



“Effectiveness of an Orientation Program on Knowledge Regarding Facilities Provided in District Early Intervention Centers Among Mothers of Under five Children at Selected Rural Area of Udaipur City Rajasthan.”

Mr. Yash sevak, Mr. Mahendra kumar

Assistant professor, HOD

Ratna Prabha nursing institute vadnagar, Govt. College of nursing udaipur

ABSTRACT

Introduction: DEIC under RBSK provides the much-needed early interventions services, which are easily approachable, adaptable user friendly and cost effective. Provides interdisciplinary approach of multi-disciplinary teams placed under one roof by housing age appropriate and domain specific equipment and with specific trained domain specialties¹⁵. Acts as the apex center of the district and ensures comprehensive services under one roof, with a holistic approach to children with special needs and also provides referral linkages. Provides referral support to children detected with health conditions during health screening, primarily for children up-to 6 years of age group¹⁶. Early Identification and early Intervention Programme for these 4 Ds minimizes the disability and therefore significantly improve the quality of their lives. **Method and material:** The method adopted for the present study was evaluative approach and the research design was pre-experimental one group pre-test and post-test. **Result:** The knowledge of district early intervention center among mothers of under five children was assessed. The overall assessment of mean pre-test knowledge score was 12.125 with SD 1.17 whereas the post-test knowledge score was 16.43 with SD 1.37 at 0.05 level of significance. 87.50% respondents have poor level of knowledge, 12.50% respondents have average level of knowledge and none of the respondents have good level of knowledge in pretest, whereas in posttest 63.70% respondents have good level of knowledge, 36.30% respondents have average level of knowledge and none of the respondents had poor level of knowledge. Hence, the orientation program was effective in enhancing the knowledge of the mothers of under five children. **Conclusion:** The knowledge of the mothers of under five children regarding facilities provided in district early intervention centers before administration of an orientation program was poor. After an orientation program was administered which significantly increased the knowledge of the mothers of under five children regarding facilities provided in district early intervention centers. An orientation program was an effective strategy which can be used in the rural community to increase the knowledge regarding facilities provided in DEIC that enhance

there knowledge about DEIC and can make use of this knowledge to take early treatment and get proper incentives.

Key words : Effectiveness, orientation program, knowledge, facilities provided in DEIC, Mothers of under five children.

Background

DEIC under RBSK provides the much-needed early interventions services, which are easily approachable, adaptable user friendly and cost effective. Provides interdisciplinary approach of multi-disciplinary teams placed under one roof by housing age appropriate and domain specific equipment and with specific trained domain specialties¹⁵. Acts as the apex center of the district and ensures comprehensive services under one roof, with a holistic approach to children with special needs and also provides referral linkages. Provides referral support to children detected with health conditions during health screening, primarily for children up-to 6 years of age group¹⁶. Early Identification and early Intervention Programme for these 4 Ds minimizes the disability and therefore significantly improve the quality of their lives.

Meaning of 4D: Defects at Birth, Diseases, Deficiencies, Developmental Delays & Disability. Nursing has been changing in the course of the past 20 years following the art of critical care¹⁷. This process has been partly attributed to the organization of specialized units for patient care, technological advances and, overall, a better understanding of physiology by health care professionals, especially the nurses¹⁸. With an annual birth cohort of almost 27 million, India is expected to have the largest number of infants born with birth defects. As per available estimates, 6% of children are born with birth defects.

Objectives

1. To evaluate the knowledge regarding facilities provided in district early intervention center among mothers of under five children.
2. To evaluate the effectiveness of an orientation program on knowledge regarding facilities provided in district early intervention center among mothers of under five children.
3. To find out the association between pre-test knowledge scores and selected socio-demographic variables.

Method

The method adopted for the present study was evaluative approach and the research design was pre-experimental one group pre-test and post-test. This approach would help the investigator to evaluate the effect of specific intervention that is “orientation program” on knowledge of mothers of under five children regarding facilities provided by DEIC. In this study sample were drawn by using purposive sampling technique. Data was collected by using structured interview schedule to assess the knowledge of mothers of under five children. The duration took for conducting pre-test and intervention was give after 45 min. Post test was conducted after 7 days using the same tool. Data was analyzed with the help of descriptive and inferential statistics. The language was found to be clear and all the items in the tool were clearly understood by the respondents without ambiguity. Respondents took 20 min to answer the question.

Result

The knowledge of district early intervention center among mothers of under five children was assessed. The overall assessment of mean pre-test knowledge score was 12.125 with SD 1.17 whereas the post-test knowledge score was 16.43 with SD 1.37 at 0.05 level of significance. 87.50% respondents have poor level of knowledge, 12.50% respondents have average level of knowledge and none of the respondents have good level of knowledge in pretest, whereas in posttest 63.70% respondents have good level of knowledge, 36.30% respondents have average level of knowledge and none of the respondents had poor level of knowledge. Hence, the orientation program was effective in enhancing the knowledge of the mothers of under five children.

The analysis revealed that there was a significant association of pre-test knowledge score with socio demographic variables like age, occupation of mother, educational qualification, monthly income of family, type of family, previous information

Conclusion

The knowledge of the mothers of under five children regarding facilities provided in district early intervention centers before administration of an orientation program was poor. After an orientation program was administered which significantly increased the knowledge of the mothers of under five children regarding facilities provided in district early intervention centers. An orientation program was an effective strategy which can be used in the rural community to increase the knowledge regarding facilities provided in DEIC that enhance their knowledge about DEIC and can make use of this knowledge to take early treatment and get proper incentives.

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CHAPTER I

INTRODUCTION

“It is the patient building of character, the intense struggle to realize the truth, which alone will tell in the future of humanity”.

- Swami Vivekananda

The initial step of screening of children from birth to 18 years of age group for selected health conditions including Defects at Birth, Deficiencies, Diseases & Developmental delays including disabilities under Rashtriya Bal Swasthya Karkyakram (RBSK) through trained and dedicated Mobile Health Teams, the next vital step is confirmation of preliminary findings, referral support, management and follow up¹. Under RBSK, these activities viz. confirmation, management, referral, tracking & follow-up, needs to be planned according to the age group of the child. The early intervention centers are to be established at the District Hospital level across the country as District Early Intervention Centers (DEIC)². The purpose of DEIC is to provide referral support to children detected with health conditions during health screening, primarily for children up to 6 years of age group. A team consisting of Pediatrician, Medical officer, Staff Nurses, Paramedics will be engaged to provide services. There is also a provision for engaging a manager who would carry out mapping of tertiary care facilities in Government

institutions for ensuring adequate referral support³. The funds will be provided under NHM for management at the tertiary level at the rates fixed by State Governments in consultation with Ministry of Health & Family Welfare⁴.

DEIC have been set up at the district hospital to give medical care and referral support to children who have been identified as having health problems during screening by the RBSK mobile health teams. Early childhood developmental impairments are frequent in India, affecting at least 10% of children⁵. According to SNCU technical reports, almost 20% of the babies identified to have developmental delays or disabilities were discharged from the health institutions at a later stage. If these delays are not addressed promptly, they may result in lifelong handicap, making children not eligible for appropriate services⁶. According to the National Sample Survey Organization (NSSO 2002), the total number of disabled populations in India is approximately 1.85 crores (1.8% of the population), however the actual estimates may be higher. The idea behind early intervention is to intervene early and minimize disability. The idea behind early intervention is to intervene early and minimize disability⁷. Once the disability is already established then the intervention would include enhancement of child development for the child to reach the highest potential for the child possible and prevent progression to handicap that may arise from activity limitation. Research has proved that the period from birth to 6 years are the most critical years for all children. This is especially true for children with developmental delay⁸. Therefore, it stands that early identification and early intervention programs can significantly improve the quality of their lives. Such programs will work towards these children achieving their maximum potential and thereby promoting their early inclusion into the mainstream. The importance of early intervention can never be over-emphasized⁹. In the postnatal years, the growth and development of the child is at its greatest in the first two to three years. It is during this first phase of cognitive development when the underpinnings of intelligence and behavior begin to evolve. Additionally, plasticity, the ability of the brain to affect structural and functional changes caused by external and internal influences is at its peak in the birth-2year period¹⁰. The malleability of the developing brain at this stage makes it possible to bring about these changes. If the child misses this opportunity, further learning will be slow or inadequate¹¹.

Developmental intervention requires an interdisciplinary approach of a multidisciplinary team placed under one roof. However, there are very few centers in India which provide such services but even most of these centers do not have all the components required for evaluation and intervention in a holistic way¹². The medical colleges have EYE, ENT, Psychiatry, Physical medicine departments but neither the instruments nor the training of the specialist are available to address the problems of the most critical period of child development i.e. the first three years of life. The paramedical staffs like Optometrist, Audiologist, Clinical Psychologist, and Physiotherapist are not trained to handle the children from birth to 6 years in a comprehensive way¹³. In a typical medical college, the parents are forced to move from one place to another place to access the services. However, in absence of quality services for such small children they are advised to come later when they become older, thus missing the critical period of development¹⁴.

Background of the study

DEIC under RBSK provides the much-needed early interventions services, which are easily approachable, adaptable user friendly and cost effective. Provides interdisciplinary approach of multi-disciplinary teams placed under one roof by housing age appropriate and domain specific equipment and with specific trained domain specialties¹⁵. Acts as the apex center of the district and ensures comprehensive services under one roof, with a holistic approach to children with special needs and also provides referral linkages. Provides referral support to children detected with health conditions during health screening, primarily for children up-to 6 years of age group¹⁶. Early Identification and early Intervention Programme for these 4 Ds minimizes the disability and therefore significantly improve the quality of their lives.

Meaning of 4D: Defects at Birth, Diseases, Deficiencies, Developmental Delays & Disability. Nursing has been changing in the course of the past 20 years following the art of critical care¹⁷. This process has been partly attributed to the organization of specialized units for patient care, technological advances and, overall, a better understanding of physiology by health care professionals, especially the nurses¹⁸. With an annual birth cohort of almost 27 million, India is expected to have the largest number of infants born with birth defects. As per available estimates, 6% of children are born with birth defects. 10% Children are detected with development delays, leading to disabilities. This Translates to more than 15 lakh new-burns with birth defects annually. Further, 4% of under-five Mortality & 10% of neonatal morality are attributed to birth defects.

Interventions under DEIC are Screening, Diagnostics & Assessment for 4Ds, Domain Specific Intervention & Management, Evaluation, Review & Follow-Up, Referral to Tertiary Hospitals for Surgery, Referral to Tertiary Hospital for further management especially after 6 years, Investigations, Liaoning for Provision of Aids to Children.

Services provided under DEIC are Medical Services (Screening, Management and Referral of 4Ds), Dental services, Audiology (Helps in treating hearing issues), Speech (Helps in speaking fluency & language improvement), Occupational therapy and Physical therapy (help in improving skills and reducing disabilities), Psychological services, Vision services, Cognition services (helps in improvement of learning, attention and memory, hence improving intelligence), Sensory services (Helps in treating autism and attention on deficit), Special Education (Helps in reducing learning disabilities), Service coordination, Lab services.

Need for the study

Developmental impairment is a common problem in children health that occurs in approximately 10% of the childhood population and even more among “at risk” children discharged from the Sick new born care unit. Children, disabled or non-disabled, under 6 years of age, represent a rapidly growing segment in India¹⁹. Children with disabilities are often denied access to appropriate services. According to the National Sample Survey Organization (NSSO 2002), the total number of disabled populations in India is approximately 1.85 crores (1.8% of the population), however the actual estimates may be higher²⁰. The idea behind early intervention is to intervene early and minimize disability. Once the disability is already established then the only intervention is to prevent it from becoming socially handicapped²¹.

Mr. Prasannakumar D.R. (2014) a comparative study to assess the Knowledge of Mothers of Under-Five Children. 80 mothers of under five children were selected by using non probability convenient sampling technique. The study revealed that majority 55% of the rural mothers and 30% of the urban mothers had moderate knowledge while 62.5% of urban mothers and 30% of the rural mothers had adequate knowledge regarding the importance of play in growth and development of under-five children. Hence it indicated that there was a significant difference in the knowledge level of rural and urban mothers²².

In yet another study conducted by Mary Pat Moeller, MS (2000) on Early Intervention and Language Development in Children Who Are Deaf and Hard of Hearing. The analyses revealed that only 2 of these factors explained a significant amount of the variance in language scores obtained at 5 years of age: family involvement and age of enrollment. surprisingly, family involvement explained the most variance after controlling for the influence of the other factors ($r = .615$; F change = 58.70).

In other study Consistent with the findings of Yoshinaga-Itano et al, significantly better language scores were associated with early enrollment in intervention. High levels of family involvement correlated with positive language outcomes, and, conversely, limited family involvement was associated with significant child language delays at 5 years of age, especially when enrollment in intervention was late. The results suggest that success is achieved when early identification is paired with early interventions that actively involve families²³.

During the community visit in village area the researcher felt that there is lack of knowledge regarding facilities provided in DEIC. In these mothers are the people who should be knowing about DEIC services so, that they can take the children to their centers and avail the benefits of this. Hence the researcher felt the need to take a study on Effectiveness of an orientation program on knowledge regarding facilities provided in District early intervention centers among mothers of under five children.

Research problem statement

Effectiveness of an orientation program on knowledge regarding facilities provided in District early intervention centres among mothers of under five children at selected Rural area of Udaipur city Rajasthan.

