpful for the teachers to adopt suitable pedagogical process for improvement of writing skill of their students.

INTRODUCTION: Heavy school-bags and the musculo-skeletal complaints are common concerns across countries, but Indian rural studies are scant. The schoolbag loads and safety limits are routinely expressed in terms percentage of bodyweights to adjust for gender and age across school standards.

OBJECTIVES: (a) Estimate weights of schoolbags in rural primary and secondary schools with regard to the safety limit of 10%-bodyweight and the upper limits imposed by the Government of Maharashtra (b) Record any current or reported health complaints (pain or discomfort in back, shoulder or neck) and explore its possible association with heavy schoolbags (c) Understand efforts of school authorities to minimize school-bag weight and its adverse health impact.

METHODOLOGY: A cross sectional study covering 261 students (m128, f 131) in 8th and 9th divisions in 3 rural schools in Nashik district.

RESULTS: There is no significant difference in the bodyweights of boys and girls in each of 8th and 9th standard (p>0.05), but there is a significant difference in the weights of school-bags of girls and boys (p<0.05) for both standards separately. It was found that 39 percent students had bags between 10-15 percent of bodyweights, while 8.4 percent students had bag weights heavier than 15 percent. Thus together (47%) brought heavier bags. It was found that 72 girls and 52 boys out (n=124 or 47%) of all 261 students, had bags heavier than 10 percent of their body weights. The range of bag-weights as percentage of body weights was observed to be 3.6 percent to 18.2 percent. All but one student had bag-packs with straps. One student brought books and notebooks in a polythene bag. Most students carried the bags on back when on foot or on bicycle. The association between heavy bags and musculoskeletal pain was positive in case of girls when tested for statistical significance. The Risk Ratio is 2.07 (CI1.032–4.16). However the association between heavy bags and musculoskeletal discomfort/pain was not seen in boys. The Relative Risk is 0.365 (CI0.108–1.231). The relation of reported pain or discomfort with subjective feeling of heaviness of bags was explored. Total 178 students reported about heaviness of bags. The association of perception of heavy bags and actual weight being >10 percent of body weight was found to be positive (Risk ratio 1.67, Chi square 11.87, p=0.0005). Further among the108 exposed to heavy bags 31 had pain/discomfort. Among the70 unexposed, 9 students had reported pain/discomfort. Thus the subjective feeling of heaviness of bags was positively associated with reported pain/discomfort (Risk Ratio: 2.23, Chi square= 6.12, p=0.013 at df1). Over 90 percent girls do some kind of domestic work like cleaning, washing of clothes and utensils, cooking and some fetching water in both pain and non-pain categories. Some girls also help on farms, but farm-work was linked.
with boys more. More than 80 percent boys’ also worked in both categories, on farms included irrigation channeling, fodder cutting, giving fertilizers and crate-loading of vegetables for transport and marketing. Most students brought drinking water bottles along with books. The bags of 9th standard were heavier; probably due to lunchbox as Mid-day Meal is limited to 8th standard. When 10 percent subsample was checked for contents of bags, it was found that the average weight of books and note books was 2.8 kg, while the average weight of the rest of the bag was 1.5 kg. All of them had instructed class-teachers to periodically weigh the bags and adjust it to less than 10 percent of bodyweight.

CONCLUSION: It is necessary to do more concerted efforts on this problem through student counseling, parent teacher meets and timetable reforms to limit subjects taught each day. Providing students with safe drinking water with an RO filter can be another measure that could bring most bag-weights below 10 percent bodyweight. This will also ensure good investment in health. Some students suggested that half the books and notebooks can be kept under the desk and rest carried home.

KEYWORDS: 1. EDUCATION 2. SCHOOL-BAGS 3. BODYWEIGHT 4. MUSCULOSKELETAL DISCOMFORT 5. BAG-PACKS 6. MID-DAY MEAL 7. HEAVY BAGS.
Health


BACKGROUND: High-flow nasal cannula therapy (HFNC), is a non-invasive form of oxygen delivery, wherein heated, humidified, and blended oxygen/air reduces damage to the upper airway mucosa, increases ciliary activity, decreases viscosity of secretions and may reduce airway edema that makes it a comfortable way of oxygenation. Most studies on HFNC therapy have been performed in neonates or in the post-extubation period in children or infants with bronchiolitis.

OBJECTIVES: To analyze the change in quality indicators due to the use of high-flow nasal cannula therapy as a non-invasive ventilation method in children with respiratory distress/failure in a non-invasive ventilation device-free pediatric intensive care unit.

METHODOLOGY: A retrospective chart review of children with respiratory distress/failure admitted 1 year before and 1 year after the introduction of HFNC therapy.

RESULTS: Under the study, the Pediatric Index of Mortality 2 (PIM 2) and Pediatric Risk of Mortality (PRISM) scores were routinely used in the PICU. 272 records (141 in the before high-flow nasal cannula introduction) were studied. In study group, 137 (50.3%) patients were intubated (72 in the before group, 65 in the after high flow nasal cannula group) and 46 (16.9%) patients died. Among the severe respiratory distress group, the rate of intubation was significantly lower in the after high flow nasal cannula group (58.1% vs. 76.1%; P< 0.05). In total, 137 (50.8%) patients required mechanical ventilation. The median PICU LOS was not significantly different in the patients who required mechanical ventilation between the before (median: 13 days; IQR: 524) and after high-flow nasal cannula (median: 13 days; IQR: 5-20) groups (P=0.7). Among the patients who did not require mechanical ventilation (134; 49.2%), the median PICU LOS in after high flow nasal cannula group was significantly shorter [median (IQR) 2(1-3) d vs. 4 (36) d; P=0.018]. When the patients were analyzed with pulmonary disease who did not require mechanical ventilation, the median PICU LOS was also shorter in the former [median (IQR) 2(1-3) d vs. 3 (2-5) d; P=0.005].

