



# DCWC Research Bulletin

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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 Abstracts of these published and unpublished studies/ articles are compiled to present the vital information in a compact, encapsulated form to facilitate its users through its publication “DCWC Research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](http://www.nipccd.nic.in)) on the slot dedicated for Documentation Centre on Women and Children for reference of readers.

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## A. Research Abstracts on Child Development

### CHILD WELFARE

1. Shukla, M. et.al. (2018).  
Factors Associated with Depression among School going Adolescent Girls in a District of Northern India: A Crosssectional Study. *Indian Journal of Psychological Medicine*. Vol. 41 (1): 46-53.  
G21305

**Introduction:**India is home to second largest population in the world, with a major adolescent population. Depression is a global concern for children, adolescents, and adults in developing as well as developed nations. In India, the combined prevalence of depression and anxiety among school going adolescents has been reported with some cases of extremely severe depression.

**Objectives:**to estimate the prevalence of depression among school going adolescent girls and various socio demographic associated with it.

**Methodology:**A cross-sectional study among school-going adolescent girls (10-19 years) from Barabanki district in Uttar Pradesh. Multistage sampling technique was used to draw a sample of 2187 school-going adolescent girls.

**Results:**Of the total 2187 school going adolescent girls enrolled in the study, almost half (47.1%)were in the age group of 14–16 years (mid adolescents), followed by late adolescents (31%) and early adolescents (21.9%). About 45% ofthe girls were studying in 11<sup>th</sup> or 12<sup>th</sup> standard (class).A majority (76.2%) belonged to Hindu religion. Around (45.6%) belonged to Other Backward Castes (OBC),followed by general category and Scheduled Caste/Tribes(64.9% and 65.5%, respectively). Almost two thirds belonged to a rural background and joint family (35.9%and 18.5%, respectively). About half (52.9%) were studying in a government school, and a majority (76%)had Hindi as the primary medium of instruction. Almost half (51.5%) of the fathers of these girls were educated upto inter college (12th standard), with farming/agriculture work as their main occupation. Almost half (50.4%)of the mothers were illiterate, and a majority of them were housewives (83%). About two thirds (66.2%) of the girls belonged to lower socioeconomic status. About (68.4%) of the girls hardly ever reported low mood, sadness, or down feeling during the past 1 week. Majority (66.9%)of them mentioned that they hardly ever got irritable or lost temper easily or got pissed off during the past week. Some(17.1%) perceived that much of the time during the past 1 week, life was not very much fun and that they are not getting as much as pleasure from things as usual. About one fifth (19.4%)felt decreased interest in hanging out with friends, lack of interest in outings, and doing school work and recreational activities much of the time. Half

(50.5%)hardly ever suffered from a feeling of worthlessness or hopelessness or not being a good person during the last week. A major proportion (75.3%) hardly ever felt tired, fatigued, unmotivated, and so on during the past 1 week, and three-fifth (61.8%) hardly ever had any trouble to concentrate. However, a few (10.1%) felt worried, nervous, panic, tensed, and anxious much of the time. About one fourth (25.2%) reported physical symptoms such as headache, nausea, and restlessness much of the time over the last week. The majority (72.9%) hardly ever reported of having any thoughts/plans/actions about suicide or self-harm over the last 1 week. However, seven girls (0.3%) had the thought of suicide/self-harm most all the time during the last 1 week. Multiple logistic regression revealed that depression was significantly higher among those residing in rural areas (odds ratio [OR] 3.32; 95% CI 2.60–4.25;P < 0.001), those in early and mid-adolescent age group (OR 2.51; 95% CI 1.85–3.33; P < 0.001),those studying in private schools (OR 3.22; 95% CI2.32–4.54; P < 0.001), and those with Hindi as the medium of instruction (OR 12.50; 95% CI 8.33–20.0;P < 0.001)

**KEYWORDS:** CHILD WELFARE;SCHOOLGOING ADOLESCENT GIRLS; SUICIDE/SELFHARM; DEPRESSION; SEVERE DEPRESSION; MEDIUM OF INSTRUCTION; NAUSEA

2. Ramya, M.R. et. al. (2018).  
Prevalence of internet usage among selected professional college students in Puducherry. *National Journal of Research in Community Medicine*. Vol. 8 (1): 15-19.  
G21306

**Introduction:** Internet is increasingly becoming more and more useful and a necessity among people. It has become an integral part of the day-to-day life of people worldwide. Internet addiction is defined as any online related, compulsive behavior which interferes with normal life, causing severe stress on relationship and work environment. It is a compulsive impulse control disorder consisting of three sub-types such as excessive gaming, sexual preoccupation and e-mail/text messaging.

**Objectives:**

1. To assess the prevalence of internet addiction among professional college students in Puducherry
2. To determine the levels of internet addiction and behavioral aspects among the study population

**Methodology:** A cross sectional study. Stratified sampling technique was used in drawing a sample size of 600.

**Results:** Out of the total 600 students, 213 (35.5%) were males and 387 (64.5%) were females. The mean age of the students was 18.99 ( $\pm 1.305$ ) years. The internet addiction was present in 525 (87.5%) students. Males (94.8%) were reported to have more internet addiction than Females (83.4%). Among the various professional colleges, BDS students (90%) were more addicted to internet followed by nursing (87.7%) and MBBS students (85.6). The internet addiction between males and females were found to be statistically significant ( $p$  value  $< 0.05$ ). Majority (73.7%) of students had started using internet since last 5 years. Most of the students (90.5%) accessed internet through mobile phones. Majority (70.8%) of students had used social networking such as WhatsApp, Facebook, twitter, Instagram as the commonly used website. More than half (57.5%) of students reported that using internet was better than textbooks and the reason most of the students answered was that they will get updated knowledge from internet. Majority of the study participants (57.4%) had used internet for entertainment purpose such as watching movies and playing video games. Among the 600 students, the internet addiction test scoring had showed that some (12.5%) had no addiction, three-fifth (58.8%) had mild internet addiction, a fourth (27.2%) had moderate internet addiction and least (1.5%) of students had severe internet addiction. Among the study participants who were addicted to internet, females (188) had outdoor activity time decreased due to internet when compared to males and was found to be statistically significant. About 153 female internet addicts felt

making friends online was beneficial and it was found statistical significance. More females (290) than males had sleeplessness due to late night logins and was statistically significant. 268 females when compared with 181 males who were addicted to internet have told that spending more time online is better than going out with friends and the differences were also statistically significant. Most of the female students (260) had felt depressed when offline and there was statistical significance ( $p=0.005$ )

**Conclusion:** Internet addiction has been considered as a serious problem among professional college students which will also affect their mental and physical health. So, it is necessary to take interventional measures for preventing internet addiction and initiatives would also be created by giving more opportunities for recreational and extracurricular activities.

**KEYWORDS:** CHILD WELFARE; INTERNET USAGE; INTERNET ADDICTION TEST; PROFESSIONAL COLLEGE STUDENTS; SLEEPLESSNESS; INTERNET ADDICTORS; MILD INTERNET ADDICTION; COMPULSIVE BEHAVIOR.



## EDUCATION

3. Pawaskar, R. S., et.al. (2018).  
A Cross-Sectional Study to Assess Effects of Schoolbag Weight and Musculoskeletal Health Problems in Primary School Students of Kolhapur. *National Journal of Community Medicine, Vol. 9 (12): 879-883.*  
G21307

**Introduction:** Musculoskeletal pain in school children has now-a-days becoming a topic of growing health concern. Parents, school officials, and health professionals are worrisome regarding the carrying of schoolbags beyond the recommended safe load limits. The relative load carried by school children expressed as percentage of body weight in the sestudies.