Objectives

1. To evaluate the knowledge regarding facilities provided in District early intervention centers among mothers of under five children.
2. To evaluate the effectiveness of an orientation program on knowledge regarding facilities provided in District early intervention centers among mothers of under five children.
3. To find out the association between pre-test knowledge scores and selected socio-demographic variables.

Operational definitions

Effectiveness: In this study, it refers to change in knowledge regarding facilities provided in District early intervention centers among mothers of under-five children.

Orientation program: In this study, it refers to series of teaching activities use of

Orientation program after which provided knowledge regarding facilities provided in District early intervention centers.

Knowledge: In this study, it refers to the correct information regarding District early intervention centers among mothers of under-five children as checked through structured interview schedule.

DEIC: In this study it refers to District Early Intervention Center (DEIC) -A novel concept for Early Childhood Intervention (0-6 years) The early intervention centers are to be established at the District Hospital level across the country as District Early Intervention Centers (DEIC).

Mothers of Under Five Children: In this study it refers as the mothers having under the age group of five years pf children which have poor knowledge regarding facilities provided in DEIC.

Hypothesis

H₁ There is a significant difference between pre and post-test knowledge scores regarding facilities provided in district early intervention centre.

H₂ There is a significant association between pre-test knowledge scores and selected socio-demographic variables.

Assumptions

In this study the researcher assumes that mothers of under-five children have poor knowledge regarding facilities provided in District early intervention centers.

Delimitations

The study is delimited to selected Rural area of Udaipur city, Rajasthan

Conceptual framework A conceptual framework or a model is made up of concepts, which are the mental images of the phenomena. It presents logically constructed concepts to provide a general explanation of the relationships among the concepts of the research study. It is the schematic representation of activities, step and action of the study. A conceptual framework is used in research to outline the possible course of action to present a preferred to an idea or thought²⁴.

In view of explaining and relating various concepts of the study regarding orientation program on knowledge regarding facilities provided in district early intervention centers among mothers of under five children, the researcher has adopted **Hildegard Peplau's interpersonal relation model** to conceptualize the research study. **Hildegard Peplau's** a nurse theorist developed the first conceptual curriculum for the Bachelor of science in nursing program and proposed interpersonal theory, which describes the interpersonal process and therapeutic relationship as the way to attain goal²⁵. For this nurse plays various role such as teacher, resource person, counselor, leader and technical expert.

The four phases in Peplau's interpersonal model are:

1. Orientation phase
2. Working phase (Identification)
3. Working Phase (Exploitation)
4. Resolution Phase

Orientation phase

In this study, the researcher has conceptualized the orientation phase in which the researcher and mother of under-five children with socio-demographic variables such as Age, education, family type occupation, previous knowledge, Monthly income of the family, and meet each other, establishes good interpersonal relations²⁶.

Working phase of Identification

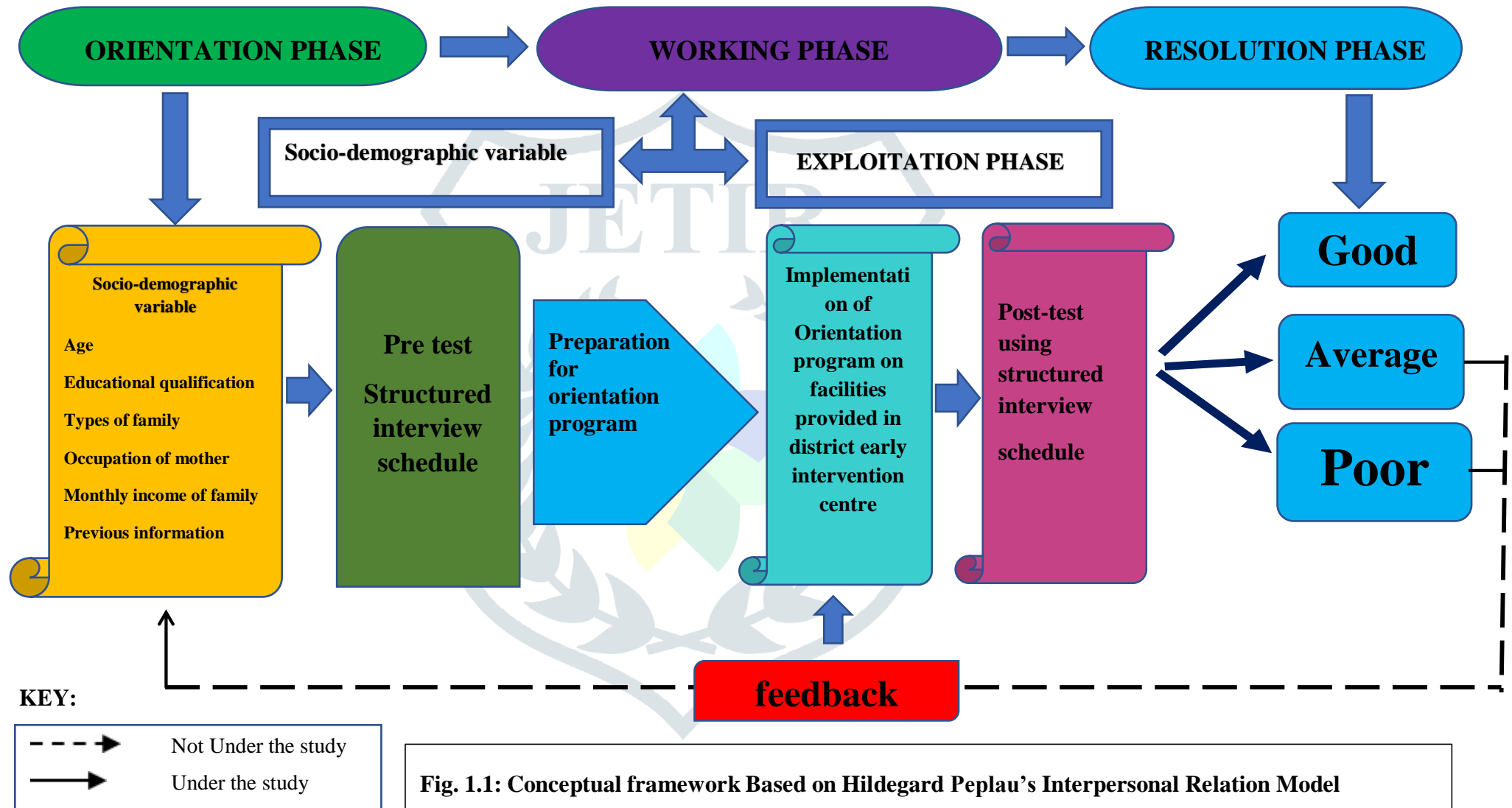
In this identification phase the felt need is assessed by pre-test using structured interview schedule. In this it refers to orientation programme on knowledge regarding facilities provided in district early intervention centres and assessment of knowledge regarding facilities provided in district early intervention centres among mothers of under-five children by researcher.²⁷

Working phase of Exploitation phase

In the exploitation phase, the researcher and mother of under-five children together set the new goal which leads to attainment of the need.

Resolution phase

In the resolution phase, the mothers of under-five children need have been met by the collaborative efforts of the researcher and mothers of under-five children. In this study, during the resolution phase the post-test assessment of knowledge was done by same structured interview schedule²⁸. The achievement of the goal or need was indicated as Good, Average and Poor regarding knowledge of facilities provided in district early intervention centres. Mothers of under-five children if their knowledge is found, Average or poor, the feedback is sent and the process the redesign to meet the need and implemented again, which however is not the part of the study²⁹.



CHAPTER II

REVIEW OF LITERATURE

The chapter deals with literature which is reviewed and relevant to the present study. literature review considered a systematic and critical review of the most important scholarly literature on a particular topic (Wood and Haber). Review of literature refers to the activities involved in identifying and searching for the information on a topic and developing understanding at the state of knowledge on the topic and is a written summary to the state of the art on a research problem. the review of literature for the present study has been done from published and un published research reviews, articles, text books, journals and editorials³⁰.

Aprajita Mehta, Vartika Saxena, Meenakshi Khapre (2022) A concurrent mixed method study was conducted in Uttarakhand for exploring challenges faced by clients and to assess client satisfaction regarding services provided under the program. The sample of study is 41 Out of the four impaneled hospitals, one private hospital and one government tertiary care hospital were selected based on convenience. In this study the tool was used as the interview schedule was prepared to know about the challenges faced by the beneficiaries. The sampling technique used in this study is parents of beneficiaries were contacted telepathically as per the list. It was found that out of 41 caregivers of beneficiaries, 13 (31.7%) faced challenges while availing the services, and 2 (4.87%) were dissatisfied with the services. Challenges faced by caregivers were out of pocket expenditure on transportation, food and stay, long time in referral and unavailability of beds, unavailability of medicines, and failed treatment. The majority of the caregivers were satisfied with the referral and treatment provided. RBSK provides free-of-cost treatment to children but the indirect cost that the caregivers have to pay for travel, stay and multiple visits pose a challenge for utilization of the services³¹.

Neetu Tripathi and Dr. Kamlesh Kumari Sharma (2022) a cross sectional study on assessment of available resources, challenges of district early intervention center under rashtriya bal swasthya karyakram at district jodhpur. In this study the sample was district early intervention center which is located at Mathuradas Mathur hospital district jodhpur of Rajasthan. The tool was used observational checklist which was prepared according to the guidelines of RBSK program. the information regarding the challenges was collected by semi structured questionnaire through face-to-face interview with the DEIC manager. the purposive sampling technique was used in this study. The results reveal that DEIC of district jodhpur is deficient in terms of staff, equipment and physical space. the challenges identified were resistance in caretakers regarding treatment and less staff and physical space available for DEIC. Overall, the researcher identified that there was a deficiency of staff, furniture and medical equipment and tools at DEIC and the main challenges were community resistance, less staff and physical space. there is a need to be filled up vacant post and provide needed infrastructural facilities. separately so that RBSK program in DEIC can run smoothly and effectively. Education and sensitization of community with reinforcement could help to overcome the resistance in community³².

Aprajita Mehta, Vartika Saxena, Meenakshi Khapre, Kuldeep Singh Martolia (2022) a cross sectional study on Evaluation of District Early Intervention Centers under Child Health Screening and Early Intervention Services in Garhwal Region of Uttarakhand, India. In this study sample size is 4 DEIC present in

Uttarakhand. The tool used as checklist was prepared for on-site observation of the DEICs. In this study purposive sampling technique is used. Out of four DEICs present in Uttarakhand, two DEICs of the Garhwal region were evaluated. DEICs were found deficient in manpower. Maximum beneficiaries (14.35%) were registered for the treatment of congenital heart disease (CHD). Facilities like ECG cum Echo room and sensory integration room were absent in both the DEICs. 20.1% of the referred cases had health conditions that were not covered under the program. 73.4% of referred cases were under treatment at DEICs and the empaneled hospitals. Shortage of infrastructure, equipment, and manpower at the point of implementation acts as a roadblock for the provision of services. The absence of these facilities defeats the purpose of DEIC as a one-stop center³³.

Surendra Babu Darivemula, Khadervali Nagoor, K. R. John, P. Shakeer Kahn, Chandra Sekhar Chittooru (2022) A record-based descriptive study was done in the DEIC in Chittoor on Morbidity Profile of Children from Birth to 18 Years of Age Referred for Intervention to the District Early Intervention Centre in a District Hospital, Andhra Pradesh. In this study total 10571 of children sample were used. Children self-reporting, identified with different morbidity at community health center, primary health center, Anganwadi, and subcenter were referred to the DEIC, Chittoor for early intervention. The “Child Health Screening and Early Intervention Services” program was used for the intervention. A total of 10571 children were screened and referred to the DEIC during the period. Out of them, 5679 (53.7%) were male and 4892 (46.3%) were female. Among all the four types of morbidities screened, majority 4847 (45.9%) were having the childhood diseases, 4177 (39.5%) had developmental delays including disabilities, 1067 (10.1%) had different deficiencies, and 361 (3.4%) had birth defects. Among the adolescent health issues, 119 (1.1%) were screened and sent for the early intervention to the district hospital. A huge number of children were screened and referred to the DEIC every year for intervention. The health sector has to focus more on the resources like workforce, training of peripheral health workers at regular intervals about the different morbidities screened, that would help in identifying the morbidities at the earliest possible time and receive the intervention at the best center³⁴.

Shruthi, kumar Sunil Doddaiah, Chandan, Arun Gopi, M. R. Narayan Murthy, Anil S. Bilimale (2021) A cross-sectional study was conducted at DEIC, Mysuru to assess client satisfaction. Assessment of beneficiary satisfaction at district early intervention centre, Mysuru district, Karnataka In study the sample size is 276 study participants who visited the DEIC. Convenience sampling method was used in this study. A semi-structured questionnaire tool was administered about the services provided across various departments at DEIC. Among 276 beneficiaries who reached DEIC, about overall client satisfaction, 250 (90.5%) were satisfied and 26 (9.42%) were dissatisfied with the functioning and services provided across various departments at DEIC. 272 (98%) were satisfied more with the information provided about the medications by the paediatric department and 11 (18.0%) were more dissatisfied with the room infrastructure, information provided about treatment adopted and instructions to parents guardians for regular follow up by the counselling department. Overall, the clients were more satisfied with the services provided by the paediatric department and less dissatisfied with the counselling and psychology department. The findings of this present study will be useful input for the early intervention centres to improve their services and can also give an overview to the healthcare managers and policymakers in developing programs and policies. Improvement in the psychology, counselling, and ophthalmology departments will provide better beneficiary satisfaction³⁵.