CONCLUSION: The implementation of HFNC therapy improved clinical outcomes in children aged 1 month to 18 years with various etiologies of severe respiratory distress/failure admitted to the noninvasive ventilation device-free PICU. To better understand the effectiveness of HFNC in the PICU, prospective randomized-controlled studies are needed.
**KEYWORDS:** 1. HEALTH 2. CHILD HEALTH 3. HIGH-FLOW NASAL CANNULA THERAPY 4. HFNC THERAPY 5. PICU 6. RESPIRATORY DISTRESS 7. BRONCHIOLITIS.
INTRODUCTION: Introduction of the Child Survival and Safe Motherhood program (CSSM) in 1992 and the Reproductive and Child Health (RCH) in 1997 by the Government of India marked as a paradigm shift in the provision of maternal and child care. One of the key strategies under the NRHM is having a community health worker who is an Accredited Social Health Activist (ASHA) for every village with a population of 1000. These ASHA workers should preferably be female, in the 25-45 years age group and have a qualification of at least eighth class. The knowledge about health services of ASHA is crucial for the success of National Health Mission.

OBJECTIVES: To appraise the knowledge of ASHA workers regarding child health services provided under NHM in Bhojipura Block, District Bareilly.

METHODOLOGY: A cross sectional study was planned in Bhojipura village. Total 48 villages ASHAs were interviewed using predesigned semi-structured questionnaire. A multi-stage sampling design with a mix of purposive and random approaches was used to interview 64 ASHAs.

RESULTS: Predominantly the ASHA belonged to age group of 31-40 years 27 (42.2%), Hindu by religion 56 (87.5%), OBC caste 36 (56.3%), married 57 (89.1%), educated up to middle class 45 (70.3%), joint family 42 (65.6%) and 33 (51.6%) ASHA were from social class II (Upper-middle). Out of 64 ASHA, 25 (39.15) ASHA told that new-born babies should be given bath immediately after delivery.40 (62.5%) ASHA replied that nothing should be applied on umbilical stump of new-born. Mostly 62 (96.9%) ASHA were aware that breastfeeding should be given first to the new-born and 61 (95.3%) ASHA knew that breastfeeding should be initiated within one hour of normal delivery. Knowledge regarding first postnatal visit, 43 (67.2%) ASHA replied that first visit should be conducted within one week of delivery followed by within 24 hour of delivery by 18 (28.1%) ASHA and no visit by 3 (4.7%) ASHA. When ASHA were asked about whether the new-born should be kept warm by wrapping especially in winter, 62 (96.9%) ASHA answered yes and 46(71.9%) ASHA replied that additional supplements like the honey/ water/ Ghuti be given to a baby, within first six months. Knowledge regarding complimentary feeding to be started at 6 months, 52 (81.3%) ASHA knew about it. Regarding knowledge of vaccines under UIP, majority of ASHA 62 (96.8%) were aware of it and 61 (95.3%) ASHA had the correct knowledge of vaccination schedule under UIP. When asked about the side effects of DPT vaccination, 46 (71.8%) ASHA’s said that fever is most common side effect followed by pain 44 (68.7%) and swelling 29 (45.3%). 16 (25%) ASHA said that a baby should be taken for immunization if the child has high fever. Out of 64 ASHA, knowledge regarding advice given to mother of diarrhoeal child were
as follows: 27 (42.1%) advised to continue food, water and breastfeeding and take care to prevent dehydration and 35 (54.7%) ASHA said that breastfeeding should be continued if the baby has diarrhea.

**CONCLUSION:** Majority of ASHAs know their role and details of their practices in new-born and child care except bathing of new born and additional supplements.

**KEYWORDS:** 1.HEALTH 2.CHILD HEALTH 3.ASHA 4.NATIONAL HEALTH MISSION 5.BREASTFEEDING 6.POSTNATAL CARE 7.UMBILICAL STUMP 8.COMPLIMENTARY FEEDING 9.DEHYDRATION.
ICDS


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**INTRODUCTION:** Integrated Child Development Services (ICDS) was launched in 1975 to provide a comprehensive package of services for the holistic development of children aged 0–6 years through a vast network of centers, known as “Anganwadi Centre (AWC).” Among the different services provided by AWC, early childhood education (ECE) is imparted to the children of 3–6 years age group. Early childhood education (ECE) is an important service provided by Integrated Child Development Services (ICDS). It is largely responsible for developing school readiness in children.

**OBJECTIVES:** To assess ECE component of ICDS services through measurement of school readiness and find out other correlates.

**METHODOLOGY:** A facility based descriptive evaluation study conducted in Bankura municipality. AWCs were selected by 30 cluster sampling among the 83 ICDS centers of Bankura Municipality.

**RESULTS:** More than half (60%) of the AWCs had no display on the wall and in rest of the centers display were placed too high. During the ECE hours, children were supervised fully by the AWWs in two-third (40%) of the centers. Maximum AWCs had favorable teacher, and child ratio (1:25), 13 percent had unfavorable ratio. Most of the centers (90%) did not have flexible sitting arrangements; only a few (10%) centers had the space to do indoor activities freely. Not a single AWC followed planned daily schedule though they all had the schedule in place and they did not perform age appropriate activities. No single AWC was there to give service/facility to differently abled children. Classroom process observation revealed in most of the AWW centers children performed conversation, storytelling, reading, writing, free play with material, and routine activities. It was also observed that in >70 percent centers children only got opportunity to learn by memorizing and playing with other children. More than two-third (69%) children were getting ECE from ICDS. Among these children, two-fifth (60%) belonged to scheduled caste/tribe (SC/ST). The overall attendance was poor for ECE (33% of the enrolled children were present) during the visit. However, girl child attendance was more than half (55%) of their total enrollment. Duration of ECE conduction was 66 ± 18.26 (mean ± SD) minutes which was far less than the norm (120 min). In maximum centers (67%), more than half (50%) of the children were involved in ECE activities. About one third of the AWCs were seen that ECE materials was not used during the ECE hours. The supervisors visited, the AWCs centers every month but CDPO visited half (53%) of the centers in every 3 months, and rest was visited less often. Physical facility score was 5.26 ± 1.3 (mean ± SD) on a 10 point
scale, management, and organization score was $2.47 \pm 1.12$ (mean ± SD) on an 8 point scale, classroom performance score of children was $11.9 \pm 1.68$ (mean ± SD) on a 20 point scale. Overall average school readiness score of 210 children was $14.03 \pm 3.71$ (mean ± SD) with range of 5–24 (full marks was 40). One fourth (25%) of the students got score below 12, half (50%) students got score between 12 and 17 and one-fourth (25%) students got score above 17. Training status in the form of the time interval since last training (whether training was done >5 years ago or ≤5 years ago) was found to have effect on school readiness. Mean school readiness score of the centers in which AWWs got training ≤5 years ago was higher than the centers where AWWs received the same >5 years ago, and the difference was found to be statistically significant.