**Objectives:**To determine the prevalence of musculoskeletal health problems and their association with schoolbag use in primary school students of Kolhapur, to implicate appropriate preventive measures and create awareness about the same among the students, parents and the schools.

**Methodology:** A cross – sectional school-based study. Total sample size of 886 primary students in the age group of 6-10 years.

**Results:** The total Schoolbag weight ranged from 0.6 - 10.3kg. Average total school bag weight carried by students was 4.95 kg. Average gross weight of school bag was 3.87 kg. Average total schoolbag weight was highest in students of class 4. The mean school bag weight as a percentage of mean body weight carried by the students was 22.4 percent (SD= 8.94). Percentage body weight carried in school bags ranged from (3.85% - 66.4%) bodyweight. Out of the total students under study, (7.2%) n=60 students carried schoolbags which were less than or equal 10 percent of their body weight, (92.8%) n=826 students carried schoolbags which weighed more than (10%) of their body weight. Average percentage of the weight contributed by textbooks, notebooks and other accessories was 55 percent, 27 percent and 18 percent respectively. Three-fifth (64%) n= 567 students complained of musculoskeletal discomfort related to carrying their schoolbag. Prevalence of musculoskeletal symptoms in Class I students was less than students studying in higher classes. Prevalence of musculoskeletal symptoms in students from CBSE schools was less than students from SSC schools. Prevalence of musculoskeletal symptoms in students from English medium schools and Marathi medium schools was (77.4%) & (36.9%) respectively. Statistically significant relationship was found between the schoolbag weight carried and the discomfort complained by the student.

**Conclusion:** Prevalence of musculoskeletal symptoms was found to be higher in CBSE (Central Board of Secondary Education)pattern schools (73%)than in SSC (Secondary School Certificate)pattern schools (55%).

**KEYWORDS:** EDUCATION;CHILD EDUCATION;SCHOOL CHILDREN; SCHOOL MEDIUM; PRIMARY SCHOOL; BODY WEIGHT; SCHOOL BAG WEIGHT; MUSCULOSKELETAL HEALTH; CBSE (CENTRAL BOARD OF SECONDARY EDUCATION); SSC (SECONDARY SCHOOL CERTIFICATE)

4. Naik B.N. (2019).  
Self-directed learning readiness among undergraduate medical students in a tertiary care health institution in Pondicherry. *National Journal of Research in Community Medicine, Vol. 8 (1): 20-24.*  
G21308

**Introduction:**The educational process is expected to be ever evolving and should encompass other modalities of teaching and learning along with lecture discussion for making the medical graduates to have right knowledge, acquire sound skills and develop right attitude. Self-directed learning (SDL) has been encouraged as a method for lifelong learning among health professionals.

**Objectives:** To assess the level of readiness for self-directed learning (SDLR) and its correlates among medical undergraduate students of a tertiary health care institution in Pondicherry.

**Methodology:** This cross-sectional study was conducted among 243 Bachelor of Medicine and Bachelor of Surgery (MBBS) students. A self-administered study tool was used for collection of relevant information. SDLR was assessed using Fisher's 40 items SDLR scale.

**Results:**The median (range) age of the study population was 20 (18 – 23) years. Nearly all (90%) of the participants studied in state boards. About one-fourth (25%) of the study participants had doctors in the family. English was the medium of instruction in class 12<sup>th</sup> for almost all the participants. Majority (57.2%) of the study participants reported multiple sources of references for study. Most common sources for study reference were text book (47.3%) followed by class notes (26.8%) and internet (22.3%). The mean (standard deviation (SD)) SDRL score was 147.8 (13.2) among the study participants. The mean (SD) scores in three domains of SDLR were 44.1 (4.8) (self-management), 46.6 (4.6) (desire for learning) and 57.1 (6.9) (self-control). Day scholar, students with good motivation level and good time management skills had statistically significant higher SDLR scores than their counterparts. Males had higher SDLR score overall as well as in all three domains than females but the difference were statistically significant in desire for learning domain. Students with good motivation level 152.5 (13.5) and time management skills 153.9 (13.1) scored significantly higher SDLR scores in all three domains than their counterparts. Student studied in state board for class 12<sup>th</sup> and student with doctor in the family have higher SDLR score than their counterparts, though statistically not significant. The SDLR score was similar among 4<sup>th</sup> and 6<sup>th</sup> semester students as well as students from urban and rural areas. About (44.4%) of the students had high readiness for SDL. Nearly half of the male students against (41%) of female students had high readiness for SDL. Age did not show correlation with SDRL overall or its domains.

**Conclusion:** Majority of the students had low readiness for self-learning in the study population. There was positive association between level of motivation and time management skills with readiness for self-directed learning among medical students. Curriculum assessor should consider various strategies to improve the motivation and time management skills of medical students.

**KEYWORDS:** EDUCATION;CHILD EDUCATION; SELF-DIRECTED LEARNING (SDL); CURRICULUM ASSESSOR; SDLR; HIGH READINESS; SELF-MANAGEMENT; DESIRE FOR LEARNING; SELF CONTROL; MEDIUM OF INSTRUCTION.

## HEALTH

5. Aithal, S.S. et.al. (2018).  
A Study on Awareness and Utilization of Kishori Shakti Yojana (KSY) Services among Adolescent Girls in Urban Area of Davanagere Taluk. *National Journal of Community Medicine; Vol. 9 (12): 851-855.*  
G21315

**Introduction:** Adolescence is an intermediate phase of growth and development between childhood and adulthood. The World Health Organization (WHO) defines an adolescent as any person between ages 10 and 19. Kishore Shakti Yojana (KSY) is such a scheme that is dedicated for improving the adolescent health in the country.

**Objectives:** To assess the awareness and utilization of KSY services among adolescent girls and the factors influencing them.

**Methodology:** A community based cross-sectional study was conducted among adolescent girls of urban Davanagere. A household survey of 376 girls.

**Results:** The age of the participants ranged from 11 to 18 years, with a mean age of  $14.60 \pm 2.14$  years. Among them, 215 (57.2%) girls belonged to early adolescent age group i.e., (11-14 years) and 161 (42.8%) girls belonged to late adolescent age group (15-18 years). Majority of the adolescent girls 360 (95.7%) were Muslim by religion and 369 (98.1%) of them belonged to nuclear family. Nearly half of the study participants, 176 (45.7%) belonged to SES class 5 according to modified BG Prasad classification. Respondents who stated that their parent (Mother/ Father) could not read and write in any language were 124 (33%). Among the adolescent girls interviewed only 222 (59.04%) of the girls were school going, the rest were school dropouts due to various reasons like family decision, financial constraints, poor interest in studies. Majority of the girls were aware about the services provided to pregnant women 346 (92%) and children 357 (94.9%); however there was poor awareness about the health education services provided by Anganwadi centers (33.2%). Less than half of the adolescent girls (32.7%) were aware of the scheme Kishori Shakti Yojana at Anganwadi. Among the total study participants, 123 (32.7%) were aware of this service and only 100 (26.5%) girls were a part of supplementary nutrition. Among them, 22 (22%) of them received nutrition for 6 months and only 13 (13%) of them noted weight gain in that period. Majority of the adolescent girls were satisfied with the quantity 58 (58%) and quality 73 (73%) of the supplementary food provided under KSY services. Overall, 290 (77.1%) adolescent girls received iron and folic acid tablets out of which 246 (84.8%) received from school and only 44 (15.2%) received it from Anganwadi centre. Among the girls who received IFA tablets from Anganwadi centre only 19 (43.2%) adolescent girls took the tablet regularly. Most of them, 31 (70.5%) took the IFA tablets for less than 6 months. The reasons for the poor compliance towards IFA tablets

included not useful 116(40%), side effects 58 (20%), belief that it may cause harm 47 (16.2%), lack of supply 46 (15.8%), feel healthy and tablets unnecessary 23 (7.9%). Only 96 (25.5%) girls participated in the Health Education Programs. Though 56 (14.9%) of the adolescent girls were aware of the vocational training services available none of the study participant underwent any training. Reasons for poor utilization of KSY services and the most common reason observed was lack of awareness 208 (55.3%) followed by lack of motivation in availing services 82(21.8%). Statistically significant association was found between utilization of KSY services and age of the adolescent girls with health education services( $p=0.015$ ), IFA tablets ( $p=0.0001$ ).