Patel Janki, Prathika Vaghela (2021) conducted a quasi experimental study to assess the effectiveness of awareness programme on knowledge regarding district early intervention center among mothers of selected areas of north Gujarat. In this study the sample size is 60 of under 6 years of children. The tool used in this study structured interview questionnaire. An awareness programme was used in this study. The random sampling technique was used in this study. In experimental group the pretest mean was 5.64 and posttest mean was 16.97. The pretest standard deviation was 2.06 and posttest standard deviation was 3.05. “t” value was 16.86. In control group the pretest mean was 5.97 and posttest mean was the pretest standard deviation was 1.86 and the posttest standard deviation was 1.90. “t” value was 0.5562. There is no significant association between the knowledge and selected demographic variables. Finding of the study indicate awareness programme was significantly effective in improving knowledge of mothers of under 6 y children regarding district early intervention center³⁶.

Andrew J. O. Whitehouse, Kandice J. Varcin, Sarah Pillar, Wesley Billingham, Gail A. Alvares, Josephine Barbaro, et al (2021) A Randomized Clinical Trial of Outcomes to Diagnosis on Effect of Preemptive Intervention on Developmental Outcomes Among Infants Showing Early Signs of Autism. A preemptive intervention vs usual care was conducted at 2 Australian research centers (Perth, Melbourne). Community sampling was used to recruit 104 infants aged 9 to 14 months showing early behaviors associated with later ASD, as measured by the Social Attention and Communication Surveillance–Revised. Infants were randomized on a 1:1 ratio to receive either a preemptive intervention plus usual care or usual care only over a 5-month period. The Primary outcome was the combined blinded measure of ASD behavior severity (the Autism Observation Scale for Infants and the Autism Diagnostic Observation Schedule, second edition) across the 4 assessment points. Secondary outcomes were an independent blinded clinical ASD diagnosis at age 3 years and measures of child development. of 171 infants assessed for eligibility, 104 were randomized; 50 infants (mean [SD] chronological age, 12.40 [1.93] months; 38 boys [76.0%]) received the iBASIS-VIPP preemptive intervention plus usual care (1 infant was excluded after randomization), and 53 infants (mean [SD] age, 12.38 [2.02] months; 32 boys [60.4%]) received usual care only. A total of 89 participants (45 in the iBASIS-VIPP group and 44 in the usual care group) were reassessed at age 3 years. The iBASIS-VIPP intervention led to a reduction in ASD symptom severity (area between curves, -5.53 ; 95% CI, $-$ to -0.28 ; $P = .04$). Reduced odds of ASD classification at age 3 years was found in the iBASIS-VIPP group (3 of 45 participants [6.7%]) vs the usual care group (9 of 44 participants [20.5%]; odds ratio, 0.18; 95% CI, 0-0.68; $P = .02$). Number needed to treat to reduce ASD classification was 7.2 participants. Improvements in caregiver responsiveness and language outcomes were also observed in the iBASIS-VIPP group. Receipt of a preemptive intervention for ASD from age 9 months among a sample of infants showing early signs of ASD led to reduced ASD symptom severity across early childhood and reduced the odds of an ASD diagnosis at age 3 years³⁷.

Prabhu Shruti Atul, Shukla Nikhil Keshav, Mandala Sai Roshni (2020) An experimental study on Rapid assessment of Rashtriya Bal Swasthya Karyakram program implementation and beneficiary feedback at two district early intervention centres in Chhattisgarh State in India. In study the sample size was 50 children from the population. The tool used in this study is an observational checklist drawn from RBSK guidelines. Purposive sampling was used for the selection of districts for the assessment of RBSK performance. DEIC Raipur was deficient in staff and infrastructure. Among all the referred cases, only 38.9% and 31.5% reached DEIC

Raipur and Raigarh, respectively. DEIC Raigarh deserves special mention. It has special Orthotics unit, “Sensory Garden,” and Disability Rehabilitation Centre. Beneficiaries face many difficulties at DEIC despite having necessary referral forms. 73.4% parents said loss of daily wages was a deterrent to go to DEIC repeatedly for follow-up. There was a deficiency of staff and infrastructure in DEIC Raipur. DEIC Raigarh had a well-equipped rehabilitation centre. It should be developed as “Model DEIC” for Chhattisgarh and explore the possibility of telemedicine to provide services to neighbouring underserved districts. Beneficiary feedback was below satisfaction³⁸.

Dinesh Krishna, Sankar Sahayraj, Muthukaruppan, Aravind Bharathwaj, Ramasubramanian et al (2020) A Rapid-Cycle Evaluation study on Early Intervention Program for Children with Developmental Disabilities in South India: Optimizing Service Providers’ Quality of Work-Life, Family Program Engagement, and School Enrollment. In this the sample size is 212. The sampling technique used in this study is purposive sampling technique. Tools included the Gross Motor Function Measure—GMFM-88, pediatric version of the Functional Independence Measure Functional Assessment Checklist for Programming (FACP) and the Communication Developmental Eclectic Approach to Language Learning (Com DEALL) Development Checklist. Measurements throughout the program informed decision-making by identifying facilitators and barriers to service providers’ quality of work-life, family program engagement, and school enrollment. Consultation with key stakeholders, including caregivers and service providers, and data driven decision making led to Krishna et al. Rapid-Cycle Evaluation in Early Intervention continual program changes that improved service provider quality of work-life, program engagement and school enrollment. These changes included addressing gender related work challenges for service providers; forming caregiver support networks; introducing psychological counseling for caregivers; providing medical consultations and assistive devices creating community awareness programs improving access to therapy services focusing on caregiver education, motivation and support and advocacy for accessibility in schools³⁹

Rita Pilar Romero-Galisteo, Pablo Gálvez Ruiz, Angel Blanco Villaseñor, Maria Rodríguez-Bailón1 and Manuel González-Sánchez1 (2020) A mixed-methods design was employed on What families really think about the quality of early intervention centers: a perspective from mixed methods. In this study the sample size was 233 participants. Only one questionnaire was given per family. Sample were collected by the purposive sampling technique. The model showed a satisfactory fit and the regression analysis indicated that treatment rooms ($\beta = -0.28$) and adaptation of activities ($\beta = 0.27$) have greater weight with respect to satisfaction, whereas for future intention, the factors of greater weight were adaptation of activities ($\beta = 0.23$) and location ($\beta = 0.20$). The qualitative analysis showed three themes: facilitators, barriers and suggestions for improvement. Within facilitators, the participants were satisfied with the Early Intervention professionals, and they made improvement suggestions for the detected barriers to improve the facilities and the follow-up of the child. The study offers a wide perspective of the perception of the service with an active participation of families in the treatment within the Early Intervention service. This will allow professionals in Early Intervention, service providers and researchers to consider the families as intervention agents capable of providing their opinion and making decisions, and not only as passive elements⁴⁰

Zachary S. Richardson, Elizabeth A. Scully, Jodi K. Dooling-Litfin,, Natalie J. Murphy, Briana Rigau,, Mary A. Khetani, Beth M. McManus, (2020) an Retrospective cohort study conducted on Early intervention service intensity and change in children's functional capabilities. In this study the sample size is 1005 was collected. Children who were EI eligible due to developmental delay, had received an EI (early intervention) care plan and at least 1 billable EI service, and had outcomes data at EI entry and exit. Standardized developmental assessments administered by the EI team. The purposive sampling technique used in this study. Children older than 24 months old experienced significantly higher EI service intensity ($b=0.40$, 95% CI: 0.18, 0.63). Child age and EI service intensity were significantly linked to gains in social and cognitive COS score changes from EI entry to exit. Older children receive a higher intensity of EI services. EI service intensity and age were linked with positive changes in functional gains⁴¹.

Ponranjini Vedeswari Chandrasekaran, Jaganbabu Palaniappan, Appadurai Rajendran, Balaji Venugopal, Pamalai Gnanamoorthy (2020) a observational study on Prevalence of Ankyloglossia among Children Reporting with Speech Pathology to District Early Intervention Centre. In this study the sample size is 8911 Children between 3 and 11 years of age. The study population included all children between 3 to 11 years of age who were referred for evaluation technique for speech difficulty for a period from June 2018 to July 2019. the tool was used Coryllos classification which describes the following types of lingual frenulum were as four different types. Among the total of 8911 patients who visited DEIC, 380 patients were referred for evaluation of speech difficulty. Among them a total of 304 patients were diagnosed with ankyloglossia. The overall prevalence of ankyloglossia was 3.4 percent and that among patients with speech problem was 80 percent. The prevalence was distributed as 63.5 percent in males and 36.5 percent in females. Type 2 ankyloglossia was highly prevalent (72 percent) than the others. A substantial proportion of children with speech problem had ankyloglossia (80 percent). So, all the children with speech difficulty should be screened for ankyloglossia and correction undertaken. Awareness should be created among the common people about ankyloglossia, and the treatment options available⁴².

Padma Bhatia, Harshima Sawlani, Mohan Shinde, Rajesh Tarachandani (2019) an observational study conducted at DEIC Magnitude and pattern of birth defect babies at Bhopal district early intervention center under RBSK's 4Ds approach. In this study 2891 sample was collected from the population. Two days a week were selected randomly for data collection during OPD timings at the center. In this study the tool was used as swami-structure questionnaire. 2891 children were registered for the study out of affected children 18.7% of them were diagnosed with Developmental delays while birth defect was observed in 4.3% cases. Of the birth defect cases majority i.e. 37.7% had congenital heart disease and 16.7% had congenital hearing loss. No case of retinopathy of prematurity was registered. The study also helps to know the magnitude and pattern of congenital anomalies. Any effective health intervention will reduce both direct costs and out-of-pocket expenditure⁴³.

Koteswara Rao Pagolu, T. Raghava Rao (2019) an observational study on Assessment of Institutional and management capacities against health conditions in District Early. Intervention Centre (DEIC), Visakhapatnam. During the study period, a sample size six of 6572 children were found to have one of the listed 30 conditions under 4D's approach of screening. The study was carried out collecting the data from the DEIC

located in the King George Hospital, Visakhapatnam, Andhra Pradesh, India for a period of one year from January 2019 to December 2019. The screening method was used to assess the children by mobile health team. During the study period, a total number of 6572 children were found to have one of the listed 30 conditions under 4D's approach of screening. Developmental delays and disabilities were seen in 4801 (73.05%) children, followed by children with childhood diseases which were observed in 1277 (19.43%), children with defects at birth were 255 (3.88%) and children with deficiencies were 239 (3.63%). Among the defects at birth, congenital deafness was the most commonly screened condition found in 84 (1.27%) children. About 53 (0.80%) neonates were found to have club foot of varying grades. On analysis of deficiencies, severe acute malnutrition was observed in 236 (3.59%) children. There was 1(0.01%) child each with Vitamin A deficiency (Bitot's Spot), Vitamin D deficiency and Goiter (Due to Iodine Deficiency). On analysis diseases during childhood, dental caries was seen in 1219 (18.54%) children and skin conditions in 26 (0.39%) children. About 44 (0.6%) children were found to have rheumatic heart disease. On analysis of developmental delays and disabilities, language delay was the commonest screened condition seen in 941(14.31%) children. Hearing impairment was seen in 917 (13.95%) children, learning disorder in 704 (10.71%) children and neuro motor impairment in 584 (8.88%) children, vision impairment was seen in 505 (7.68%) children, motor delay was seen in 462 (7.02%) and cognitive delay was seen in 205 (3.11%). There were 68 (1.03%) cases of behavioral disorders (Autism) and were treated with multi modal therapy including sensory integration. Regarding manpower at the center, all the posts were occupied throughout the study period except medical officer, psychologist, dental hygienist and DEIC manager. We observed that many curable diseases are undiagnosed among the children and hence they were deprived of treatment for the same. Promotion of Early Intervention Services is most biennial for improvement in health status of children and therefore RBSK purview should be extended to reach every individual child⁴⁴.

Sunil K Guleri Sachin Parma (2019) a cross sectional observational study conducted on Prevalence of 4Ds among Population of below 18 years Screened under RBSK in Districts of Western Madhya Pradesh. Out of 14 districts of western Madhya Pradesh, two districts were selected randomly for the study which came out to be Indore and Ujjain. Semi structured interview schedule was organized with programme manager of both the districts. The total population of children in age group below 18 years was 217540 in Indore and 405934 in Ujjain. Out of this 143994 (66.19%) in Indore and 249956 (61.5%) in Ujjain children were Screened under RBSK programme in one year. The children were screened for 4Ds (Defects at birth, Diseases in Children, Deficiency conditions and Developmental Delays including Disabilities). The most common birth defect was congenital heart disease in both the districts with prevalence of 0.54-0.65 per thousand populations of children. As per the findings of our study a large no of children suffers from one or other type of defect, deficiency, disease and developmental delays and disorders. RBSK programme has been able to search, identify, report and assist in the proper management of these 4Ds. In our study the districts were divisional headquarters and developed cities. The coverage of screening programme was lagging up to 30% - 40% even in these developed districts. Madhya Pradesh is one of the poorest performers in cases of child health indicators. So it is the direct need of time to extend the RBSK screening coverage close to 100 %, so that not even a single with any of the 4Ds left behind from access to health services⁴⁵.