CONCLUSION: For proper functioning of an AWC, it should be housed in a building with a kitchen, has baby friendly toilet, drinking water facilities, and with adequate space for children to play. Awareness of the parents should be increased about early stimulation for ECE and help in the study at home, which will further improve school readiness.

KEYWORDS: 1.ICDS 2.AWC 3.ANGANWADI CENTRES 4.EARLY CHILDHOOD EDUCATION 5.ECE 6.AGE-APPROPRIATE ACTIVITIES 7.SCHOOL READINESS SCORE.
Nutrition


BACKGROUND: In 2011, the global prevalence of severe acute malnutrition (SAM) below 5 years of age, estimated as severe wasting or weight-for-height $\leq 3$ Z-score of WHO reference, was 3 percent or 19 million children with the highest burden in South Central Asia (5.1%) and central Africa (5.6%).

OBJECTIVES: To evaluate recovery and survival of severely wasted children without community management of acute malnutrition programme.

METHODOLOGY: A community-based cross-sectional study. The study was conducted in rural areas of Meerut district, UP with a sample size of 409 severely wasted (WHO weight-for-height $<-3Z$), 6- to 59-month-old children.

RESULTS: The findings highlighted that children in the age-group of 6 to 24 months-old (55%) were largely represented with majority of boys (63%). The nuclear families (62%) and Hindus (53%) were in the majority in the study. About half of the parents were either unemployed or unskilled labourers. A quarter of them were semi-skilled or skilled workers. Poor parental literacy rate was found with more mothers (53%) than fathers (26%) were illiterate. Other anthropometric deficits were found to be commonly co-existing; stunting in 71 percent, severe stunting in 42 percent, underweight in 98 percent, severe underweight in 84 percent and MUAC $<-3$ Z in 33 percent. Just 23 percent had MUAC $<11.5$ cm. Amongst 6-24 months old subjects, all anthropometric deficits were significantly higher, except for underweight. Certain mortality outcome was prevailed in all while repeat anthropometry for comparison was available for 368 (92.5%) survivors. The median (IQR) and range of follow-up contact duration were 7.4 (6.6, 10.1) months and 3.0 to 17.8 months, respectively. The study reported 11 deaths during 290.5 person-years follow-up with a case fatality of 2.7% (95% CI 1.4, 4.8) and mortality incidence (per thousand person-years) of 37.9 (95% CI 21.0, 68.4). There were 5 (case fatality 1.2%), 6 (1.5%), 8 (2%) and 10 (2.4%) deaths within 1, 1.5, 4 and 6 months of enrolment, respectively. Mortality was comparable among boys and girls (6 vs 5) with incidence (95% CI) being 32.5 (14.6, 72.4) and 47.1 (19.6, 113.1), respectively. Noteworthy predictors of mortality in the univariate model included younger age ($P=0.04$), poorer occupation of head of household ($P=0.04$) and lower enrolment anthropometry (any variable; $P<0.001$). 10 deaths occurred in younger subjects; the mortality incidence (95% CI) was 63.6 (34.2, 118.2) and 7.5 (1.1, 53.3) in 6-24 and 24-60 months’ age groups, respectively. Higher mortality risk (HR 4.7; 95% CI 0.95,
22.51; P=0.053) in children below 18 months of age even after adjustment for sex, baseline weight-for-length/height Z score and socio-economic factors. Amongst the survivors, the median (IQR) and range of follow-up duration were 7.4 (6.6, 10.2) months and 4.1 to 17.8 months, respectively. Inclusively, among 368 severely wasted children, 39 percent were moderately wasted, 31 percent had recovered while just 30 percent were still severely wasted. With maximum follow-up of 6 months, in the subgroup 56 percent were still severely wasted while the corresponding to the 8 months (33%), which was similar to overall (30%) statistics. Probability of recovery and shifting to weight-for-length/height category ≥-3Z increased sequentially with follow-up duration up duration were 7.4 (6.6, 10.2) months and 4.1 to 17.8 months, respectively.

**CONCLUSION:** The study reflects that without community management of acute malnutrition in rural Meerut District of India, severely wasted children had low (1.2% - 2.7%) case fatality with long-term spontaneous recovery of around 25-30 percent.


G20078

**BACKGROUND:** Low-grade chronic inflammation in association with obesity plays a major role in the pathogenesis of atherosclerosis and insulin resistance. C-reactive protein (CRP) is another inflammatory biomarker, associated with impaired insulin sensitivity and the development of cardio metabolic syndrome. Adiponectin is a collagen like plasma protein secreted exclusively by adipocytes. This protein has anti-inflammatory, anti-atherogenic, and potent insulin-sensitizing effects, which may be partially mediated by suppression of TNF-α and IL-6.

**OBJECTIVES:** To assess serum Adiponectin, Interleukin-6 (IL-6) and high-sensitivity C-reactive protein (hsCRP) levels and their correlation with conventional risk factors for cardiovascular disease and diabetes in overweight/obese Indian children.

**METHODOLOGY:** A cross-sectional study, with a sample size of 84 children between 7-15 years, with BMI >85th centile according to Indian reference curves.