**Conclusion:** This study revealed poor awareness and utilization of KSY services to the adolescent girls. Spreading awareness about the KSY services under ICDS through various information education and communication (IEC) activities.

**KEYWORDS:** HEALTH; ADOLESCENT HEALTH; IRON AND FOLIC TABLETS; IFA TABLETS; KSY; PREGNANT WOMEN; BG PRASAD CLASSIFICATION; SUPPLEMENTARY NUTRITION; VOCATIONAL SERVICES; PRESCHOOL EDUCATION; FINANCIAL CONSTRAINTS; FAMILY DECISION; HEALTH EDUCATION PROGRAM.

6. Nair, M. et.al. (2018).  
Iron Overload in Children with Leukemia Receiving Multiple Blood Transfusions. *Indian Pediatrics*. Vol.55(11): 962-965.  
G21312

**Introduction:** Children with hematological malignancies receive multiple packed red cell (PRBC) transfusions throughout their treatment due to several reasons like bone marrow suppression, blood loss, repeated infections, nutritional anemia, renal insufficiency etc.

**Objectives:** To find out prevalence of iron overload in children with leukemia at the end of treatment, and to identify factors affecting iron overload.

**Methodology:** Patients with Acute Lymphoblastic Leukemia (ALL) were stratified into standard-risk and high-risk based on age. 66 children (37 boys); 31 (47%) were aged 1-6 years and 35 (53%) were aged 7-14 years at diagnosis.

**Results:** The findings revealed that 58 patients (88%) had Acute Lymphoblastic Leukemia(ALL) and 8 patients (12%) had Acute Myeloid Leukemia (AML). Fifty-five patients (83.3%) received PRBC transfusions during treatment. Total Transfusions received (TTV) ranged from 10-210 mL/kg, with mean TTV of 48 mL/kg. AML patients received more transfusions (mean 110 mL/kg, range 60-100 mL/kg) than ALL patients (mean 37 mL/kg, range 10-110 mL/kg), and high-risk ALL patients received more transfusions (mean 58 mL/kg, range 30-110 mL/kg) than those with standard-risk ALL (mean 30 mL/kg, range 10-60 mL/kg). Mean ferritin level was also higher for AML patients (1148 ng/mL) as compared to ALL patients (566 ng/mL). Iron overload was found in 16 patients (24.2%), with mean ferritin levels 1228 ng/mL (range 1060-2660 ng/mL). They received higher TTV (average 71 mL/kg), with 12 out of them receiving TTV>100 mL/kg. Half of the AML patients (4 out of 8), and 20% of ALL patients (12 out of 58) demonstrated iron overload. On univariate analysis, iron overload had statistically significant association with type of leukemia, treatment intensity and TTV, and was not associated with age or gender of child. On multivariate analysis, TTV >100 mL/kg (>10 transfusions) was the only significant determinant of iron overload (P=0.003).

**Conclusion:** The findings of the study pointed that the pediatric leukemia patients demonstrated iron overload at the end of treatment. It is suggested that these patients need to be monitored and followed-up after treatment to assess need for later chelation therapy.

**KEYWORDS:** HEALTH; CHILD HEALTH; CHILDHOOD CANCER; LEUKEMIA; ACUTE LYMPHOBLASTIC LEUKEMIA (ALL); TOTAL TRANSFUSIONS RECEIVED (TTV); BONE MARROW SUPPRESSION; IRON OVERLOAD; CHEMOTHERAPY

## ICDS

7. Joshi, H.P. et al. (2018).  
A Study of Monitoring and Supportive Supervision by CDPOs and Supervisors in ICDS. New Delhi : NIPCCD. 223p.  
G21311

**Introduction:** Since its inception, there had been various evaluation carried out to make the ICDS Programme a more robust, child-friendly, and thoroughly connected to the end users, that is the mothers and children under 6 years. The innovations under the restructuring of ICDS, that have been employed includes Universalization of this Programme, effective implementation from Annual Programme Implementation Plans (APIPs) key gaps, a comprehensive Monitoring system with MIS in place, and more effective methods had been adopted by the SMUs and CMU, NIPCCD, respectively.

**Objectives:** The objectives of the study are:

- i. Find out the extent of monitoring and supportive supervision by CDPOs and Supervisors affecting the delivery of services by AWWs; and
- ii. Identify the organizational factors contributing and hindering to effective monitoring and supporting supervision of AWWs by CDPOs and Supervisors in accordance with the guidelines for monitoring and supervision.

**Methodology:** A multi stage stratified random sampling method was adopted to select a total sample of 144 AWCs.

**Results:** The findings revealed that out of six DPOs, four (66.7%) were in the age group between 39-50years while majority of Supervisors(41.7%) was in the age group 30-40 years. Among Supervisors a large majority were postgraduate (79.2%), graduates (16.7%) and one Supervisor (4.1%) was matriculate. Maximum (36.8%) Anganwadi Workers were graduates / post graduates followed by senior secondary (34.7%), matriculates (27.1%) and below matric (1.4%). In the present study, one third of the DPOs (33.3%) had experience of above 10 years and two-third (66.7%) were working as DPO for less than five year. More than half (54%) of Supervisors had experience as Supervisor for more than 10 years wherein two-fifth (41.7%) were working as Supervisors for less than five years. Among Anganwadi Workers about two-fifth (44.4%) were working for 5 to 10 years and another (41.7%) had experience for more than 10 years wherein some (14%) were working for less than 5 years. About half of the DPOs (50%) were promoted from CDPO, one sixth (16.7%) were directly appointed as DPO and one-third (33.3%) were having charge of DPO. Majority of the CDPOs (58.3%) were directly recruited as CDPO and one-third (33.3%) were promoted from supervisors whereas some (8.3%) of them were on