Neha Sharma, Jamal Masood, S. N. Singh, Naim Ahmad, Prabhaker Mishra, Shikhar Singh, Sudip Bhattacharya (2019) a cross sectional study on Assessment of risk factors for developmental delays among children in a rural community of North India. In this study the sample size is 30 Anganwadi centers, 450 children aged 2 months–6 years were taken in the study. The multistage random sampling technique by using lottery method. In this study the tool used for the participants is interview schedule. Seventy-three (16.2%) children were found to have DDs and 60 (13.3%) children had the global DDs. About 84/421 (20.0%) children had cognitive delay, followed by 43/450 (9.6%) children who had delay in speech and language area. About 17/190 (8.9%) children had social delay while 26/407 (6.4%) children had hearing and vision impairment. Gross motor delay was seen in 24/450 (5.3%) children and 16/300 (5.3%) children had fine motor delay. Gestational age (adjusted odds ratio [AOR] – 13.30), complications during delivery (AOR – 25.79), meconium aspiration (AOR – 12.81), and child never breastfed (AOR – 8.34) were strong predictors for the delay in different domains of developmental milestones. Socioeconomic, ante-natal, natal and post-natal factors should be considered for prompt identification and initiation of intervention for DDs⁴⁶.

Naheed Akhtar, Anam Khalid, Uzma Firdaus (2019) a retrospective cross-sectional study conducted on Prevalence and pattern of ophthalmic morbidity in pediatric patients at a district early intervention center of North India. In this study this sample size is 495 patients between 0 to 16 years were included in this study. To find out prevalence and pattern of Ophthalmic morbidity in pediatric population in a district early intervention center (DEIC) of North India. In this study the sample were selected by complete ophthalmic workup technique this including as visual acuity test by Lea paddles, Lea symbols, Cardiff acuity cards, E- charts, Snellen's chart or log MAR visual acuity chart along with cycloplegic refraction. Hirschberg's test, cover-uncover test, and prism bar cover test were done for strabismus evaluation. The tool was used in this study is Each patient underwent torchlight and slit-lamp examination for the anterior segment and dilated posterior segment examination. Prevalence of Ophthalmic morbidity was 49.09%. Peak prevalence (72.41%) was found in age gp. (9-12 yrs). Refractive errors were the commonest morbidity (33.74%). Females had higher prevalence of morbidity than males. Refractive error was the commonest Ophthalmic morbidity. Early intervention in Pediatric population is utmost essential to prevent irreversible visual loss and amblyopia⁴⁷.

Bill & Melinda Gates Foundation (2018) a systemic analysis study on Developmental disabilities among children younger than 5 years in 195 countries and territories, 1990–2016: a systematic analysis for the Global Burden of Disease Study 2016 used Dis Mod-MR 2.1, a Bayesian meta-regression tool, Globally, 52.9 million children younger than 5 years sample were selected. The use of framework for policy and action to address the needs of children with or at risk of developmental disabilities, particularly in resource-poor countries. Sample were selected by previous data of children which are YLDs for all health conditions among children younger than 5 years in 2016. Vision loss was the most prevalent disability, followed by hearing loss, intellectual disability, and autism spectrum disorder. However, intellectual disability was the largest contributor to YLDs in both 1990 and 2016. Although the prevalence of developmental disabilities among children younger than 5 years decreased in all countries (except for North America) between 1990 and 2016, the number of children with developmental disabilities increased significantly in sub-Saharan Africa (71.3%) and in North Africa and the Middle East (7.6%). South Asia had the highest prevalence of children with developmental disabilities in 2016 and North America

had the lowest. The global burden of developmental disabilities has not significantly improved since 1990, suggesting inadequate global attention on the developmental potential of children who survived childhood as a result of child survival programmes, particularly in sub-Saharan Africa and south Asia. The SDGs provide a framework for policy and action to address the needs of children with or at risk of developmental disabilities, particularly in resource-poor countries⁴⁸.

Deepti Dabar, Ranjan Das, Seetharamaiya Nagesh, Vikas Yadav, and Abha Mangal (2016) a cross sectional study on A Community-based Study on Growth and Development of Under-Five Children in an Urbanized Village of South Delhi. In this study the sample size is 520 children of under five years of age. Random sampling is used in this study for selection of the sample. The tool was used in this study is kuppuswamy scale for the assessment of socioeconomic status of the family. In all, 10.6% of children <5 years old were found to be developmentally delayed. Maximum number of children (10.1%) were found to have a delay in the domain of 'hearing language, concept development'. Of all the factors, the strongest association was found with stunting, paternal education, alcohol abuse, attendance in Anganwadi playschool. The study concludes that developmental delay is present in a sizable proportion of children <5 years of age and may be a significant factor in the overall achievement of life's potential in them⁴⁹.

Mr. Prasannakumar D.R. (2014) a comparative study to assess the Knowledge of Mothers of Under-Five Children Regarding Importance of Play in Growth and Development in Selected Rural and Urban Areas, Bangalore. To assess the knowledge of rural and urban mothers regarding the importance of play in growth and development of their children. To compare the knowledge of rural and urban mothers of under-five children regarding importance of play in growth and development. In this study the 80 mothers of under five children were selected by using non probability convenient sampling technique. In this study the tool was used as structured knowledge questionnaire on importance of play in growth and development. Findings of the study revealed that majority 55% of the rural mothers and 30% of the urban mothers had moderate knowledge while 62.5% of urban mothers and 30% of the rural mothers had adequate knowledge regarding the importance of play in growth and development of under-five children. The total difference in the mean of overall knowledge score was 3.32 with the 't' value of 3.341 and found to be significant at the level of $p < 0.01$. Hence it indicated that there was a significant difference in the knowledge level of rural and urban mothers. Study also reveals that there was a statistically significant association between the knowledge score of the rural and urban mothers with demographic variables such as age, education, occupation, family income, number of children and religion at the probability level of $p < 0.05$ and $P < 0.01$. From the study findings, it is understood that the samples had moderate knowledge regarding the importance of play in growth and development of children. The knowledge level of the mother's increases with the age, educational status, family income and number of children they have. Hence the study emphasizes more responsibility on health care professionals, especially nurses in empowering the mothers of under-five children regarding the importance of play in growth and development⁵⁰.

Carolyn Elizabeth George, Gift Norman, Tanya Elizabeth Benjamin, Devashri Mukherjee (2014) a qualitative study on Barriers to Early Diagnosis, Intervention and Social Integration of Children with Developmental Disabilities: A Qualitative Study from Rural Villages and a Poor Urban Settlement of Bangalore,

South India. In this study Parents of 32 children were interviewed; of them in 18 children, both parents were present during the interview, and in the other 14 children, only the mother was present. The tool was used in this study is the semi-structured interview. Using the lottery method, 8 schools from the list, 4 each (2 private and 2 government) from rural and urban areas, were chosen at random for the study. the oldest child was 15 years old and the youngest was 2, the mean age being 7.6 years. 62.5% of the children in the study were males. Their medical conditions were cerebral palsy (43.8%), mental retardation (28%), cerebral palsy and mental retardation (12.5%), spinal muscular atrophy (6.3%), blindness (3.1%), seizure disorder (3.1%) and Teacher Collin syndrome (3.1%). The study throws light on the various challenges faced by parents, doctors and teachers in dealing with children with developmental disabilities in India. It reveals that parents felt there was a delay in diagnosis, and lack of access to correct information about where to go for help. Treatment options, when available, were inaccessible and unaffordable. Myths and misconceptions about disability, added to their woes. The doctors felt their competency levels were not optimal to diagnose and manage disabilities among children. They also felt that there was insufficient information on where to refer such children. In addition, they lacked communication skills to deliver 'bad news' to the parents. The teachers, in general, had a negative attitude towards children with special needs. They viewed them as an additional burden and responsibility. They lacked the knowledge and skills to care for such children. They were also apprehensive about the attitudes and interactions of normal children at school with children with disability⁵¹.

Ajediran I Bello, Jonathan NA Quartey and Louisa A Appiah (2013) a cross sectional study on Screening for developmental delay among children attending a rural community welfare clinic in Ghana. In this study the sample size is 330. The screening sampling technique is used were as out of 389 sample the selected sample is 330. The tool was used in this study were as structure interview questionnaire. Three hundred and thirty (330) children were screened and majority 60(18%), were found within the age range 3 months 1 day to 5 months 0 day. 251(76%) had normal weight (2.5 kg-3.5) while 26(7.6%) were underweight (<2.5 kg). Generally, 147(44.6%) of the children had DD in the different domains of the questionnaires. 41(12.4%) had DD in social/personal interaction while 19(5.8%) were delayed in the communication domain. Birth weight and duration of gestation were significantly associated with communication domain while the level of education of the mothers and duration of gestation were significantly associated with gross motor domain. An appreciable proportion of the children were found to experience developmental delays and the most prevalent occurrence was in personal/social interaction. Birth weight, gestational age and maternal educational level provide insight into a link with communication and gross motor skills⁵².

Mary Pat Moeller, MS (2000) an experimental study on Early Intervention and Language Development in Children Who Are Deaf and Hard of Hearing. In this study the sample size is 80 children were selected. The tool was prepared for the participants were evaluated using the Peabody Picture Vocabulary Test and a criterion-referenced measure, the Preschool Language Assessment Instrument, administered individually by professionals skilled in assessing children with hearing loss. A rating scale was developed to characterize the level of family involvement in the intervention program for children in the study. In this study the purposive sampling were used. A statistically significant negative correlation was found between age of enrollment and language outcomes at 5 years of age. Children who were enrolled earliest (eg, by 11 months of age) demonstrated significantly better

vocabulary and verbal reasoning skills at 5 years of age than did later-enrolled children. Regardless of degree of hearing loss, early-enrolled children achieved scores on these measures that approximated those of their hearing peers. In an attempt to understand the relationships among performance and factors, such as age of enrollment, family involvement, degree of hearing loss, and nonverbal intelligence, multiple regression models were applied to the data. The analyses revealed that only 2 of these factors explained a significant amount of the variance in language scores obtained at 5 years of age: family involvement and age of enrollment. Surprisingly, family involvement explained the most variance after controlling for the influence of the other factors ($r = .615$; F change = 58.70), underscoring the importance of this variable. Age of enrollment also contributed significantly to explained variance after accounting for the other variables in the regression ($r = -.452$; F change = 19.24). Consistent with the findings of Yoshinaga-Itano et al, significantly better language scores were associated with early enrollment in intervention. High levels of family involvement correlated with positive language outcomes, and, conversely, limited family involvement was associated with significant child language delays at 5 years of age, especially when enrollment in intervention was late. The results suggest that success is achieved when early identification is paired with early interventions that actively involve families⁵³.



CHAPTER III METHODOLOGY

In this chapter the methodology for the study is discussed. It includes research approach, research design, variables, population of the study, sample and sampling technique, inclusion and exclusion criteria, setting of the study, research tools, development of the tools, intervention, pilot study, content validity and reliability, ethical issue and plan for data collection, plan for data analysis and interpretation. Research methodology is concerned with problem solving, problem statement, historical research and evaluation of research. It includes the collection, assembling and examination of available data, making assumptions about the data, testing the assumptions, and developing practical applications from the laws or principles that have been derived from the verifications of the assumption⁵⁴.

Research methodology could be defined as a way to solve the research problem systematically. It deals with defining the problem, formulation of hypothesis, methods adopted for data collection and statistical techniques used for analyzing the data with logical reason behind it. It may be understood as a science of studying how research is done scientifically. The scope of research methodology is wider than that of research methods. Research methodology is not only about the research methods but also consider the logic behind the methods use in the context of the research study⁵⁵.

Research Approach

An evaluative approach is used to find out the effectiveness of an orientation program on knowledge regarding facilities provided in district early intervention centers among mothers of under five children.

The research approach spells out the basic strategies that the researcher adopts to develop information that

is accurate and interpretable.

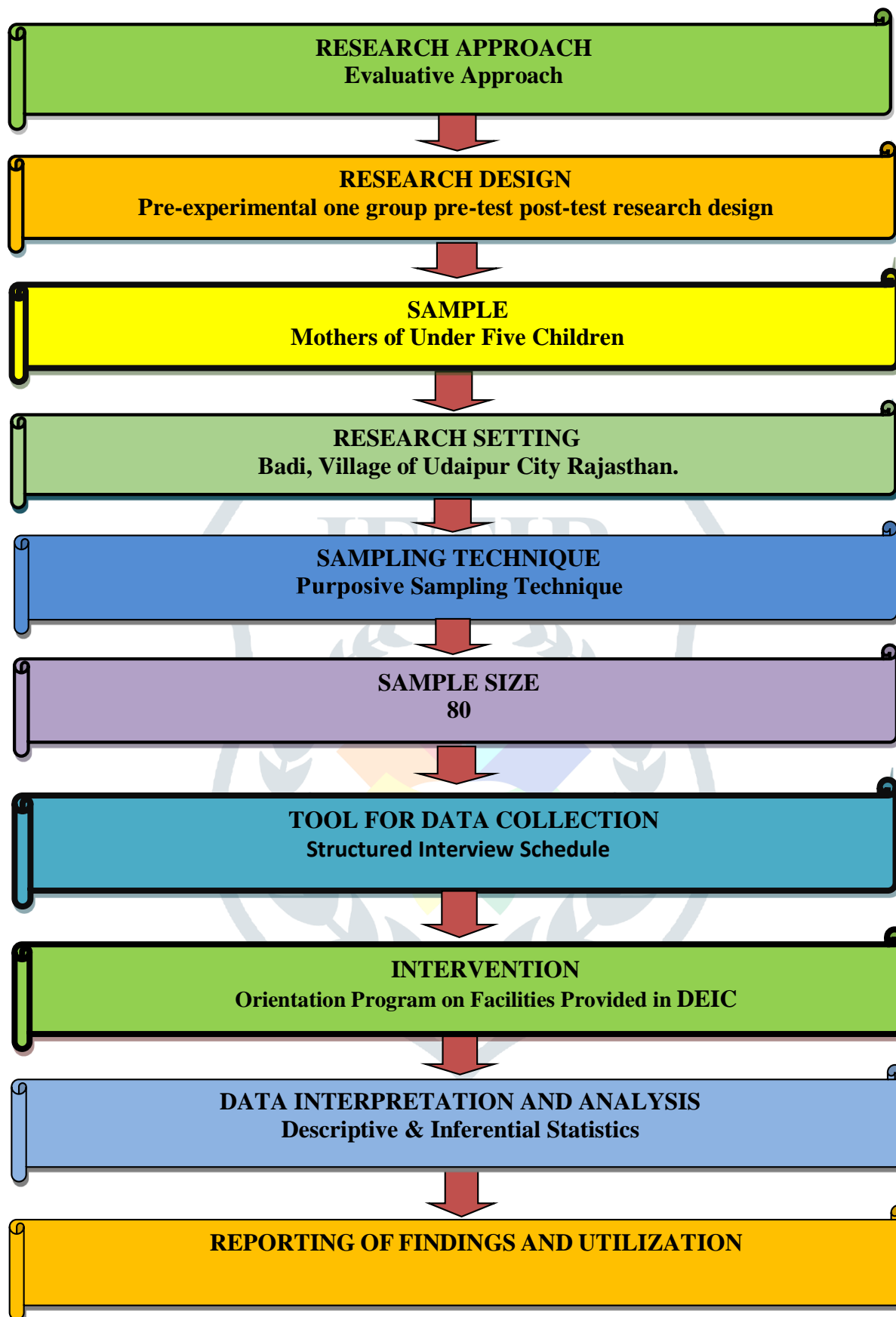


Figure 3.1 Schematic Representation of Research Methodology

Research Design

Research design is a blue print for conducting of a study that maximizes control over factors that could interfere with the study's desired outcome.