**RESULTS:** Eighty-four children (48 boys) with a mean (SD) age of 10.2 (1.9) years were enrolled in the study. 87 were obese while two-thirds of the children were pre pubertal. The mean (SD) BMI Z-score was 2.7 (0.8). Mean (SD) waist circumference was 82.4 (10.3) cm, with abdominal obesity in 67.3 percent. Hypertension was present in 15.5 percent with mean (SD) systolic and diastolic BP was 113 (10) and 74 (10) mm Hg, respectively. The commonest abnormality was found to be elevation of inflammatory mediators, with IL-6 being elevated in 54.4 percent and hsCRP in 49.4 percent. Low High-density lipoproteins (HDL) was the commonest dyslipidemia among the subjects noted in 35.1 percent. Low adiponectin levels (16.5%) was followed by and impaired fasting glucose (10.7%) among the subjects. A significant inverse correlation was established with serum adiponectin with waist circumference (r= -0.28, P=0.047). A positive correlation in serum IL-6 with BMI (r= 0.23, P= 0.09), and blood glucose (r= 0.24, P= 0.08) was found but was statistically insignificant. Median (IQR) serum IL-6 in children with abdominal obesity was 45.2 (6.3-31.2) pg/mL as compared to 6.6 (4.5-22.5) pg/mL in those without abdominal obesity (P=0.047). Median (IQR) serum IL-6 was higher in the children with impaired fasting glucose as compared to those with normal levels (107.0 (22.5-197.5) vs 8.5 (5.0-116.0) pg/mL, P=0.06). There was no significant correlation between the serum levels of IL-6, hsCRP and adiponectin. No correlation was observed between hsCRP and BMI, waist circumference or blood glucose.
CONCLUSION: About half of the obese/overweight children were diagnosed with elevated Inflammatory mediators CRP and IL-6, with low adiponectin (16.5%). Inverse correlation of adiponectin with waist circumference, and positive correlation of IL-6 with BMI and fasting blood glucose specified the efficacy of these parameters as markers of metabolic risk in children.


**INTRODUCTION:** The first two years of a child's life are the most crucial in terms of proper growth and development. Optimal Infant and Young Child Feeding practices (IYCF) rank among the most effective interventions to improve health. Poor infant and young child feeding practices are one of the major factors responsible for under-nutrition.

**OBJECTIVES:** To determine the IYCF practices using 8 core indicators and 7 optional indicators, and to determine the reasons or causes for inadequate IYCF practices.

**METHODOLOGY:** A Hospital based cross sectional study with a total of 520 children were assessed in the study.

**RESULTS:** Mothers of 520 children attending immunization clinics were interviewed. The median age of the child was 32.5 weeks. The median age of the mothers was 23 years. Majority (70.3%) of the women had studied till 10th class or higher and were housewives (89.2%). Half (54.8%) of the women were from joint families followed by nuclear families (42.5%). One-third (33.8%) of the children were put to breastfeed within one hour of birth. Four-fifth (80.3%) of the child infants 0-5 months of age were exclusively fed with breast milk. Most (86.8%) of children 12-15 months of age were fed breast milk. A less than three-fourth (72.5%) of the children 6-8 months of age received solid, semi-solid or soft foods. Among the children 6-23 months of age, minimum dietary diversity was 29.9 percent, minimum meal frequency was a third (34.1%), minimal acceptable diet was very less (6.2%) and consumption of iron rich/iron fortified foods was about three-fourth (73.1%). All the children 0-5 months of age were predominantly breast-fed. More than three-fourth (78.1%) of the children were receiving age appropriate breast-feeding while (30%) were bottle-fed. Median duration of breast-feeding was not calculated as it considers children up to 36 months of age. The study was limited to children up to 24 years of age. Among the children 20-23 months of age, 45.8 percent were still being given breast milk. More than three-fourth (78.8%) mothers gave colostrum to the child after birth. The rest reported that they discarded it due to several reasons like spoilt milk, too thick, and some thought it was stagnant milk and shall make the baby sick. More than a third (37.9%) mothers reported that they gave pre-lacteal feeds to their children. Majority of these mothers (196) were not aware that pre-lacteal feeds should not be given like honey and water which were given in several cases as a part of a religious custom.
CONCLUSION: Though IYCF practices are better than reported national averages, much needs to be done to improve the IYCF practices in children of low socio economic groups. Knowledge gaps were common and health care workers need to improve the existing knowledge gaps at different time points that include Antenatal check-ups, Hospital deliveries and Immunization visits.

B. Research Abstracts on Child Protection

CHILD LABOUR


Introduction: In the 1971 census it was estimated that there were slightly over 13 lakh (13,26,726) working children in the State of Uttar Pradesh. However, the number of child labourers had shown an increase in every census, and in 2011, it stood at an all-time high, crossing 21 lakhs (21,76,706), with a child worker ratio of 4.27.

Objectives: To capture the underlying socio economic factors that led to these children migrating for work to other States, without their families as well as the modalities through which they were recruited; and, to examine the efficacy of the rescue and rehabilitation process in order to devise more effective strategies to combat child labour.

Methodology: A list of 258 children from Bahraich rescued from the States of Maharashtra, Rajasthan and Delhi in the last three years were surveyed. A basic socio economic study tool was designed to conduct the survey.

Results: The findings revealed that, a few (4%) of the children surveyed went on their own, while no child reporting that he had gone with either of his/her parents. Some (15%) reported that they had gone with a relative, 14 percent said that they had gone along with other boys of the village. An overwhelming two-third (67%) reported that they had gone with the prospective employer or his agent. The study shows that one-fourth (26%) of the children surveyed, were in the age group of 9 to 11 at the time when they were sent to work, one-fifth (20%) were in the age group of 11 to 12, while one-third (34%) children were in the age group of 12 to 13 years and the rest were in the age group of 13 to 14 years. However, the study also shows that 43 percent of the children surveyed were actually going to school at the time when they were sent out of the State to work. Less than a third (31%) of the children surveyed were found to be working in the zari/ zardozi factories, while another third (32%) were working in the hotel/ dhaba catering sector. Some (30%) were working in embroidery/ garment sector and a few (6%) in other sectors. Surprisingly, a least (4%) of the children surveyed reported that they were paid less than Rs. 500 per month, while some (17%) received a remuneration between Rs. 500 to Rs. 1000, and more than a third (37%) reported to receive wages between Rs. 1000 to Rs. 2000, 15 percent reported wages between Rs. 2000 to Rs. 3000 and another 15 percent reported that they received wages above Rs. 3000 per month.12 percent of the children surveyed reported
that they used to work for 8 to 10 hours, while less than a fourth (23%) reported working for 10 to 12 hours, and another a fourth (25%) children surveyed reported that they were working for 12 to 14 hours and 37 percent reported working for 14 to 16 hours. A small fraction (2%) children reported that they were working for more than 16 hours daily. Almost all, (99%) of the children surveyed reported that they were staying at the worksite, and 1 child (1%) that he was staying with relatives. Only a few (5%) of the children surveyed reported receiving financial assistance, while an overwhelming 95 percent of children reported not receiving any financial assistance.