deputation from other departments. About one third (33.3%) of the CDPOs attended last refresher course within 4 years preceding the survey; one sixth (16.7%) attended refresher course within 4-6 years preceding the survey. Two-fifth (41.7%) of Supervisors and half (50%) of the CDPOs had not attended any refresher training in the last eight years. Three-fourth of Supervisors have attended one or more orientation courses ranging from ECCE, WHO growth standard, revised MIS in ICDS VHND, NHed, SABLA and other income generation schemes. As per the norms, in a circle 25 AWCs are there. In the present investigation, out of 24 Supervisors, 13 (54.2%) had the charge of one circle, Seven Supervisors (29.2%) had charge of two circles, two (8.3%) had charge of four circles whereas one Supervisor had charge of three circles and another one had five circles. Out of 24 Supervisors, three Supervisors (12.5%) had 20 to 25 AWCs under their supervision; 10(41.6%) Supervisors were supervising 25-50 AWCs; seven (41.6%) Supervisors had 50-75AWCs under their charge; two (8.2%) had 75-100 and another two (8.2%) Supervisors had more than 100 AWCs under their supervision. One fourth (25%) posts of CDPOs, (30.6%) posts of Supervisors, (3.3%) AWWs, (8.4%) AWHs, (33.3%) posts of Assistant/clerks, (36.4%) posts of accountant/Accounts clerks, (50%) posts of Statistical Assistants were not filled. Out of 12 ICDS projects selected as sample for the present study, only two-fifth (41.7%) projects had adequate space for storage of ration at CDPO office. At least 3 AWCs during each block visit to ensure a fifth (19%) AWC coverage in a year equally spreading them across the year. Majority of the CDPOs (7 out of 12) reported that they are able to visit the same AWC in more than one year time. Whereas, 5 CDPOs reported that they visit an AWC once a year. Notably, one-third of AWCs (35.6%) have not been visited at all during last one year from the date of survey as reported by CDPOs. Major reasons for not paying joint visits of AWCs with Medical Officers (MO) were lack of convenient time with MO (25%) while another one-fourth (25%) MOs not interested, lack of coordination and others (8.3%). Three-fourth of CDPOs instructed Supervisors to guide AWWs in specific weak areas. Half of the CDPOs instructed Supervisors to plan visits accordingly; followed by instructing Supervisors to bridge the gap (41.7%); giving warning and stopping the salary(16.7%); and reporting to higher authority for taking action (8.3%). Majority (95.8%) of Supervisors prepared the visit plan by themselves. This finding was corroborated by CDPOs (91.7%). The various activities undertaken by CDPOs during AWC visit include checking the attendance of AWW and AWH (33.3%); interviewing the AWW (5.6%); checking records/registers (35.4%); observing the attendance of children (36.8%);meeting the beneficiaries/PRIs/community leaders (18.8%); physical verification of SN stock & distribution (32.6%); discussing the problems faced by AWW (25%); demonstrating PSE activities (22.9%); and guided AWW in growth monitoring (19.4%). Out of 24 Supervisors, 22 (91.7%) reported that they prepare action plan on the basis of topics/issues discussed in the circle meetings. Majority of CDPOs (75%) asked AWWs to complete the records in case of records not maintained properly.

**Conclusion:** The study highlighted that although the CDPOs had received refresher training but were not undergoing refresher training once in two years. Half of the CDPO were having additional charge of other ICDS project (s). There was shortage of adequate space at AWCs, while the visits paid by the Supervisors and CDPOs were also found to be irregular. Training to AWWs was advocated by the CDPOs for proper functioning of the AWCs.

**KEYWORDS:** ICDS; ANGANWADI CENTRE (AWC); ANGANWADI WORKERS (AWWS); SUPPLEMENTARY NUTRITION (SN); SUPERVISORS; AWH; CDPOS; NEW WHO CHILD GROWTH STANDARDS; WEIGHT PLOTTING; SNEH SHIVIRS; VHND; ANM; NRC; NHED; VILLAGE HEALTH SANITATION AND NUTRITION COMMITTEE (VHSNC); FIVE-TIER MONITORING SYSTEM; PSE.

## NUTRITION

8. Marwaha. R.K. et. al. (2018).  
Supplementation with Three Different Daily Doses of Vitamin D3 in Healthy Pre-pubertal School Girls: A Cluster Randomized Trial. *Indian Pediatrics, Vol.55 (11): 951-956.*  
G21309

**Introduction:** The deficiency of Vitamin D has been widely recognized as public health problem. The Vitamin D deficiency causes secondary hyperparathyroidism with negative consequences on bone mineral density (BMD) resulting in increase in serum bone resorption markers.

**Objectives:** To evaluate the effect of vitamin D3 supplementation on serum bone formation and resorption markers.

**Methodology:** A cluster randomized controlled trial. 300 pre-pubertal school girls (age 6.1-11.8 y) were evaluated from a private school in Delhi, India.

**Results:** Out of total, 240 (80%) were found eligible and consented for study; 216 (72%) completed the study. Twenty-four were excluded due to unavailability of post-treatment laboratory reports, or missed taking supplementation for more than 7 days continuously, or other reasons. All 300 girls (100%) had 25 (OH) D below 20 ng/mL. Mild, moderate, and severe deficiency was observed in 96 (44.4%), 113 (52.3%) and 7 (3.3%) children, respectively. Post-supplementation mean (SD) serum 25(OH)D levels increased to 29.23 (8.00) ng/mL ( $P<0.01$ ), and a level of 20 ng/mL or more were seen in 67 (91%) girls in group A, 64 (97%) in group B and all (100%) in group C. The difference in the rise of serum 25(OH)D levels between group A and C (7.74 ng/mL,  $P<0.01$ ) and between groups B & C (5.86 ng/mL,  $P<0.01$ ) was significant. The baseline serum PTH was 49.6 (27.2) pg/mL that decreased to 33.7 (14.5) pg/mL with a follow-up of 6 months of vitamin D3 supplementation ( $P<0.01$ ). Secondary hyperparathyroidism was seen in 32 (14.8%) children at baseline, which reduced (4.5%) on follow-up ( $P<0.01$ ). The mean (SD) urinary calcium mg/mg following 6 months of supplementation ( $P<0.01$ ) that was not different among the three groups after adjustment for age. Following supplementation, serum PINP levels increased significantly from 538.9 (199.78) to 655.5(18.24) ng/mL ( $P<0.01$ ) and serum CTX decreased significantly from 0.745 (0.23) to 0.382 (0.23) ng/mL ( $P<0.01$ ); significant for intra-group comparison but not intergroup comparison. No adverse effects were found during the study period.

**Conclusion:** It was found that the daily intake of Vitamin D doses of 600 IU to 2000 IU for a continuous 6 months results in Vitamin D sufficiency in more than 90% of pre-pubertal girls.

**KEYWORDS:** NUTRITION;CHILD NUTRITION; VITAMIN D3 SUPPLEMENTATION; PRE-PUBERTAL SCHOOL GIRLS; SERUM BONE; HYPERPARATHYROIDISM; DAILY SUPPLEMENTATION.

9. Kaviyaa, A.T.et. al. (2018).  
Vitamin D Deficiency as a Factor Influencing Asthma Control in Children.  
*Indian Pediatrics, Vol. 55(11): 969-971.*  
G21310

**Introduction:** Children with asthmatic problems have been marked as a huge burden on the family and society at large. The Vitamin D has been majorly associated with the persistence of asthma. Many studies have shown that Vitamin D inhibits sensitization in bronchial wall smooth muscle and that the deficiency of Vitamin D can increase the occurrence and severity of asthma.

**Objectives:** To study the association between asthma control and serum 25OH Vitamin D levels in children with moderate persistent asthma on preventer therapy.

**Methodology:** A prospective observational study. In total 50 children aged 6 to 18 years with moderate persistent asthma on preventer therapy for 2 months (+29 days).