The term research design refers to the plan or organization of a scientific investigation. Research design helps the researcher in selection of subjects, manipulation of experimental variables, control of extraneous variables, procedure of data collection and the type of statistical analysis to be used to interpretate the data. For the present study, research design used is Pre experimental one group pre-test post-test design.

The design chosen for the study is presented in that table as:

Table 3.1 Pre-Experimental One Group Pre-Test Post-Test Research Design

| Group | Pre-test | Intervention | Post test |
|--------------------------------|----------|--------------|-----------|
| Mothers of under-five children | 01 | X | 02 |

Keys:

- 01: Pre-test knowledge regarding facilities provided in District early intervention centers among mothers of under five children.
- X: Orientation program on knowledge regarding facilities provided in District early intervention centers among mothers of under five children.
- 02: Post-test knowledge regarding facilities provided in District early intervention centers among mothers of under five children.

Research Setting

It refers to the physical location where data collection will be done in the study. The present study was conducted in Badi village of Udaipur city Rajasthan.

The selection of the samples was done on the basis of:

- Feasibility of conducting study
- Geographical proximity
- Availability of sample

Sampling Technique

Sampling is a process of selecting a portion of the population to obtain data, regarding a problem. In this study the subject was selected by Purposive sampling technique. This technique is the respondent's fulfilling inclusion and exclusion criteria well listed from selected rural community. In this study, Purposive sampling technique were used to select the sample. In this technique, the research relies on his own judgment when choosing members of population to participate in the study. 80 mothers of under five children were selected from selected rural community and by the use of structured interview schedule the pre-test were done and orientation program were conducted regarding facilities provided in district early intervention canter and the post test was done after 7 days with the same tool.

Sample Size

A sample is a small proportion of the population selected for observation and analysis. In this study the sample size consists of 80 mothers of under five children at Badi village of Udaipur city Rajasthan.

Sample Selection Criteria

Inclusion Criteria

Mothers:

1. Having children under five of age living in selected Rural area
2. Willing to participate
3. Available during data collection

Exclusion Criteria

Mothers of under five children

1. Not willing to participate in study.
2. Not available or sick during the study.

Variables under study

Independent variable - In this study independent variable is orientation program.

Dependent variable - In this study the dependent variable is knowledge of mothers of under five children regarding facilities provided by DEIC.

Socio-Demographic variables - The socio-demographic variables in the study are age, occupation of mother, educational qualification, monthly income of family, type of family, previous information regarding facilities provided at District early intervention centres.

Development and Description of the Tool

Data collection tool are the devises or instruments that researchers use to observe or measure the tools in the research problem. A valid and reliable data collection instrument is considered important to collect the data. An orientation program was prepared by the researcher and used to assess the knowledge of mothers of under five children regarding facilities provide in District early intervention centres based on the objectives of the study as it is considered the best and appropriate tool to elicit the responses. The main strength behinds the tool was:

- Related review of literature
- Based on the opinions and suggestion of experts.
- Discussion with colleagues and professional

- Books, journals, internet etc.

All the above provided relevant data necessary to construct the tool regarding facilities provided by District early intervention centres.

Preparation of Blue Print

The investigator was prepared a blue print before constructing the tool. The items were distributed according to the content area. A blue print on knowledge regarding facilities provided in district early intervention center was prepared.

| SR. NO | AREA | TOTAL NO. OF ITEMS |
|--------|-----------------------------|--------------------|
| 1. | Socio-Demographic Variables | 7 |
| 2. | Define DEIC | 8 |
| 3. | Concepts of DEIC | 2 |
| 4. | Various needs of DEIC | 3 |
| 5. | Objectives of DEIC | 3 |
| 6. | Facilities Provided in DEIC | 4 |
| | Total | 27 |

A blue print based on content regarding knowledge of facilities provided in district early intervention centers is prepare as follow:

Table 3. Blue Print of Structured Interview Schedule Regarding Facilities Provided in DEIC

Description of the tool

The tool consisted of two sections

Section A: Demographic data.

The socio-demographic variables in the study are age, occupation of mother, educational qualification, monthly income of family, type of family, previous information regarding facility provided at District early intervention centers.

Section B: Structured interview schedule.

The structured interview schedule used in this study for the sample's mothers of under five children.

Scoring Criteria

There was a total of 20 items. Score of '1' will be given for each positive response and '0' for negative response. The scores ranged from a minimum of '0' to a maximum of 20.

Table 3.3 Interpretation of Level of Knowledge

| Interpretation of Level of knowledge | Percentage |
|---|-------------------|
| Good | >75% |
| Average | 51-75% |
| Poor | <50% |

Intervention

An orientation program regarding facilities provided in District early intervention centres.

- Define DEIC
- Concepts of DEIC
- Various needs of DEIC
- Objectives of DEIC
- Facilities Provided in DEIC

Content Validity of the Tool

Content validity is the degree to which the items in an instrument adequately represent the universe of content for the concept being measured. Content validity is relevant for both affective and cognitive measure. The prepared instrument along with objectives, tools, intervention on orientation program was submitted to 5 experts from child health nursing. The experts were requested to judge the items for relevance, clarity, appropriateness of the content area. On the basis of expert's suggestion, broad review of literature try out and pilot study results modifications was made in the final tool. On the basis of expert's suggestions, broad reviews of literature following modifications was made in the final tool. Language was made simpler and easier to understand in the tool.

Reliability of the tool

Table 3.4: Reliability Test

| Reliability test | | |
|-------------------------|---|---------------------|
| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | No. of Items |
| 0.89 | 0.89 | 20 |

Reliability of tool is the extent to which the tool is consistent, accurate, precise, established. The final tool is tested for reliability. The tool was administered on eight samples. The reliability of tool was calculated by

Cornbach's alpha method, the calculated value "r" for knowledge was 0.89, was reliable at the 0.02 and 0.05 level of significance respectively. Standard value of 'r' = + 0.89

Pilot Study

Pilot study is a small-scale version or trail run done in preparation for a main study. The purpose of the pilot study is to find out the feasibility of the study. To assess the effectiveness of data collection plan and make due modification as required. To find out the feasibility of conducting the main study and to determine the methods of statistical analysis. The investigator conducted the pilot study in rural area of Udaipur. The sample size was 08 mothers of under five children. Permission was obtained from concerned authority Sarpanch of the Eklingpura, village Udaipur.

The purpose of the study was explained to samples prior to the study and informed consent was obtained. Data was collected using structured interview schedule to assess the knowledge of mothers of under five children. The duration took for conducting pre-test and intervention was give after 45 min. Post test was conducted after 7 days using the same tool. Data was analysed with the help of descriptive and inferential statistics. The comprehension, feasibility and time required to complete the tool was assessed. The language was found to be clear and all the items in the tool were clearly understood by the respondents without ambiguity. Respondents took 20 min to answer the question. Hence, the tool was found to be feasible and practicable for the main study. Some of items in the tool were modified. No problem was faced during pilot study.

Findings of the Pilot Study

- The mean pre-test knowledge score was 12.13%.
- The mean post-test knowledge score was 16.25%.
- The mean percentage of post-test knowledge was higher than the mean percentage of pre-test, it shows a significant difference in the knowledge level after administer the orientation program regarding DEIC.
- The reliability of tool was calculated by Cornbach's alpha method, the calculated value "r" for knowledge was 0.89, was reliable at the 0.02 and 0.05 level of significance respectively. Standard value of 'r' = + 0.89

Data Collection Procedure

The main study was conducted between 27.10.2022 to 09.11.2022 at rural community area of Udaipur. The formal written permission was obtained from the concerned authority of the community area head sarpanch Mr. Madan lal choubisa. The purpose of the study was explained to the group and confidentiality of their responses was assured. After obtaining the permission and consent, the knowledge assessed using structured interview schedule. Orientation program was implemented on the same day following all COVID-19 protocols. Post-test was conducted from 7th day. The duration took for administration of tool and orientation program was 45 min.

Data Analysis

Data analysis is the technique used to reduce, organize and give meaning to the data. In the present study, data obtained was analysed on the basis of the objective of the study using descriptive and inferential statistics. A master data sheet was prepared with responses given by respondents. The plan for data analysis was as follows:

- Distribution of samples according to selected socio demographic variables were analyzed using frequency and percentage distribution.
- Mean, mean % and standard deviation used to analyze pre-test and post-test knowledge scores.
- Paired and unpaired t- test was used to determine the effectiveness of orientation program by comparing mean pre and post-test knowledge scores.
- “chi- square” test was used to find out the association between the pre-test knowledge scores, of the samples with selected socio demographic variables.

Ethical Consideration

- Permission was obtained from ethical committee of RNT medical college, Udaipur.
- Permission was obtained from concerned authority of Badi village of Udaipur.
- Informed consent was obtained from the participants at the time of data collection.
- Consent was taken from each respondent who have participate in the study.
- Confidentially and anonymity of the respondents was maintained.

Summary

This chapter explained the methodology for this study. It included research approach, research design, variable under study, setting of the study, population, sample, sampling technique, development of tool, content validity, and procedure for data collection and plan for data analysis.

CHAPTER IV

DATA ANALYSIS AND INTERPRETATION

This chapter deals with analysis and interpretation of data collected. The present study aimed to assess the effectiveness of an orientation programme on knowledge regarding facilities provided in District early intervention centres among mothers of under five children. The analysis and interpretation of data of this study based on the data collected through orientation on knowledge regarding facilities provided in District early intervention centres. Structured interview schedule used for 80 mothers of under-five children. The results were computed using descriptive and inferential statistics based on the objectives and hypothesis.

Analysis is the categorizing, ordering, manipulating and summarizing the data to obtain answer to research questions. The purpose of analysis is to reduce data to intelligible and interpretable form so that the relation of research problem can be studied and tested. The obtained data were analysed based on objective and hypothesis and was organized under following sections⁵⁶.

| | |
|-------------|---|
| Section -I | <ul style="list-style-type: none"> • Distribution of Respondents according to socio-demographic variables. |
| Section -II | <ul style="list-style-type: none"> • Area-wise mean pre-test and post-test knowledge scores. • Interpretation of level of knowledge and attitude scores. • Effectiveness of an orientation programme on knowledge regarding facilities provided in district early intervention center. |
| Section III | <ul style="list-style-type: none"> • Association between mean pre-test knowledge scores with selected socio demographic variables |

SECTION- I

4.1: Distribution of Respondents According to Socio Demographic variables

Table: 4.1: Distribution of Respondents According to Age

n= 80

| Age in years | No. of respondents | % |
|--------------|--------------------|-------|
| 18-24 | 5 | 6.25 |
| 25-30 | 20 | 25.00 |

| | | |
|--------------|-----------|---------------|
| 31-40 | 25 | 31.25 |
| 41-50 | 30 | 37.50 |
| Total | 80 | 100.00 |

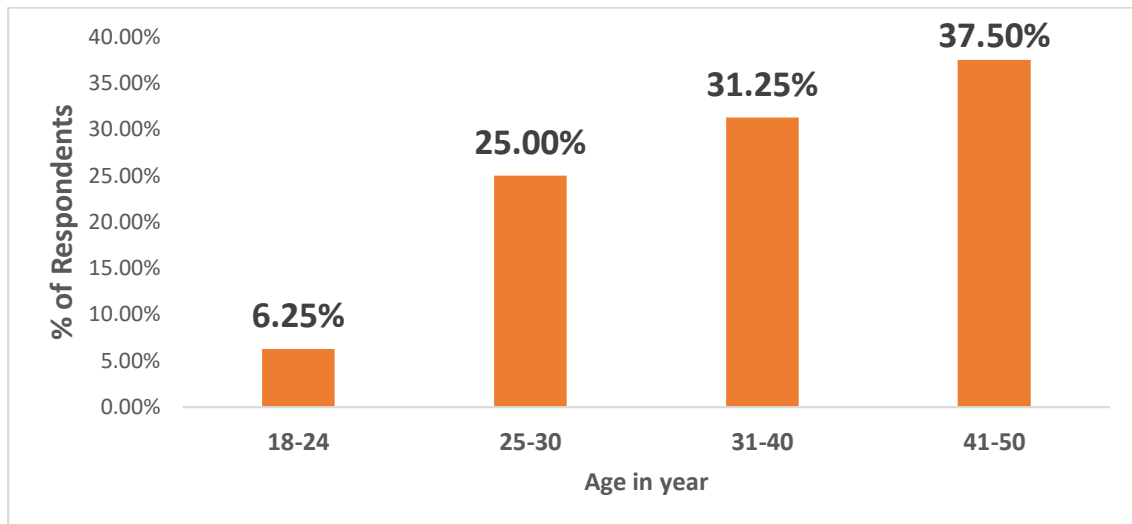


Figure: 4.1 Distribution of Respondents According to Age

Table 4.1 and figure 4.1 revealed that majority 37.50% of the respondents were in age group between 41-50, 31.25% of respondent were in age group between 31-40, and 25% of respondent were in age group of 25-30 and least 6.25% respondent were in age group between 18-24.