**Recommendations:** A well-established mechanism for tracking of children for work to other States would be necessary to establish to prevent children from being trafficked. The maintenance of a village level register at the Panchayat level, which could function as a movement register for children shall be in place and the person accompanying the child should also be recorded. Standard procedures need to be notified, verifying the identity of adults accompanying them. Action against traffickers and repeated offenders as being the persons who recruited/ took the children for work needs to be taken. Strict action against these persons may deter others from trafficking in children. Streamlining the rescue process followed by the Rajasthan Government in handing over the children directly to district authorities in Bahraich.

**KEYWORDS:** 1.CHILD LABOUR 2.CHILD PROTECTION 3.WORKING CHILDREN 4.CHILD WORKER 5.CHILD WORKER RATIO 6.RESCUE OPERATIONS 7.DAILY WAGES 8.WORKING HOURS 9.ZARI FACTORIES 10.GARMENT SECTOR 11.REMUNERATION.
Health


**INTRODUCTION:** India is the second highest consumer of tobacco in the world after China. Global Youth Tobacco Survey (GYTS) conducted all over India and in Gujarat estimated that 14.6 percent and 19 percent of students, respectively, currently use any form of tobacco products. Adolescents who are addicted to pan masala are more likely to get addicted to tobacco products in the near future.

**OBJECTIVES:** To study the effect of peer-led interventions on tobacco use among adolescents.

**METHODOLOGY:** 20 schools were randomly selected and 10 schools each were identified as cluster for intervention and control groups. A total of 402 students in intervention group and 422 in control group were studied.

**RESULTS:** Out of the total 157 government schools in Gandhinagar (rural), 10 schools each in control and intervention groups were selected randomly. A total of 402 students participated from intervention schools and 422 from the control schools. After 6 months of the research, students lost to follow-up were 31 (7.3%) in control group and 52 (13%) in intervention group, and after 1 year, it increased up to 53 (20%) in control group and 57 (27.1%) in intervention group. After conducting A Stop Smoking in School Trial like peerled intervention, a significant reduction in tobacco consumption of any form was observed in the intervention group (48%–36%) during the follow up ($Z = 3.2, P < 0.01$). A significant reduction in exposure to passive smoking in the intervention group (32%–29%) was also observed. All the students smoking initially had stopped smoking at the end of the follow up in both the groups.

**CONCLUSION:** It was found that peerled intervention was effective in reducing the consumption of smokeless tobacco in any form. The rate of reduction was more in the first follow up as compared to the end of the intervention. Sustained intervention in the form of retraining is needed for the long term effect.

**KEYWORDS:** 1. HEALTH 2. CHILD PROTECTION 3. ADOLESCENTS 4. SMOKELESS TOBACCO 5. SMOKING TOBACCO 6. TOBACCO CONSUMPTION.
INTRODUCTION: The children’s physical and emotional demands are neglected if proper care is not provided by the parents. They do not share or talk about their suppressed feelings having no opportunity for freedom of expression and develop mistrust because of the unpredictable behaviour of parents. They take roles and responsibilities often inappropriate to their age, witness violence in different forms at home, feel guilty and responsible for their parent’s behaviour.

OBJECTIVES: To assess the health effects, to describe the coping strategies adopted by the children of alcohol dependent parents. To correlate between health effects and coping strategies adopted by the children of alcohol dependent parents and AUDIT scores of parents. To associate the health effects and coping strategies of the children of alcohol dependent parents with selected demographic variables of parents. To associate the health effects and coping strategies of the children of alcoholic dependent parents with their selected demographic variables and to assess the problems faced by the children of alcohol dependent parents.

METHODOLOGY: Across sectional, descriptive exploratory research design. 400 children of alcohol dependent parents in the age between 12 and 18 years, residing at selected villages of Kirumambakkam Primary Health Centre, Puducherry.

RESULTS: The BMI calculation showed 83 (20.75%) children were found to be underweight and 9 (2.25%) were obese. 145 (36.25%) children were found with mild anaemia and 73 (18.25%) were having moderate anaemia. The physical health assessment revealed 39 (9.75%) had worm infestation, 2 (0.5%) had chicken pox, 17 (4.25%) had scabies, 166 (41.5%) had headache, 124 (31%) had stomach ache, 53 (13.25%) had backache, 63 (15.75%) had sleeplessness. Dental carries was found among 59 (14.75%) children, menstrual irregularities was reported by 9 (2.25%) girls. Three of them were taking treatment for iodine deficiency and 10 (2.50%) were taking treatment for ulcer. There were 45 (11.25%) children abused physically and 3 (0.75%) sexually abused by their alcohol dependent parents. The perceived stress level was high among 176 (44%) children and very high among 137 (34.25%) children. The self-esteem of 153 (38.25%) children was low and only 15 (3.75%) of them had high self-esteem. The children equally adopted both, productive (Mean 51.21 at SD 13.24), and non-productive coping Mean (51.93 at SD 10.41) strategies. Hemoglobin of children had a significant association with education ($x^2=16.87$, $P=0.01$) and occupation of mother ($x^2=21.57$, $P=0.005$). Hemoglobin also found significantly associated with ($x^2=15.7$, $P<0.01$) duration of addiction of parents. Perceived stress of children had significant association with occupation of father ($x^2=30.39$, $P=0.001$). There was a significant association found between self-esteem of the children and age ($x^2=8.5$, $P<0.03$) and income ($x^2=7.84$, $P<0.04$) of the father.
CONCLUSION: The miserable impact of parental addiction to alcohol on their children can lead them to live in an unsafe, unhappy restricted, over responsible life. Therapy/counselling must be planned to aim to move towards a healthier family system that builds self-worth, where there is trust, open communication, love, independence and growth of these children of alcohol dependent parents.

C. Women and Gender Issues

HEALTH


INTRODUCTION: Menstruation is the cyclical shedding of the inner lining of the uterus, the endometrium, under the control of hormones of the hypothalampituitary axis. Reproductive morbidities such as dysmenorrhoea, pre-menstrual syndrome, irregular menses, excessive bleeding during menstruation etc. are common in adolescent girls. In spite of this, health care seeking for reproductive morbidities is very low. Most of the adolescent girls remain silent without seeking any health care.

OBJECTIVES:
To address the gap in knowledge, belief and practice regarding menstruation among adolescent girls.

METHODOLOGY: A community based cross sectional study was conducted over a period of one year, in an urban area of Belagavi among 625 adolescent girls in the age group of 16–19 years. Data was collected by house to house visit using a predesigned, pretested questionnaire.