**Results:** The mean (SD) age was 11.2 (3.6) years. Asthma control was poor in 7 children, 22 children had well-controlled asthma, and 21 had partial control. Children with well controlled asthma were significantly less likely to have been born low birth weight. The nutritional status revealed that the normal weight was predominant in well-controlled(73%) as compared to not well-controlled(46%). The underweight were found more in the not-well controlled (36%) than well-controlled (14%) and the overweight/obese also found more in the not-well controlled (18%) than well-controlled (14%). Elevated IgE levels was found more in no well controlled (71%) than the controlled (59%). The serum 25 (OH) D levels ranged between 6.5 ng/mL and 32.5 ng/mL. The mean (SD) level was 19.6 (6.2)ng/mL, and median (IQR) was 18.6 (9.5, 14.9) ng/mL. The deficiency of vitamin D levels was found more in not-controlled (93%) while that of the controlled (18%).

**Conclusion:**The findings of the study revealed that the Vitamin D deficiency is associated with suboptimal asthma control. Vitamin D deficiency has been shown to increase the incidence and severity of asthma as well as the efficacy of preventive therapy with inhaled corticosteroids.

**KEYWORDS:** NUTRITION;CHILD NUTRITION; CHILDHOOD ASTHMA; VITAMIN D INTAKE; VITAMIN D DEFICIENCY;SERUM 25 (OH); PREVENTER THERAPY; IGE LEVELS; MODERATE PERSISTENT ASTHMA; WHO STANDARDS; BMI CHARTS.

10. Das, S. R. and Krishna, C. (2018). Household Food Insecurity and Malnutrition in an Urban Field Practice Area of a Medical College. *National Journal of Community Medicine*, Vol. 9 (12): 869-874.  
G21318

**Introduction:** India is amongst the world's largest population, where the people live everyday without any food security. More than a fifth (21%) of children in India suffer from wasting. Not only does food insecurity in itself has deleterious effects on households and individuals but efforts at achieving food security may also pose a heavy economic toll if households must spend most of their income on obtaining food.

**Objectives:**The study conducted to determine the prevalence of food insecurity at the household level and to assess the association between food insecurity and malnutrition of under-five children.

**Methodology:**This cross-sectional study was conducted among 200 mothers of under-five children in urban field practice area.

**Results:**Majority of the subjects were in the age group of 20-29 years (87.0%). 133 (66.5%) were Muslim by religion, 170 (85.0%) were hailing from nuclear family. Family size was <4 in majority of studys objects (84.5%). 106 (53%) were residing in their own houses, 92 (46.0%) were educated till high school, 167 (8305%) were unemployed and 107(53.5%) had income of 5000-10000 rupees per month. Majority 133 (66.5%) were food secure and 87 (33.5%)were food insecure. There was a statistically significant association between food insecurity and age of study subjects, religion, type of house and education of mother. Logistic regression showed that compared to mothers aged >30years, mothers aged <20 years(OR 14.358, CI 1.291-159.644, p<0.05) had higher chances of being food insecure. Mothers with rented house had higher chances of being food insecure compare to mothers with own house (OR3.282, CI 1.728-6.235 p<0.05).According to weight for age, 120 (60%) were normal, 63 (31.5%) were under-weight and 17(8.5%) were severely under-weight. According to height for age, 111 (55.5%) were normal, 74 (37%)were stunted and 15 (7.5%) were severely stunted. According to weight for height, 132 (66%) were normal, 40 (20%) were wasted and 28 (14%)were severely wasted .Children of mothers who were food-insecure had more chances of under weight compared to children of mothers who were food-secure (OR 4.64, CI 2.48-8.73, p<0.05). Similarly, children of mothers who were food-insecure had more chances of stunting(OR 1.33, CI 0.74-2.40, p=0.33) and wasting (OR3.66, CI 1.96-6.83, p<0.05) compared to children of mothers who were food-secure.

**Conclusion:**The present study revealed high level of food insecurity at household level in the selected area. However there was no association between food insecurity and stunting.

**KEYWORDS:** NUTRITION;CHILD NUTRITION; GLOBAL HEALTH INDEX; GHI; FOOD INSECURITY; FOOD-SECURITY; UNDER-FIVE CHILDREN; HFAIS SCALE; WASTING; SEVERELY STUNTED; UNDERWEIGHT; NORMAL WEIGHT

## B. Research Abstracts on Child Protection

### HEALTH

11. Reja, R. et. al. (2018).  
Assessment of Knowledge about Immunization among Mothers of Under Five Children Attending Immunization in Tertiary Care Hospital in Udaipur. *National Journal of Community Medicine, Vol. 9(12): 865-868.*  
G21316

**Introduction:** Immunization is established tool for checking and eradicating dangerous infectious diseases and is estimated to avoid between 2 and 3 million deaths annually. Vaccination is one of the biggest scientific breakthroughs ever made.

**Objectives:** To evaluate the mothers' awareness and knowledge of immunization.

**Methodology:** A hospital based cross sectional study. 320 mothers who came for immunizing and their under 5 children.

**Results:** The findings revealed that some (17.5%) women were below 20 years, while majority (70.6%) were in the age group of 21-30 years and 11.8 percent were in age group above 30 years. Mostly women were housewives (80%) and rest were working (20%). Similarly, most of the women didn't complete their senior secondary education (75.9%). Only a fourth (24.1%) women had education greater than senior secondary. Two-third (66.9%) residing in urban areas & a third (33.1%) women belonged to rural areas. The source of information regarding immunization amongst majority of the respondents was ANC clinic (69.2%), followed by health workers such as ASHA/AWW (58.6%) and media (53.1%). Only two-fifth (38.7%) of the mothers whose sources of information were hospital based staff, doctors and nurses etc. Majority of mothers (98.4%) stated vaccines to be beneficial. Most of them know the right age to start vaccination (84%) and about vitamin A. Only a fourth (27.8%) knew about Rota virus vaccine and another (22.5%) knew about five components of pentavalent vaccine. After assessing scores, only a fourth (28%) mothers were well ware about immunization and their children were immunized completely. In contrast with this three fourth (72%) of the mothers didn't know or had very less information about immunization. Majority of 222 (86.7%) housewives and 60 (93.7%) working mothers were well aware about immunization. When mothers were divided according to their education status, one-fourth (25.5%) mothers having education below senior secondary had adequate knowledge about immunization and rest (74.5%) mothers had partial or no knowledge about

immunization. Similarly, only (39%) mothers having education higher than senior secondary had inadequate knowledge about immunization and rest (61%) mother adequate knowledge about immunization. Three-fourth (77%) in urban and two-fifth (60.4%) in rural mothers had adequate information about immunization. The association between knowledge and educational status is highly significant ( $p < .001$ ). Majority of mothers 164 (76.4%) in urban and 64 (60.4%) mothers in rural mothers had adequate information about immunization. The association between knowledge and residential status is highly significant ( $p < .001$ ).

**Conclusion:** Vaccination completeness is importantly linked with knowledge and practice of mothers/parents. The mothers' educational and residential status and their knowledge regarding immunization were significantly associated which indicate importance of improving female literacy and women empowerment to improve the immunization coverage and to reduce infant mortality rate.

**KEYWORDS:** HEALTH; VACCINATION; CHILD PROTECTION;  
IMMUNIZATION; PENTAVALENT VACCINE; ROTA VIRUS VACCINE; HEALTHCARE  
WORKERS; WORKING MOTHERS; ANTENATAL CLINICS.

## C. Women and Gender Issues

### HEALTH

12. Kumar, A. et. al. (2018).  
Determinants for acceptability of a Conditional Cash Transfer Scheme (JananiSurakshaYojana) for Encouraging Institutional Deliveries among Antenatal Mothers: A Case Control Study. *Journal of Health Management, Vol. 20(2): 197-205.*  
G21313

**Introduction:** As one of the indicators in development of the country remains the health of the mother and child. The government of India has always been concerned as one could find a fourth of the world's unattended deliveries happen in India. To address the need of the women's health and prevent the maternal deaths, attributed during the intrapartum and postpartum period, the world's largest cash transfer programme JananiSurakshaYojana (JSY) was introduced among women below the poverty line and belonging to the backward classes.