Table: 4.2 Distribution of Respondents According to Educational Qualification

n= 80

| Educational Qualification | No. of respondents | % |
|---------------------------|--------------------|---------------|
| No formal education | 25 | 31.25 |
| Primary | 30 | 37.50 |
| Secondary | 20 | 25.00 |
| Graduate & above | 5 | 6.25 |
| Total | 80 | 100.00 |

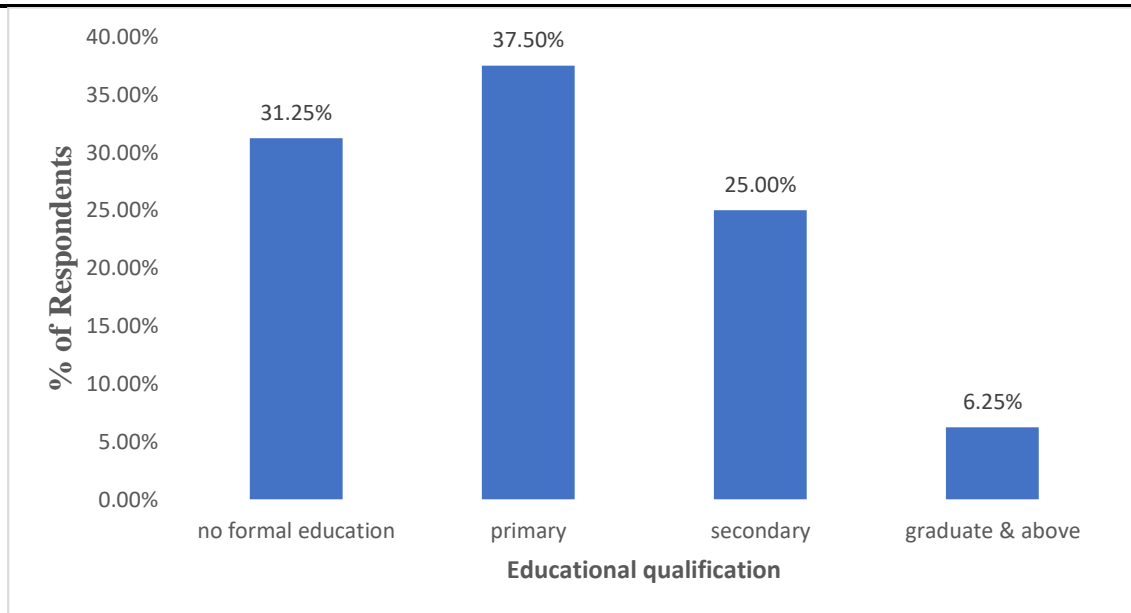


Figure: 4.2 Distribution of Respondents According to Educational Qualification

Table 4.2 and figure 4.2 revealed that majority 37.50% of respondents were primary education, and 31.25% of respondents were no formal education and 25% of respondent were secondary education and least 6.25% of the respondent were graduate and above.

Table: 4.3 Distribution of Respondents According to Type of Family

n= 80

| Type of Family | No. of respondents | % |
|----------------|--------------------|---------------|
| Joint | 50 | 62.50 |
| Nuclear | 30 | 37.50 |
| TOTAL | 80 | 100.00 |

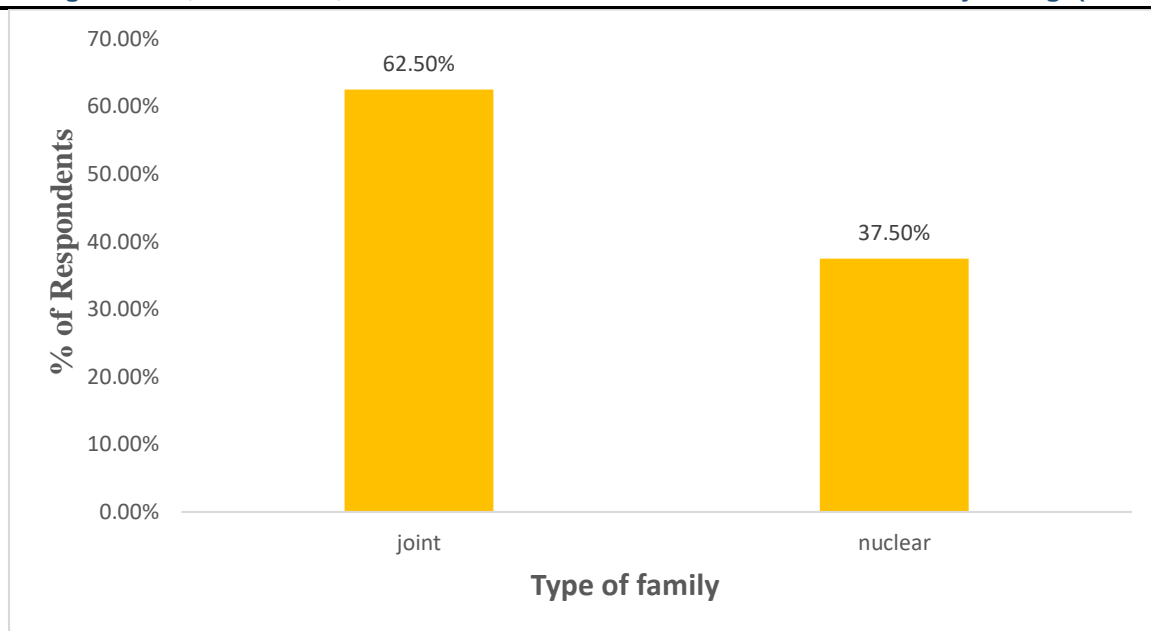


Figure: 4.3 Distribution of Respondents According to Type of family

Table 4.3 & Figure 4.3 revealed that 62.50% of the respondents had joint family and 37.50% had nuclear family.

Table: 4.4 Distribution of Respondents According to Occupation of Mother

n= 80

| Occupation of Mother | No. of respondents | % |
|----------------------|--------------------|---------------|
| Govt. employee | 0 | 0.00 |
| private employee | 20 | 25.00 |
| business | 0 | 0.00 |
| house wife | 60 | 75.00 |
| Total | 80 | 100.00 |

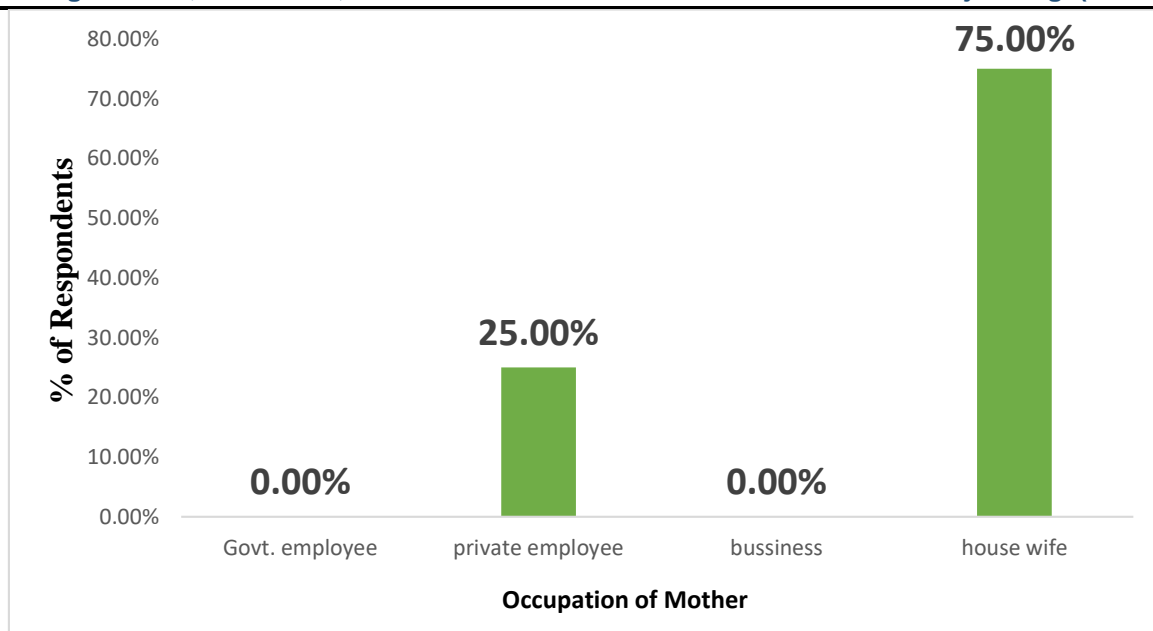


Figure: 4.4 Distribution of Respondents According to Occupation of Mother

Table 4.4 & Figure 4.4 revealed that majority of the respondents were house wife 75.00%, 25.00% were private employee, and none of the respondent were business and govt. employee.

Table: 4.5 Distribution of Respondents According to Monthly Income of Family

n= 80

| Monthly Income of Family | No. of respondents | % |
|--------------------------|--------------------|---------------|
| less than 10000 | 50 | 62.50 |
| 10001-20000 | 30 | 37.50 |
| 20001-30000 | 0 | 0.00 |
| above 30000 | 0 | 0.00 |
| Total | 80 | 100.00 |

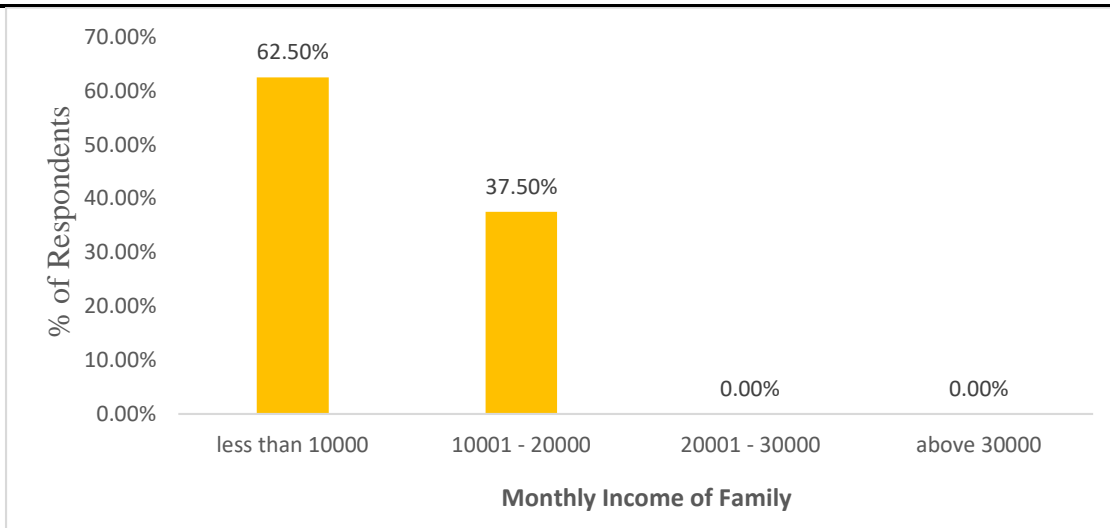


Figure: 4.5 Distribution of Respondents According to Monthly Income of Family

Table 4.5 & Figure 4.5 revealed that majority 62.50% of the respondents had less than 10 thousand monthly income and 37.50% of the respondent were 10 to 20 thousand monthly income and none of the respondent were 20 to 30 thousand and above 30 thousand monthly incomes of family.