RESULTS: In our study, the mean age (±SD) of the respondents was 17.4±1.09 years and median was 17.5 years. Majority 530 (84.8%) of the adolescent girls were studying and 95 (15.2%) of them had stopped studying at the time of this study. The mean age (±SD) of menarche was 12.8±1.73 years. Majority 494 (79%) of the adolescents said that menstruation was a natural cyclical process and 416 (66.6%) of girls were aware regarding menstruation before the onset of menarche and the sources of information were; 185 (44.5%) from mothers, 75 (18.0%) from teachers, 67 (16%) from sister, 51 (12.3%) from friend, 22 (5.3%) from relative and 16 (3.9%) of them acquired information through mass media. About 271 (43.4%) of the adolescent girls used sanitary pads, 207 (33.1%) used cloth, 139 (22.2%) used both sanitary pads and cloth as per the availability and 8 (1.3%) used tampon. Among the 346 cloth users, 218 (63%) were using reused cloth and 128 (37.0%) used fresh cloth every cycle. Regarding perineal hygiene during menstruation, 464 (74.3%) girls knew that poor perineal hygiene predisposes to RTI. Our study showed that 228 (36.5%) of adolescent girls had one or the other menstrual problem. Among them 129 (20.6%) had dysmenorrhoea, 64 (10.3%) had oligomenorrhoea, 24 (3.8%) had menorrhagia, 9 (1.5%) had polymenorrhagia and 2 (0.3%) had polymenorrhoea. Of the 228
study subjects, 50 (21.9%) girls approached a gynecologist for treatment, 45 (19.8%) of them took self-treatment, 29 (12.7%) approached a qualified doctor other than gynecologist, 2 (0.9%) sought the help of anganwadi worker and 102 (44.7%) of the girls did not do anything for the menstrual problem. Significant association was found between knowledge and practice regarding the ideal material to be used during menstrual cycle and the use of sanitary pads during menstruation (p<0.001) and also in number of girls practicing cleaning of external genitalia who were having correct knowledge regarding perineal hygiene predisposing to RTI (p<0.01). But, among the subjects who had correct knowledge regarding the ideal material to be used during menstrual cycle almost equal number of girls, 271 (49.5%) of them used it and 276 (50.5%) of them did not use it even after knowing it should be used showing a gap in knowledge and practice. It was also found that 289 (62.3%) of the study participants who had correct knowledge practiced cleaning external genitalia and 175 (37.7%) of them did not practice which shows a gap in knowledge and practice. However, only 37 (7.5%) believed that girls could go to place of worship during menstruation. Similarly, 308 (62.3%) believed that girls need not restrict any kind food during menstruation. Of the 272 study participants, who believed that certain foods should be restricted during menstruation, 88 (32.4%) believed that hot foods like eggs and meat should be avoided, 74 (27.2%) believed spicy food, 68 (25%) sour foods and 42 (15.4%) believed fatty foods should be avoided during menstruation.

CONCLUSION: The present community based cross-sectional study reported good knowledge among the late adolescent girls regarding menstruation. But there was a gap in knowledge, belief and practice among adolescent girls which needs to be addressed.

KEYWORDS: 1. HEALTH 2. WOMEN HEALTH 3. MENSTRUATION 4. MENARCHE 5. ADOLESCENT GIRLS 6. DYSMENORRHEA 7. PERINEAL HYGIENE 8. RTI.
INTRODUCTION: Urinary tract infection (UTI) is defined as the presence of microbial pathogens in the urinary tract. The infection of the bladder and urethra are referred to as the infection of the lower urinary tract whereas the kidney and ureter infection is an indication of upper urinary tract infection. UTIs can be classified as uncomplicated or complicated (based on the factor that triggers the infection) or primary or recurrent (depending on the nature of occurrence). Although UTI affects both genders, women of the reproductive age group (15-44 years) are the most vulnerable, may be due to their anatomy and reproductive physiology.

OBJECTIVES: To estimate the prevalence rate of UTI among females of reproductive age group. To determine the association between socio demographic factors and prevalence of UTI among the study group.

METHODOLOGY: Study population identified were females in the reproductive age group (15–44 years) residing in the study area Kancheepuram District of Tamil Nadu. Cross sectional study with systematic random sampling technique with a sample size of 250.

RESULTS: The findings reveals that most of the (44%) females belonged to 15-24 years of age followed by females (36%) who belonged to 35-44 years of age. Around one-fifth (20%) belonged to 25-34 years of age. Among the study participants majority (64%) were Hindus, followed by Christians (22%) and rest (14%) were Muslims. Some (40%) of the study subjects had high school education and others (22%) had primary school education. Socio economic status was classified based on BG Prasad scale. Around 38 percent belonged to Class IV socio economic status and some (30%) belonged to Class III socio economic status. Three-fourth (76%) females were married and remaining (24%) were unmarried. Prevalence of UTI among females of reproductive age group was found to be one-fifth (20.4%). It was seen that among the females who had UTI, three-fourth (76%) had symptomatic UTI and remaining (24%) had asymptomatic UTI. Most of the study subjects, three-fourth (74.8%) did not have any symptoms. More than one-fifth (21.6%) complained of burning micturition, 15.6 percent had increased frequency of micturition and 7.6 percent had complaints of painful micturition. Almost one-fourth (25.2%) had any one of the symptoms mentioned.
CONCLUSION: UTI is a serious public health problem, if untreated. The burden of UTI among females of reproductive age group was more among those who presented with the symptoms of UTI. The symptoms of UTI can bring about a great discomfort to the patients resulting in a compromised quality of life. Early diagnosis and prompt treatment will prevent the chances of developing further complication of UTI and will help reduce the sufferings of the patient, hospital stay and economic loss. Managing UTIs among affected women efficiently will help them to lead a healthy and economically productive life in the future.

KEYWORDS: 1. HEALTH 2. WOMEN HEALTH 3. REPRODUCTIVE AGE 4. URETER INFECTION 5. URINARY TRACT 6. URINARY TRACT INFECTION 7. UTI.