**Objectives:** To assess the knowledge of antenatal women regarding JSY and determine the reasons for a group of antenatal women for availing the benefits of JSY.

**Methodology:** A matched case control study. Total sample size of 136 pregnant women enrolled for antenatal check-up with a valid BPL card was taken in.

**Results:** Majority of participants were more than 25 years of age in both cases (72.1%) and the control (66.2%). The literacy rate among the beneficiaries or cases (95.6%) as well as among the spouse (97.1%) was found to be higher than controls. The findings also revealed that there were more controls (75%) than the cases (69.1%) registered from rural areas. The association between period of gestation of participants and their acceptance of JSY was found to be statistically significant ( $p$ -value = 0.02). The presence of ASHA workers were found in all the cases. While a majority of the controls 46 (68%) were not at all knowing about the JSY. Out of the remaining 22 controls (32.4%) the study further revealed that partial controls (52%) had heard of JSY in the Anganwadi. Health Care workers as ASHA and ANM remained the primary source of information for two-third (66.6%) cases. In the control group, two-third (66%) stated lack of awareness as a reason for not utilizing JSY, followed by utilizing other scheme (17.6%), inefficiency of ASHA in enrolment (14.7%) and scheme limited to girl child (14.7%) followed by non-cooperative family (8.8%).



**Conclusion:** The JSY has been implemented successful in facilitating institutional deliveries for women in the BPL category. Yet there are major participants in the study not availing the facility. Most of the women are aware that the benefit under this scheme is limited only to mothers of girl child and the cash benefit is provided only to the mother. It shall be concluded that ASHA workers although facilitate the community diagnosis for women beneficiaries, but are overloaded with so many tasks and responsibilities. Thus, there is a need for increase in their incentives in order to motivate them for their duties.

**KEYWORDS:** HEALTH; WOMEN HEALTH; MATERNAL MORTALITY RATE (MMR); JANANI SURAKSHA YOJANA (JSY); ANTENATAL CARE; ASHA WORKERS; ANM

13. Nair, M., et.al. (2016). Association Between Maternal Anaemia And Pregnancy Outcomes: A Cohort Study In Assam, India. *BMJ Global Health Journal, March 2016: 1-9.* G21314

**Introduction:**The state of Assam, have high maternal and infant mortality due to iron deficiency anaemia is a major causal factor. Iron deficiency anaemia during pregnancy is a known risk factor for preterm birth, low birthweight and small-for-gestational age babies, and increases the risk of postpartum haemorrhage (PPH).

**Objectives:**To examine the association between maternal anaemia and adverse maternal and infant outcomes, and to assess the feasibility of conducting epidemiological studies through the Indian Obstetric Surveillance System–Assam (IndOSS-Assam).

**Methodology:**Retrospective cohort study with a total sample size of 1007 pregnant women who delivered.

**Results:** About 33 of the 1007 women (3.3%) had aPPH. 11 women were reported to have a blood loss of 500–999 mL, 6 between 1000 and 1499 mL, another 6 had >1500 mL of blood loss in the first 24 h after delivery and for the remaining 10, estimates of blood loss were not available. In three-fourth (73%) of the PPH cases, the reported cause was uterine atony (n=24); other causes included placenta praevia (n=2), placental abruption (n=1), uterine infection (n=2), tears/injuries (n=2) and retained placenta (n=2). A high prevalence (n=263 of the 969, 27%) of low birth weight among live-born singleton pregnancies was found in the study population and a higher prevalence of small-for-gestational age (n=409 of the 969, 42%). 33 perinatal deaths of the 989 singleton pregnancies (3.3%), 20 stillbirths and 13 neonatal deaths which occurred either on the day of delivery or within 2 days of birth. Among the 1007 pregnant women, (28%) (n=282) had the most recently recorded Hb in the first trimester (1–12 weeks of gestation), 37% (n=372) in the second trimester (13–27 weeks), (30%) (n=302) in the third trimester (28–40 weeks), and for the remaining (5%) (n=51) the date of Hb record was not available. Overall, (65.1%) had mild anaemia/normal Hb levels (356 women with normal Hb  $\geq$ 11 g/dL, and 300 with mild anaemia 10–10.9 g/dL), a third (32.8%) had moderate anaemia (n=330) and a few (2.1%) (n=21) had severe anaemia during the antenatal period. Just over a quarter of women (n=141) received treatment for anaemia including iron supplementation, blood transfusion or other treatments (such as herbal remedies).

**Conclusion:** Maternal anaemia is associated with increased risks of PPH, low birthweight, small-for-gestational age babies and perinatal death. The IndOSS-Assam platform can be used to conduct epidemiological research.

**KEYWORDS:** HEALTH; WOMEN HEALTH; MMR; MATERNAL MORTALITY RATE; POSTPARTUM HAEMORRHAGE (PPH); LOW BIRTH WEIGHT; IRON DEFICIENCY ANAEMIA

14. Reja, R., et. al. (2018).  
Correlates of Awareness and Attitude Regarding HIV/ AIDSTransmission  
in Pregnant Females Attending Tertiary CareCenter of Southern  
Rajasthan. *National Journal of Community Medicine, Vol.9 (12): 860-864.*  
G21317

**Introduction:**The most common cause of major cases (90%) of HIV transmission among children is vertical transmission of HIV from mother. Of this, breastfeeding contributes to at least (10%). The preventive schemes under the National AIDS Control Program (NACP) comprises directed treatments for high-risk groups and bridge population, Needle exchange programs for injection drug users, prevention and control of sexually transmitted diseases, HIV counseling and testing services.

**Objectives:**To assess the awareness regarding HIV/AIDS ransmission in pregnant women and their attitude towards people living with HIV/ AIDS (PLHA).

**Methodology:**A hospital based cross-sectional study conducted on pregnant women attending antenatal clinic. In total 320 pregnant mothers were interviewed using a semi-structured questionnaire.

**Results:** The findings revealed that more than three-fourth (76.8%) subject were aware that unsafe sex was one of the most common mode of transmission HIV, while another (76.2%) women were aware about transmission of HIV virus from mother to their children, two-third (65%)women consider that sharing contaminated needle can cause HIV/AIDS, some (38.4%) were aware about infection by contaminated blood transfusion, two-fifth (42.8%)women were aware about transmission of HIV virus to babies through breast feeding. Some (27.8%), (18.1%)and (6.8%) subject considered that HIV can be transmitted by touching, sharing utensils and mosquito bites. As regarding attitude other (41.3%) subjects have average attitude regarding PLHA, two-fifth (39.3%) subjects had badattitude and only one-fifth (19.4%) women had good attitude towards PLHA. Two-third (66.6%) study subjects with more than high school education and majority (69.5%) subjects with education below secondary level consider PLHA as threat to society, three-fifth (60.4%) study subjects with more than high school education and majority (47.8%) subjects with education below secondary level show concern about the care of HIV+ person, three-fifth (64.6%) study subjects with more than high school education and another (72%) subjects with education below secondary level said that they would dismiss their HIV+ maid but this type of attitude among education status of subject is not a significant ( $p$ -value  $>0.005$ ). In contrast to above (70.8%) study subjects with more than high school education and half (53.3%) subjects with education below secondary level consider that their infected children should be allowed in regular school and finally, majority (85.4%) study subjects with more than high

school education and two-third (66.9%) subjects with education below secondary level consider that HIV+person should be allowed to attend social functions, two-fifth (39.6%) study subjects with more than high school education and partial (59.9%) subjects with education below secondary level consider that HIV+ person would stop shopping if owner of shop is HIV+. This type of attitude toward HIV among higher educated subject and lower educated subject has statistically significant difference (p-value<0.05).