Table: 4.6 Distribution of Respondents According to Previous Information

n= 80

| Previous Information | No. of respondents | % |
|----------------------|--------------------|---------------|
| YES | 20 | 25.00 |
| NO | 60 | 75.00 |
| TOTAL | 80 | 100.00 |

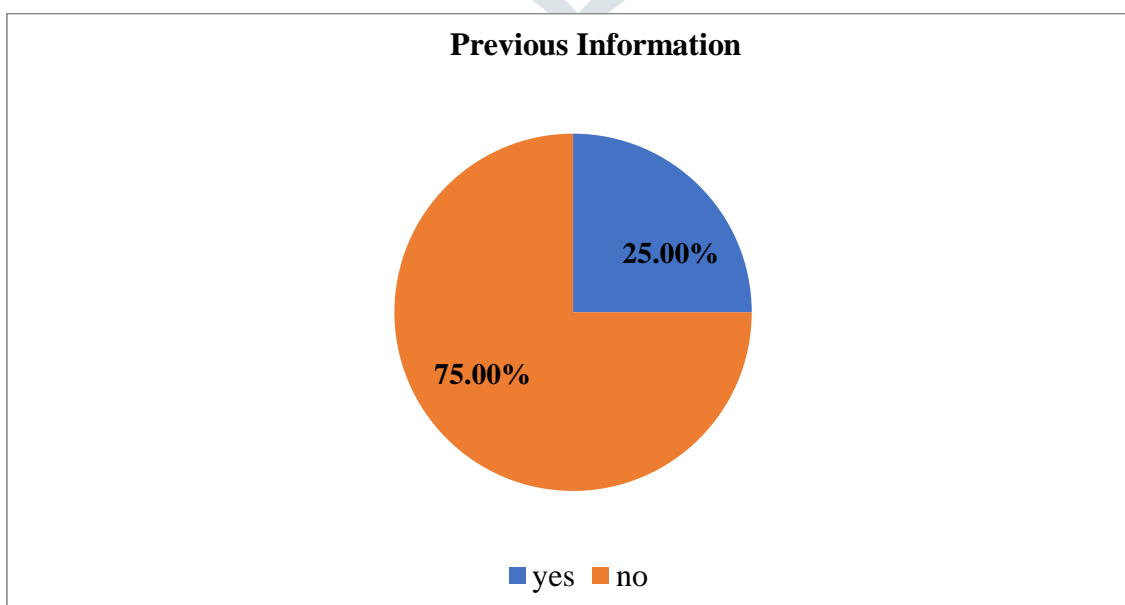


Figure: 4.6 Distribution of Respondents According to Previous Information

Table 4.6 & Figure 4.6 revealed that 75.00% of the respondents had no previous information and 25.00% had previous knowledge.

SECTION-II

This section examined data pertaining to the following objectives and hypothesis.

Objectives:

1. To evaluate the knowledge regarding facilities provided in DEIC among mothers of under five children.
2. To evaluate the effectiveness of orientation program on knowledge regarding facilities provided in DEIC among mothers of under five children.

Hypothesis: -

H₁ There is a significant difference between pre and post-test knowledge scores.

Table 4.7: Area-wise Mean Pre-Test and Post Test Knowledge Scores

n=80

| Area | Pre | | Post | |
|-----------------------------|-------|------|-------|------|
| | Mean | % | Mean | % |
| Define DEIC | 61.37 | 0.87 | 80.00 | 1.05 |
| Concepts of DEIC | 65.50 | 0.60 | 87.50 | 0.43 |
| Various needs of DEIC | 58.25 | 0.69 | 81.75 | 0.61 |
| Objectives of DEIC | 59.00 | 0.50 | 82.50 | 0.50 |
| Facilities Provided in DEIC | 59.00 | 0.64 | 84.00 | 0.62 |

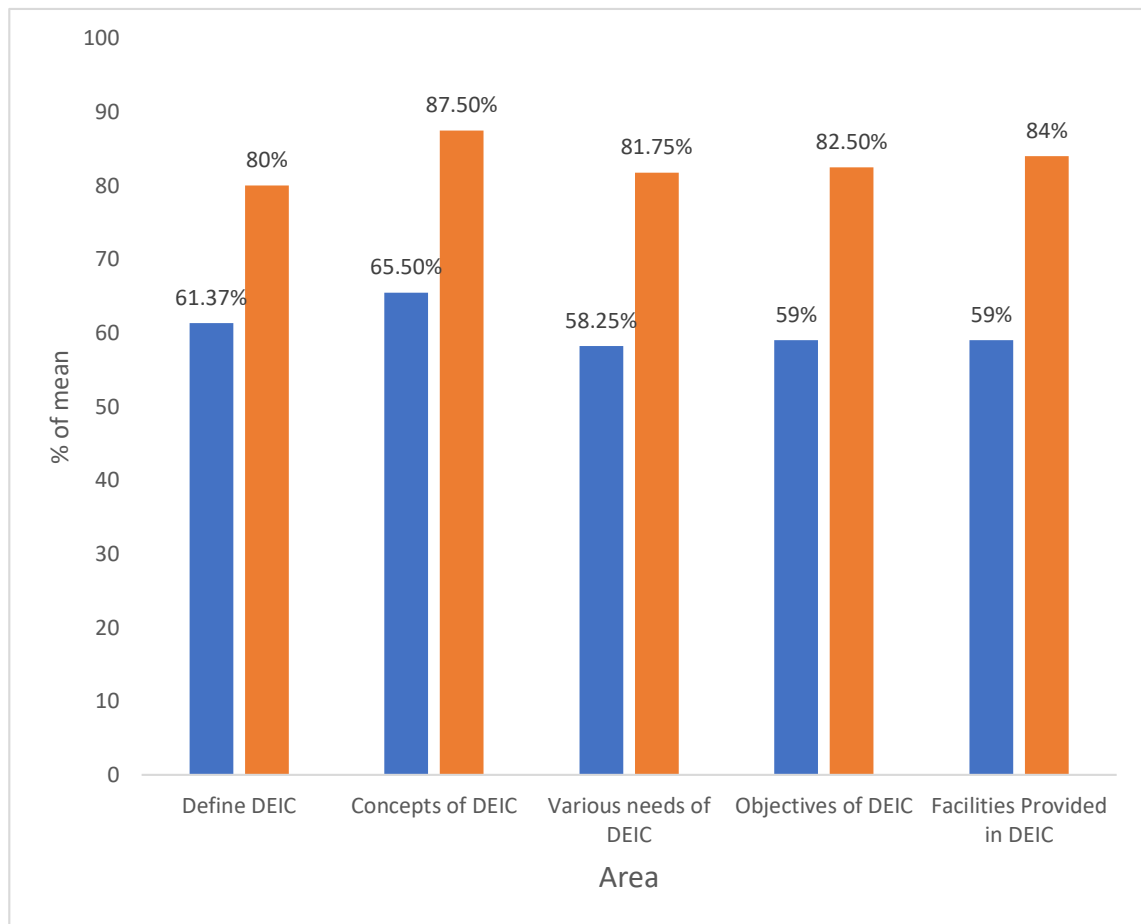


Figure 4.7: Area-wise Mean Pre-Test and Post Test Knowledge Scores

Table 4.7 and Figure 4.7 revealed that in terms of Introduction, mean pre-test knowledge scores were 61.37 with SD 0.87 whereas mean post-test knowledge scores were 80.00 with SD 1.05.

In terms of concepts, mean pre-test knowledge scores were 65.50 with SD 0.60 whereas mean post-test knowledge scores were 87.50 with SD 0.43.

In terms of various needs, mean pre-test knowledge scores were 58.25 with SD 0.69 whereas mean post-test knowledge scores were 81.75 with SD 0.61.

In terms of facilities provided, mean pre-test knowledge scores were 59 with SD 0.64 whereas mean post-test knowledge scores were 84 with SD 0.62.

Table 4.8: Interpretation of Level of Knowledge Scores

| Level of knowledge | Pre-Test | | Post-Test | |
|--------------------|-----------|---------------|-----------|---------------|
| | N | % | N | % |
| Poor (<50%) | 70 | 87.50 | 0 | 0.00 |
| Average (50-75%) | 10 | 12.50 | 29 | 36.30 |
| Good (>75%) | 0 | 0.00 | 51 | 63.70 |
| Total | 80 | 100.00 | 80 | 100.00 |

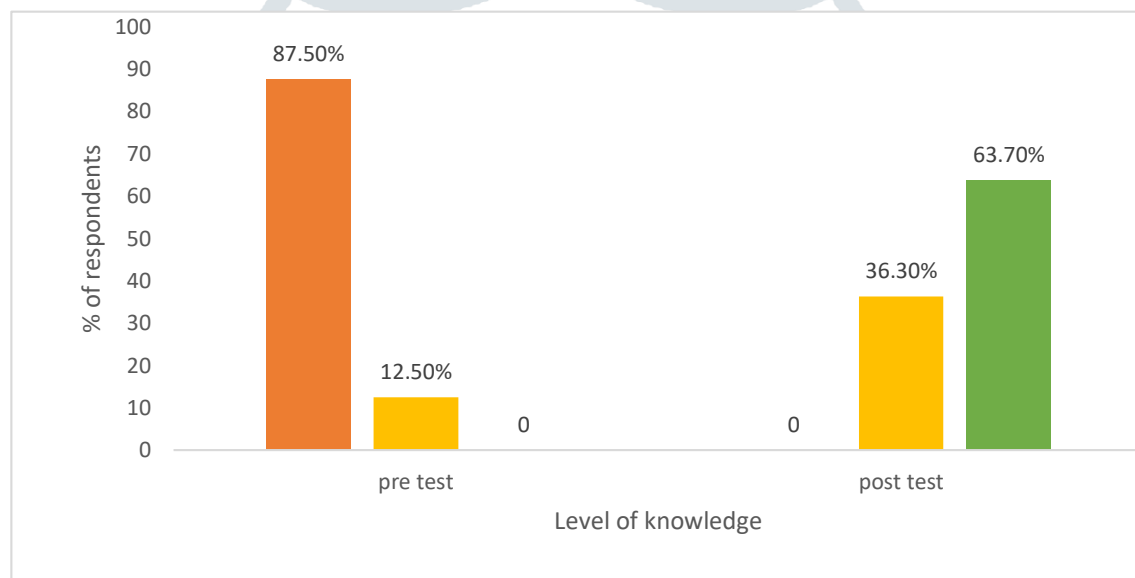
**Figure 4.8: Interpretation of Level of Knowledge Scores**

Table 4.8 and Figure 4.8 revealed that 87.50% respondents have poor level of knowledge, 12.50% respondents have average level of knowledge and none of the respondents have good level of knowledge in pretest, whereas in posttest 63.70% respondents have good level of knowledge, 36.30% respondents have average level of knowledge and none of the respondents had poor level of knowledge.

Table: 4.9 Effectiveness of An Orientation Program on Knowledge Scores

n=80

| | Mean | Mean % | SD | Mean diff. | t value | df | p value | Level of Significant |
|-----------|-------|--------|------|------------|---------|----|---------|----------------------|
| pre test | 12.13 | 60.62 | 1.17 | 4.30 | 12.59 | 79 | 0.0001 | S |
| post test | 16.43 | 82.15 | 1.37 | | | | | |

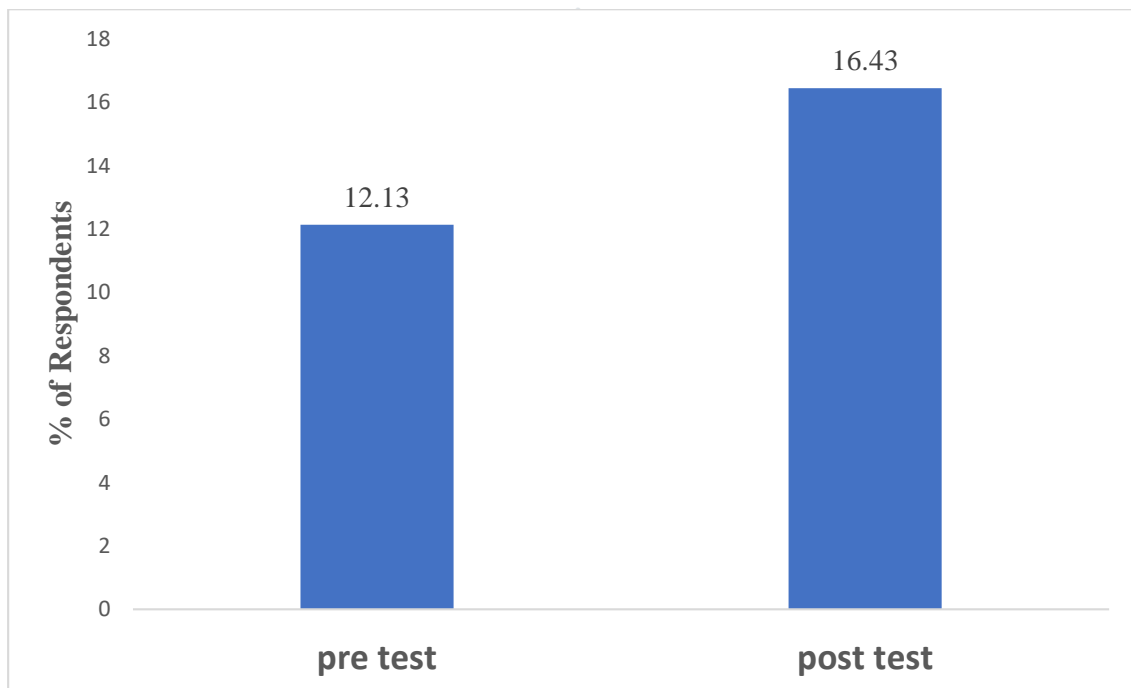
**Figure: 4.9 Effectiveness of An Orientation Program on Knowledge Scores**

Table 4.9 and Figure 4.9 revealed that mean pre-test knowledge score was 12.13 with SD 1.17 where the post-test knowledge score was 16.43 with SD 1.37 the mean difference is 4.30 and the calculated t value is 12.59 df is 79 at 0.05 level of significance. Hence, H_1 stated that there is a significant difference between pre and post-test knowledge scores and it was accepted in this study.

SECTION-III

This section examined data pertaining to the following objectives and hypothesis.