**INTRODUCTION:** Tobacco consumption is a major public health issue globally. Majority of smokers (81%) of the world are living in low and middle income countries is the major risk factor for six leading causes of death namely ischemic heart disease, cerebro-vascular diseases, tuberculosis, lower respiratory tract infections, chronic obstructive pulmonary disease, and cancers of trachea, bronchus and lungs. It is estimated that the annual death toll may reach 8 million by the year 2030. Tobacco use has high impact on growing economy and high expenditure on health. Number of women chewing tobacco is also increasing leading to stillbirth, preterm baby and LBW babies. Number of children using the tobacco in their early age is an urgent issue to address.

**OBJECTIVES:** To explore the perceived reasons for initiation and continuation of tobacco usage among rural population Kuppam in A.P.

**METHODOLOGY:** Community based cross sectional study. Total 1500 participants, above 15 years were selected randomly for the study.

**RESULTS:** Total number of study subjects was 1500. Male 783 (52.2%) and females 717 (47.8%). Most of them were in the age group of 20-29 years (32.3%), followed by 30-39 years (20.9%). Majority of them were 605 (40.3%) belonged to nuclear family. Most of them were married (72%) and, illiterates (52%). Majority of them, were agricultural laborers (54.6%) and two-thirds of them belonged to class IV and class V socioeconomic status. Regarding prevalence of tobacco consumption among the 1500 study subjects, majority (61.3%) were Hindus, and mostly were tobacco consumers (61.2%). And all the 4 Muslims were tobacco consumers, it was seen to be highest among the subjects belonging to the marital status of separated/divorced/widow/widower group (86.5%). Out of 780 illiterate subjects, mostly were tobacco consumers (78.1%). Consumption was found to be highest among agricultural labors (71.7%) followed by housewife (63.4%). The prevalence of tobacco consumption showed gradual increase from class I (upper social class) to class V (poorer social class). Most subjects (89.9%) were consuming tobacco in two forms such as smoking and chewing. Prevalence of tobacco consumption was higher among the females (71.7%) compared with males (52.2%), which was statistically significant. Tobacco chewing was very common among most women. About half (47.1%) subjects used chewing tobacco for 10 times or more per day. The mean age at initiation of tobacco use was lower among females (17.6 years) than among males (21.6 years). Some (32.1%) of the subjects used the chewing products less than 5 times per day, and less than half (47.1%) subjects used them for 10 times or more. Most subjects (54.4%)
started tobacco consumption below the age of 20 years followed by subjects in the age group of 20-29 years (28.9%). Only 7.6% of subjects started to use tobacco after the age of 40 years. The reasons revealed by study for initiation of tobacco consumption. Peer pressure (50.4%) was the most important reason, followed by influence of family members like parents, grandparents and siblings etc. (16.4%), followed by to overcome hunger and thirst (9.6%), relaxation (3%), to pass the time (4.3%). Other reasons (9.7%) include curiosity, to overcome sleep during night duty and to get extra energy.

**CONCLUSION:** The study found a high prevalence of tobacco use. The present study has found the initiation of tobacco use before 20 years of age in most of the subjects. The common reasons for starting tobacco use found in this present study were peer pressure, influence of family members and relatives. It was found that there were certain beliefs and misconceptions that tobacco is helpful in relieving pain, tension etc. Hence it is essential for community based smoking cessation activities, health education, behavioral change communication, focus group discussion, legislative measures should be considered as preventive measures.

**KEYWORDS:** 1.HEALTH 2.WOMEN HEALTH 3.TOBACCO CONSUMPTION 4.TOBACCO CHEWING 5.INITIATION 6.CONTINUATION 7.AWARENESS 8.PEER PRESSURE.
INTRODUCTION: In India, marriage at an early age is still common and unfortunately any institution does not provide any education either regarding safe maternal health and infant care. The first two years of child are very crucial for infant development and it is quite evident that the well-being and nutrition of the child and his or her future is totally dependent upon the knowledge of the mother that she has about child care. They are not able to have a proper dialogue with their parents because of inhibitions and social taboo and hence youth may enter into parenthood with suboptimal information about infant and child feeding.

OBJECTIVES: To evaluate the awareness of breastfeeding amongst young female students from three different teaching institutions i.e. school, nursing and medical and to evaluate the influence of educational intervention on them.

METHODOLOGY: A descriptive cross-sectional study. One school was randomly selected from a block in Dehradun. Out of 75 schools going young females 71 participated in the study. 66 Students each of 3rd Year Nursing and 3rd Year MBBS students of HIMS participated in the study.

RESULTS: Scaling up of awareness in school going young females was maximally seen in average duration of each breastfeed (35%), adequacy of breastfeeding (27%), Exclusive breastfeeding (23%), HIV-TB mother should feed her baby or not (16%). In nursing female students, it was maximum in HIV-TB mother should feed her baby or not (85%), positioning of the baby during feeding (52%), exclusive breastfeeding (16%), average duration of each breastfeed (15%), whereas in medical students it was maximum in HIV-TB mother should feed her baby or not (81%), average duration of each breastfeed (48%) harmful effects of bottle feeding, (48%) adequacy of breastfeeding (41%), frequency of breastfeeding (35%).

CONCLUSION: Educational intervention is an effective tool to improve the awareness regarding breastfeeding practices but the effect of interventions may vane off with time in the absence of reinforcement, hence periodic sessions should be held in medical colleges to remove the misconceptions and incorporate correct feeding practices.

INTRODUCTION: Chronic liver diseases (CLD) are characterized by liver injury, chronic inflammation and finally by progressive substitution of liver parenchyma by scar tissue. Vitamin-D insufficiency and deficiency are prevalent in almost half the healthy population of developed countries.

OBJECTIVES: To evaluate the vitamin-D status of patients with chronic liver disease and establish an association with these severity of the disease.

METHODOLOGY: A retrospective study conducted in a tertiary care centre. In a sample size of 100 patients age, gender, etiology of CLD, vitamin-D, CP score, MELD score, and liver function tests were obtained.

RESULTS: A total of 100 chronic liver disease patients of various etiologies were included in the study, out of which 88 percent were males. The mean age group of the subjects was 50.36±20.48 years. Among the study population, 91 percent had low vitamin D levels. More than half (56%) of the cases were alcoholic liver disease and the remaining etiologies included NAFLD, Viral, autoimmune and others. Among the vitamin D deficient cases (n=82), 56 belong to the Child Pugh-C score (45% of one year survival). There was no significant correlation between the MELD score and vitamin-D levels in the study population. It was found that nearly four-fifth (82%) of the CLD patients had insufficient or deficient vitamin-D levels.