**Conclusion:**In the study, all the mothers knew about prevention of mother-to-child transmission of HIV. However, the perception of risk of HIV was low among the study subjects. The risk of HIV infection amongst housewives was not known to many.

**KEYWORDS:**HEALTH;WOMEN HEALTH; HIV/ AIDS; PREGNANT WOMEN; NATIONAL AIDSCONTROL PROGRAM (NACP); PEOPLE LIVING WITH HIV/AIDS; PLHA; PARENTS TO CHILD TRANSMISSION; NEEDLE SHARING; BREAST FEEDING.

15. Singh, S. et al. (2018).  
Pregnant Women Who Requested A '108' Ambulance in Two States of India. *BMJ Global Health*, May, 7p.  
G21321

**Introduction:** According to the Indian Institute of Public Health, India has approximately 45,000 maternal deaths yearly, the second highest number around the world. Through a three-tier primary health care system, Indian Government has promoted institutional delivery so that pregnant women gets appropriate health facilities and stabilising care for preventing maternal deaths in low-income and middle income countries. The '108' ambulance service is the largest innovative emergency transportation services in India which operates across states and union territories to provide free emergency medical service for pregnant women.

**Objectives:** To describe the demographic and clinical characteristics and outcomes of pregnant women and also to understand the type of health facility used by pregnant women who called '108' service for ambulance.

**Methodology:** A cross-sectional telephonic survey was conducted to understand the characteristics and outcomes of '108' ambulance. Interviews were also conducted with the client's call and were followed up as well.

**Results:** During the survey, most of the women were between the age of 20 and 34 years and were Hindus from rural areas. The mean age of women in Andhra Pradesh was 23.6 years and 24.9 years in Himachal Pradesh. In Andhra Pradesh, the '108' services was majorly used by people from socially disadvantaged castes (90% women belonged to below-the-poverty-line strata), while people from Himachal Pradesh were mostly from general castes (only 16% from BPL strata). There were no significant changes in the socio-demographic profile between the study groups of the state, however, in Himachal Pradesh, large proportion of women from tribal area were not assigned to ambulance from '108' service due to accessibility issue. Approximately 90% of women in AP and HP called the '108' service due to normal labour pains. 22.2% women were transported in AP due to high risk pregnancy, whereas, 17.7% did not use an ambulance, and 18.9% were not assigned with the ambulance. In HP, 27% were transported due to high risk pregnancy; however, 18.9% women were not assigned with the ambulance. Early complication in pregnancy was reported by 15% women in the survey. Obstetric emergency was reported by 7.4% women in AP, 9.8% women did not use the ambulance and 4.1% women were not assigned the ambulance. Irrespective of '108' service available in the states, people preferred available

vehicles at the time of emergency. Mostly the high risk in pregnancy reported included the caesarean section, age less than 20 years and short stature. In AP, multigravida and history of neo-natal deaths were also reported. Common obstetric emergency included preterm labour, anaemia (moderate to severe), excessive bleeding and high blood pressure. From the survey it was found that 44% who did not use the ambulance and 12% who were not assigned with it, were not taken to any health facility in AP. Most of them delivered before the transport arrived and the rest used the available vehicles such as 90% of them used auto rickshaw or taxi and only 6 used the other form of ambulance. Women in AP who used '108' ambulance, were transported to government sub-district/ district hospitals and one-quarter to primary health centres (PHCs) and community health centres (CHCs). In HP, approximately 90% were sent to government sub-district/ district hospitals due to lack of obstetric services at low level facilities, while the use of PHCs and CHCs was less. It was also found that pregnant women had more trust among the private sector than the public sector health care providers. There was a lack of private obstetric care in remote areas. Not a single woman in AP and only four in HP had abortions. Women who delivered at AP constituted of 0.9% who were transported by '108' services and 30.3% who were not assisted with the ambulance. The percentage in HP consisted of 5.7% and 1% respectively. Of the woman not transported by '108', one died in AP and none in HP. With respect to stillbirths and neo-natal deaths, AP had 17 and 16 and HP had 10 and 22 respectively. However, there is no statistical difference among the proportions of still births and neo-natal deaths between transported and non-transported women in either state.

**Conclusion:** More number of women who used '108' ambulance services in AP were from poor socio-economic class, however, in HP, the beneficiaries were mostly from general class. There was no significant difference among the women being transported or not. A suggestion from the study came out that '108' service should formulate strategies to reach the unreachable and improve in the domain of obstetric emergencies.

**KEYWORDS:** HEALTH; '108' AMBULANCE SERVICE; CLASS; OBSTETRIC EMERGENCY; PHC; CHC; PREGNANCY; HOSPITALS; STILL BIRTH; NEO-NATAL DEATHS; CARE; HEALTH FACILITIES.

16. Khan W.I. et.al. (2018).  
Neuropsychiatric disorders in Rural and Urban areas of district Dehradun. *Indian Journal of Community Health*. Vol. 30(03): 247-252  
G21320

**Introduction:** Mental and behavioural problems are among the most burdensome, around the globe, and are likely to increase in subsequent decades. The burden of illnesses resulting from psychiatric and behavioural disorders is enormous. Neuropsychiatric disorders have a profound effect on a global level, influencing social, cultural, and economic perspectives all around the communities.

**Objectives:** To estimate the prevalence of neuropsychiatric disorders in district Dehradun; and; to find out association of socio-demographic correlates with neuropsychiatric disorders

**Methodology:** A community based cross-sectional study. A Multistage Stratified Random Sampling of 1700 samples.

**Results:** A total of 1700 individual were interviewed, out of which majority of respondents were in the age group of 30-39 years (28.9%), closely followed by 20-29 years (26.9%) age group. The mean age of the surveyed population was  $9.36 \pm 13.9$  years (males -  $40.06 \pm 14.3$  years, females -  $38.62 \pm 13.5$  years). Prevalence of any DSM-5 neuropsychiatric disorder was found to be a fifth (20.5%). The prevalence was higher in urban area (33.1%) as compared to rural area (13.6%) and this difference was found to be highly significant statistically ( $\chi^2$ -111.351; df -2;  $p < 0.0001$ ). Only 58 (16.7%) of the screened positive respondents had ever been diagnosed with neuropsychiatric illness the prevalence of Neuropsychiatric disorders in the studied subjects increased consistently with the increasing age (with exception of geriatric age group) with maximum being in 50-59 years age group (34.7%). The findings were more or less similar in both areas. The prevalence was found to be significantly higher in male subjects i.e. a third (33.8%) as compared to females (6.5%). It was observed that Neuropsychiatric/ mental disorders increased consistently with the increasing literacy status, with maximum being in graduates and above (26.2%) and minimum in illiterates (13.7%). The maximum prevalence of Neuropsychiatric disorders (37.2%) was observed in respondents who were employed under some agency (government/private), closely followed by the respondents who were doing their own business (including self-employed respondents and shop keepers), while unemployed respondents were least affected (9.1%) only. Neuropsychiatric disorders were found maximum in respondents who were divorced/ separated/ widow (26.2%), while unmarried respondents were least affected (14.7%) prevalence only. The prevalence of Neuropsychiatric disorders was found to be highest amongst respondents belonging to Hindu religion

(25.9%), followed by Sikhs (5.7%) and Muslims (2.4%). It was observed that it was more prevalent in respondents belonging to general caste (29.1%), followed by Schedule caste and Schedule tribe (25.6% and 16.3%), while respondents belonging to OBC caste were least affected with prevalence (13.5%). The occurrence of neuropsychiatric disorders increased with improving socio-economic status, with exception of upper lower class. The prevalence was highest in upper class (33.3%) and minimum in upper lower class (14.2%).

**Conclusion:** The study revealed that about one fifth of the population surveyed had one or the other neuropsychiatric disorder and most of them were undiagnosed and therefore not treated. It was significantly higher in literate and employed males and in urban area.

**Keywords:** HEALTH; MENTAL HEALTH; NEUROPSYCHIATRIC DISORDERS; PREVALENCE; COMMUNITY; RURAL URBAN; DEHRADUN.



## NUTRITION

17. Jose, B. and Raman M. (2018).  
Morbidity Status of Food Handlers from Various Food Service Establishments of Cochin, Kerala, India. *Indian Journal of Nutrition*, Vol. 5 (2) : 1-2.  
G21319

**Introduction:** Conventionally or unconventionally the commitment to food preparation at homes has decreased and number of meals eaten out of the home increased. Consumers favor convenience and saving time than proper handling and preparation of food.

**Objectives:** To study the morbidity status of food handlers from various food handling establishments.

**Methodology:** Simple Random Sampling was adopted to select 248 food handlers from eight different categories of food service establishments.

**Results:** The findings revealed that the morbidity status from selected food handlers collected in the year 2014-2015 was analysed. The health conditions included to collect study data were anemia, dental carries, acute respiratory infections, diabetes mellitus, and hypertension. Among 248 food handlers who participated in the study only 10 (4%) were healthy remaining food handlers had some sort of health issues. Remaining (96%) of food handlers were apparently unhealthy with one or more than one health problems. Food handlers morbidity status selected from 8 different categories of food service sectors and noticed that that 4.8 percent (n = 12) of the participants were found to be anaemic, 36.6 percent (n = 91) had dental carries, 32.6 percent (n = 81) had acute respiratory infections, 16.1 percent (n = 40) had diabetic mellitus, and 5.6 percent (n = 14) of food handler participated in the study were hypertensive and 4.03 percent (n = 4.03) of the participants had no significant disease episodes.

**Conclusion:** The health status of the food handlers from various food service establishments was found to be unsatisfactory. Awareness about importance of employee's health and wellness to improve their productivity needs to be created among food handlers and the management of food service establishments.

**KEYWORDS:** NUTRITION; WOMEN NUTRITION; FOOD HANDLERS; ANAEMIA; MORBIDITY STATUS; FOOD SERVICES SECTOR; HEALTH PROBLEMS; ACUTE RESPIRATORY INFECTIONS; FOOD PREPARATION.

## WOMEN WELFARE

18. BhartiyaStree Shakti. (2017).  
Tackling Violence against Women: A Study of State Intervention Measures. New Delhi : India, Ministry of Women and Child Development. 357p.  
G21141

**Introduction:** Gender Based Violence (GBV) has recently raised as a global issue extending across the regional as well as the international boundaries. The scars of the gender-based violence pose danger to a woman's reproductive health and also on the cognitive and psychological well-being of the survivor.

**Objectives:** 1. To undertake comparative study of the policies framed on State funds/programmers like Nirbhaya Fund for analysis in terms of their implementation- scope and limitations etc.

2. To study the facts in execution and implementation of these policies in High and Low prevalence districts from states selected.

3. To identify the Gaps and to Scale up the best innovations in the planning and execution of these policies.

4. A comparative study of impact of new laws, crime rate and reporting rate, change in awareness level.

**Methodology:** A total of 161 respondents from 4 states Maharashtra, Kerala, UP and Delhi.

**Results:** The findings revealed that the prevalence wise crime reported, out of the total 157 cases 85 cases belong to High prevalence area while 72 cases belong to low prevalence area. Under the cases belonging to High prevalence area maximum number of cases (64.9%) registered under multiple sections. Among the cases registered in the low prevalence area highest, 73.6 percentage of cases were registered under multiple sections whereas 16.6 percentage cases were registered under section 376. The highest number of respondents (51%) were in the age group of 29 to 35 which is considered as youth age. About a fourth (25.2%) of the respondents were educated up to secondary school and relatively lesser (19.6%) was educated up to middle school level. Religion of the victims reveals that maximum of the respondents in both the high (83%) and low (84.9%) prevalence area were Hindus. Out of the 161 respondents 83 (51.5%) were from high prevalence area whereas 73 (45.3%) belonged to low prevalence area, and rest had not provided the information. In high prevalence area, highest (47%) resided in the urban slums whereas others (33.7%) resided in the urban non-slum area. In low prevalence area, highest number of victims (54.8%) belonged to rural area whereas (23.3%) belonged to tribal area. Both in high (55.7%) and low (46.6%) prevalence area, most of the cases were registered by victim themselves, followed by registered by parents of the victims in high prevalence area (35.2%) and low prevalence area (42.5%). Injury of the victims while filing case was

found in most (60%) of cases in high prevalence area. The prevalence of the medical examination of the victims immediately after the event of violence, 84 (52.2%) were from high prevalence area whereas 71 (44.1%) belonged to low prevalence area. Most (73.9%) of the respondents from the high prevalence area and (60.3%) of respondents in low prevalence area were the victims of the violence while they were alone. About three-fifth (63.8%) of respondents from high prevalence area and two-third (66.4%) of respondents from low prevalence area agreed that they were treated by the police respectfully. Out of the total respondents 5 did not respond out of which three were from high prevalence area and three were from low prevalence area. Three-fourth (74.1%) respondents from 54 (73%) in high prevalence area shared that they informed the victim about Victim Compensation and similar funds, whereas 58 (90%) in the low prevalence area shared that they informed the victim about Victim Compensation and similar funds. The opinion of the Nirbhaya Fund officers shared on the responsibilities that out of the four respondents (50%) revealed that they don't share any other responsibility whereas (25%) of respondents shared that they do share responsibility in other schemes. Out of them (25%) of the respondents shared that specifically they shared the responsibility in women and child development program. During 2011 to 2015, beneficiaries that were benefitted by the government schemes revealed that 18 (94.7%) were victims of rape where as only one (5.3%) beneficiary were victim of acid attack. Out of the total 48 respondent's counsellor 33 were from the high prevalence area and 15 were from the low prevalence area. Out of the 33 respondents from high prevalence area (51.5%) of respondents claimed that they do face difficulties in term of non-cooperation from the victim while three-fourth (73.3%) of respondents from the low prevalence area shared that they face problem in the form of non-cooperation during the process of counselling.

**Conclusion:** Although it is not easy to eradicate deep seated cultural value or alter tradition that perpetuates discrimination. Education of both men and women will lead to change in attitudes and perceptions. Legal assistance would be provided at the police stations as well so as to provide relief to the distressed state of mind.

**KEYWORDS:** WOMEN WELFARE; GENDER BASED VIOLENCE; VICTIM COMPENSATION; MEDICAL EXAMINATION; CHILD DEVELOPMENT PROGRAM; NIRBHAYA FUND; WOMEN REPRODUCTIVE HEALTH.

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