CONCLUSION: Greater proportions of poor-prognostic liver disease patients have low vitamin-D levels. Low vitamin-D levels could be a hindrance for the recovery of CLD patients. The future scope of this study is that it can be carried out as a case-control study and interventional study. Clinical drug trials can be conducted to confirm the influence of normal vitamin-D levels in retarding the progression of CLD.

KEYWORDS: 1. NUTRITION 2. WOMEN NUTRITION 3. VITAMIN-D 4. CHRONIC LIVER DISEASES (CLD) 5. VITAMIN-D LEVELS 6. VITAMIN DEFICIENCY 7. ALCOHOLIC LIVER DISEASE 8. CHILD PUGH-C SCORE.
INTRODUCTION: Intimate partner violence (IPV) is abuse that occurs between two people in a close relationship. The term “intimate partner” includes current and former spouses and dating partners. IPV can also cause emotional harm, eating disorders, depression, and suicidal tendencies. Victims also may get involved with substance abuse and engage in risky sexual activity.

OBJECTIVES: To assess the extent of physical, sexual, psychological, and controlling behavior of intimate partners against women in an educated society and find the association with age, age of marriage, married years, educational status of the women and that of partner.

METHODOLOGY: A sample of 200 women from different educational backgrounds who were working were contacted (nurses, technicians, doctors, engineers, lecturers and teachers) in Urban Karnataka.

RESULTS: Our study found that 81 of the 200 (40.5%) women reported physical, mental, or psychological abuse including controlling behavior of the partner. All three abuses were reported in 8 of the 200 women. Psychological abuse following physical abuse was seen in 24 of the 200 women (12%), and 9 of the 200 women (4.5%) had both sexual and psychological abuse. About one-fourth (25.5%) of the total women had combination of abuses, among 44 of the 200 women who reported physical violence, half (50%) of them had it only once, while half (50%) had been assaulted within a year, and one-fourth (26%) had the abuse in the recent past (<1 month). It was found that 23 of the 200 women experienced sexual violence by intimate partner. Victims faced sexually abused within a year were (30.4%) and in the recent past (<1 month) were (17.4%). Psychological assault was high among the different types of assaults consisting of 29 percent. The study participants informed that it occurred 27.6 percent sometime in the victims lifetime, while abuse in a year and recent past (<1 month) was 41.3 percent and 31.03 percent, respectively. Thirty -five of the 200 women had been emotionally battered which constituted three-fifth (60.5%) of those with psychological assault. It was seen that a few (8.3%) of the professional women suffered from both physical and psychological assaults. Physical assault was found to be higher in the age group of 30–50 years and sexual assault was higher in 30–40year old women and >50 years aged women. As the married years increased, sexual assault was found to increase (0% from <5 years to 31% in 10–20
years). Psychological assault was significantly high in the age group of 20–30 years (52.4%) and >50 years of age (46%) and those who were less educated.

CONCLUSION: Violence is present among educated population, with psychological abuse being more common. Different factors were found to play a role; hence, there is a need for social revolution for this public health concern.

KEYWORDS: 1. SOCIAL WELFARE 2. SEXUALLY ABUSED 3. PHYSICAL ASSAULT 4. PSYCHOLOGICAL ASSAULT 5. VIOLENCE ABUSE 6. INTIMATE PARTNER.
INTRODUCTION: Sexual harassment is defined as unwelcome sexual request for sexual favors and other conduct. Sexual harassment occurs when unwelcome conduct of a sexual nature creates a threatening environment that affects a person ability to participate in an action or when it is stated that an individual must submit to conduct if a sexual nature in order to join in a company or other things. Sexual harassment is also defined by law and the law says that it will seek to prevent such sexual harassment incidents and take corrective actions when sexual harassment occurs. There are two types of sexual harassment they are quid pro quo which means this for that in this case an individual must submit to conduct of a sexual nature in order to participate or join in a company the other type is hostile environment which means uncomfortable environment in this case when a unwelcome conduct of a sexual nature creates a threatening environment that affects a person’s ability to participate in an activity.

OBJECTIVES: To examine and maintain a comfortable productive work environment for women; and; to know the need for a comprehensive law on preventing sexual harassment of women at work place.

METHODOLOGY: Applied research. The sample is collected from the secondary data source including the articles, books and journals.

RESULTS: According to the hypothesis to maintain a comfortable productive work environment for women they should adopt a clear prevention of sexual harassment of policy. They should explain their employees that they have the freedom of right to work free from sexual harassment so they feel comfortable. They should monitor their workplace and get out among their employees periodically and talk to their employees about their work environment. They should keep the lines of communication open. They should take all the complaints seriously and act immediately to investigate the complaints. If complaints turns to be valid their response should be effective. This is how they should maintain a comfortable and productive work environment for women at workplace. There was no positive workplace environment for women's. Statistically, the number of sexual harassment cases reported by the top companies in India as per year over year change (yoy %) are TCS (100%), SBI (92.9%), Infosys (17%), Wipro (11%). The findings reveals that there was no encouragement on appropriate conduct of managers regarding prevention of sexual harassment. There was no policy regarding implementation of prohibiting sexual harassment of women at work.
place. There was no high level management support. There was no regular training and information on preventing sexual harassment to all staff and management.

CONCLUSION: Sexual harassment is a form of gender discrimination which is not just illegal but also harmful. More comprehensive laws gives us specific rights and remedies if you experience sexual harassment in the work place. The most common injuries suffered by victims of sexual harassment are emotions. Victims of sexual harassment often feels powerless and they develop low self-esteem. Bringing comprehensive laws gives us power to fight back against sexual harassment. The victims have the right to be free from sexual harassment and the right to be treated with dignity and respect and we don't need to tolerate sexual harassment. Therefore there should be more laws pertaining to prevention and control of sexual harassment of women at work place and the management should also take some positive measures to prevent sexual harassment of women at work place.

KEYWORDS: 1. WOMEN WELFARE 2. SEXUAL HARASSMENT 3. GENDER DISCRIMINATION 4. PRODUCTIVE WORK 5. GENDER EQUITY 6. WOMEN WORKFORCE.
## Acknowledgement

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