Objectives:

3. To find out the association between pre-test knowledge scores and selected socio-demographic variables

Hypothesis: -

H_2 There is a significant association between pre-test knowledge scores and selected socio-demographic variables.

Table 4.10: Association Between Pre-Test Knowledge Scores and Selected variables like Age, Educational Qualification, Occupation of Mother

n=80

| Variables | Median | | Total | chi-square tabulated value | df | p | Result |
|----------------------------------|--------------|--------------|-------|----------------------------|----|-------|--------|
| | Below median | Above median | | | | | |
| Age in years | | | | | | | |
| 18-24 | 3 | 2 | 5 | 7.82 | 3 | 0.01 | S |
| 25-30 | 10 | 10 | 20 | | | | |
| 31-40 | 12 | 13 | 25 | | | | |
| 41-50 | 20 | 10 | 30 | | | | |
| Educational Qualification | | | | | | | |
| No formal education | 15 | 10 | 25 | 7.82 | 3 | 0.01 | S |
| Primary | 17 | 13 | 30 | | | | |
| Secondary | 10 | 10 | 20 | | | | |
| Graduate & above | 1 | 4 | 5 | | | | |
| Occupation of Mother | | | | | | | |
| Govt. employee | 0 | 0 | 0 | 7.82 | 3 | 0.001 | S |
| Private employee | 15 | 5 | 20 | | | | |
| Business | 0 | 0 | 0 | | | | |
| House wife | 27 | 33 | 60 | | | | |

Table 4.10: In terms of association between pre-test knowledge scores and age of the respondent's analysis revealed that chi square tabulated value is 7.82 at df 3 at 0.001 level of significance which indicated that there were significant association found between mean pre-test knowledge scores and age of respondent.

In terms of association between pre-test knowledge scores and education of the respondent's analysis revealed that chi square tabulated value is 7.82 at df 3 at 0.001 level of significance which indicated that there were significant association found between mean pre-test knowledge scores and education of respondent.

In terms of association between pre-test knowledge scores and occupation of the respondent's analysis revealed that chi square tabulated value is 7.82 at df 3 at 0.001 level of significance which indicated that there were significant association found between mean pre-test knowledge scores and occupation of respondent.

Table 4.11: Association Between Pre-Test Knowledge Scores and Selected Variable Like Previous Information, Type of Family, Monthly Income of Family

| Variables | Median | | Total | chi-square tabulated value | df | p | Result |
|---------------------------------|--------------|--------------|-------|----------------------------|----|-------|--------|
| | Below median | Above median | | | | | |
| Previous Information | | | | | | | |
| Yes | 15 | 5 | 20 | 3.84 | 1 | 0.001 | S |
| No | 25 | 35 | 60 | | | | |
| Type of Family | | | | | | | |
| Joint | 20 | 30 | 50 | 3.84 | 1 | 0.001 | S |
| Nuclear | 20 | 10 | 30 | | | | |
| Monthly Income of Family | | | | | | | |
| less than 10000 | 30 | 20 | 50 | 7.82 | 3 | 0.001 | S |
| 10001 - 20000 | 15 | 15 | 30 | | | | |
| 20001 - 30000 | 0 | 0 | 0 | | | | |
| above 30000 | 0 | 0 | 0 | | | | |

In terms of association between pre-test knowledge scores and previous information of the respondent's analysis revealed that chi square tabulated value is 7.82 at df 1 at 0.001 level of significance which indicated that there were significant association found between mean pre-test knowledge scores and previous information of respondent.

In terms of association between pre-test knowledge scores and type of family of the respondent's analysis revealed that chi square tabulated value is 3.84 at df 1 at 0.001 level of significance which indicated that there were significant association found between mean pre-test knowledge scores and type of family of respondent.

In terms of association between pre-test knowledge scores and monthly income of the respondent's analysis revealed that chi square tabulated value is 3.84 at df 3 at 0.001 level of significance which indicated that there were significant association found between mean pre-test knowledge scores and monthly income of respondent.

Overall analysis revealed that there were a significant association of pre-test knowledge score with socio demographic variables like age, occupation of mother, educational qualification, monthly income of family, type of family, previous information whereas association of pre-test knowledge score with socio demographic variables. Hence, H_2 stated that there is a significant association between pre-test knowledge scores and selected socio-demographic variables it was accepted in this study.

CHAPTER V

DISCUSSION

This chapter deals with the discussions in accordance with the objectives of the study and hypothesis. The present study has been undertaken to Effectiveness of an orientation program on knowledge regarding facilities provided in District early intervention centers among mothers of under five children at selected Rural area of Udaipur city Rajasthan

Objectives

1. To evaluate the knowledge regarding facilities provided in District early intervention centers among mothers of under five children.
2. To evaluate the effectiveness of an orientation program on knowledge regarding facilities provided in District early intervention centers among mothers of under five children.
3. To find out the association between pre-test knowledge scores and selected socio-demographic variables.

Hypothesis

H₁ There is a significant difference between pre and post-test knowledge scores.

H₂ There is a significant association between pre-test knowledge scores and selected socio-demographic variables.

The findings of the study are discussed under the following headings:

SECTION I

Distribution of respondent according to socio demographic variables

Age The majority 37.50% of the respondents were in age group between 41-50, 31.25% of respondent were in age group between 31-40, and 25% of respondent were in age group of 25-30 and 6.25% respondent were in age group between 18-24.

Educational Qualification The majority 37.50% of respondents were primary education, and 31.25% of respondents were no formal education and 25% of respondent were secondary education and 6.25% of the respondent were graduate and above.

Type of Family The majority 62.50% of the respondents had joint family and 37.50% had nuclear family.

Occupation of Mother The that majority of the respondents were house wife 75.00%, 25.00% were private employee, and none of the respondent were business and govt. employee.

Monthly Income of Family The majority 62.50% of the respondents had <10 thousand monthly income were and 37.50% of the respondent were 10 to 20 thousand monthly income were and none of the respondent were 20 to 30 thousand and > 30 thousand monthly income.

Previous Information The majority 75% of the respondents had no previous knowledge and 25.00% had previous information.

SECTION II

Area wise distribution of Mean Pre-test and post-test knowledge scores

In terms of Introduction, mean pre-test knowledge scores were 61.37 with SD 0.87 whereas mean post-test knowledge scores were 80.00 with SD 1.05. In terms of concepts, mean pre-test knowledge scores were 65.50 with SD 0.60 whereas mean post-test knowledge scores were 87.50 with SD 0.43. In terms of various needs, mean pre-test knowledge scores were 58.25 with SD 0.69 whereas mean post-test knowledge scores were 81.75 with SD 0.61. In terms of facilities provided, mean pre-test knowledge scores were 59 with SD 0.64 whereas mean post-test knowledge scores were 84 with SD 0.62. The mean pre-test knowledge score was 12.125 with SD 1.17 where the post-test knowledge score was 16.43 with SD 1.37 at 0.05 level of significance.

Interpretation of Level of knowledge score

The 87.50% respondents had poor level of knowledge, 12.50% respondents had average level of knowledge and none of the respondents had good level of knowledge in pretest, whereas in posttest 63.70% respondents had good level of knowledge, 36.30% respondents had average level of knowledge and none of the respondents had poor level of knowledge

Effectiveness of Orientation program on Knowledge

The mean pre-test knowledge score was 12.125 with SD 1.17 where the post-test knowledge score was 16.43 with SD 1.37 at 0.05 level of significance and t value 12.59. Hence, H_1 stated that there is a significant difference between pre and post-test knowledge scores and it was accepted in this study

SECTION-III

Association Between Mean Pre-Test Knowledge scores with selected Socio-Demographic variable

Age

In terms of association between pre-test knowledge scores and age of the respondent's analysis revealed that chi square tabulated value is 7.82 at df 3 at 0.001 level of significance which indicated that there were significant association found between mean pre-test knowledge scores and age of respondents.

Educational Qualification

In terms of association between pre-test knowledge scores and education of the respondent's analysis revealed that chi square tabulated value is 7.82 at df 3 at 0.001 level of significance which indicated that there were significant association found between mean pre-test knowledge scores and education of respondents.

Type of family

In terms of association between pre-test knowledge scores and type of family of the respondent's analysis revealed that chi square tabulated value is 3.84 at df 1 at 0.001 level of significance which indicated that there were significant association found between mean pre-test knowledge scores and type of family of respondents.

Occupation of Mother

In terms of association between pre-test knowledge scores and occupation of the respondent's analysis revealed that chi square tabulated value is 7.82 at df 3 at 0.001 level of significance which indicated that there were significant association found between mean pre-test knowledge scores and occupation of respondents.

Monthly Income of Family

In terms of association between pre-test knowledge scores and monthly income of the respondent's analysis revealed that chi square tabulated value is 3.84 at df 3 at 0.001 level of significance which indicated that there were significant association found between mean pre-test knowledge scores and monthly income of respondent.

Previous Information

In terms of association between pre-test knowledge scores and previous information of the respondent's analysis revealed that chi square tabulated value is 7.82 at df 1 at 0.001 level of significance which indicated that there were significant association found between mean pre-test knowledge scores and previous information of respondents.

Overall analysis revealed that there was a significant association of pre-test knowledge score with socio demographic variables like age, occupation of mother, educational qualification, monthly income of family, type of family, previous information whereas association of pre-test knowledge score with socio demographic variables. Hence, H_1 stated that there is a significant difference between pre and post-test knowledge scores and it was accepted in this study.

CHAPTER VI

SUMMARY, CONCLUSION, NURSING IMPLICATIONS AND RECOMMENDATIONS

This chapter deals with summary of the study, conclusion, implication of the study on nursing research, administration, education and practice, limitation and recommendation of the study.

Objectives

1. To evaluate the knowledge regarding facilities provided in District early intervention centers among mothers of under five children.
2. To evaluate the effectiveness of an orientation program on knowledge regarding facilities provided in District early intervention centers among mothers of under five children.
3. To find out the association between pre-test knowledge scores and selected socio-demographic variables.

Hypothesis

H₁ There is a significant difference between pre and post-test knowledge scores.

H₂ There is a significant association between pre-test knowledge scores and selected socio-demographic variables.

Methodology

The present study was an evaluative approach and research design was pre-experimental with one group pre-test, post-test design as the study aimed to assess the effectiveness of orientation program on knowledge regarding facilities provided in district early intervention centers. The researcher has adopted **Hildegard Peplau's interpersonal relation model** of conceptual framework.

Review of literature and related studies helped the researcher and to collect the appropriate and relevant information to support the study design, the methodologies, Conceptual frame work, development of the tools and orientation program and also helped to plan for the analysis of data.

The study was conducted in rural area of Udaipur city, Rajasthan. The sample consists of 80 mothers of under five children. The purposive sampling technique was used to select the samples. The tool developed and used for data collection it was structured interview schedule consists of two sections, Section A: Socio-demographic variables and Section B: Structured interview schedule. Experts established content validity of the Structured interview schedule on facilities provided in District early intervention center. The tool was developed for participants in both language English as well as Hindi. The tool was found to be reliable in the pilot study and valid by the authorized experts.

The pilot study was conducted on 20\09\2022 to 27\09\ 2022 to find the feasibility of the study. The

purposes of the pilot study were to find out the feasibility of conducting the final study. 08 samples were selected who were excluded in the main study and teaching strategy was tested for effectiveness. The purpose of the study was explained to samples prior to the study and informed consent was obtained.

The main study was conducted between 27.10.2022 to 09.11.2022 at Badi village community area of Udaipur. The formal written permission was obtained from the concerned authority of the community area head sarpanch. The purpose of the study was explained to the group and confidentiality of their responses was assured. After obtaining the permission and consent, the knowledge assessed using structured interview schedule. Orientation program was implemented on the same day following all COVID-19 protocols. Post-test was conducted from 7th day onwards. The duration took for administration of tool and orientation program was 45 min.

Section I

Major findings related to socio demographic variable of the respondents

Age The majority 37.50% of the respondents were in age group between 41-50.

Educational Qualification The majority of respondents were primary educated 37.50%.

Type of Family The majority of the respondents had joint family 62.50%.

Occupation of Mother The majority of the respondents were house wife 75.00%.

Monthly Income of Family The majority of the respondents had less than 10 thousand monthly income of family was 62.50%.

Previous Information The majority of the respondents had 75.00% OF Previous information.

Section II

Area wise distribution of Mean Pre-test and post-test knowledge scores

In terms of Introduction, mean pre-test knowledge scores were 61.37 with SD 0.87 whereas mean post-test knowledge scores were 80.00 with SD 1.05. In terms of concepts, mean pre-test knowledge scores were 65.50 with SD 0.60 whereas mean post-test knowledge scores were 87.50 with SD 0.43. In terms of various needs, mean pre-test knowledge scores were 58.25 with SD 0.69 whereas mean post-test knowledge scores were 81.75 with SD 0.61. In terms of facilities provided, mean pre-test knowledge scores were 59 with SD 0.64 whereas mean post-test knowledge scores were 84 with SD 0.62. The mean pre-test knowledge score was 12.125 with SD 1.17 where the post-test knowledge score was 16.43 with SD 1.37 at 0.05 level of significance.

Interpretation of Level of knowledge score

The 87.50% respondents had poor level of knowledge, 12.50% respondents had average level of knowledge and none of the respondents had good level of knowledge in pre-test, whereas in post-test 63.70% respondents had good level of knowledge, 36.30% respondents had average level of knowledge and none of the respondents had poor level of knowledge

Effectiveness of Orientation program on Knowledge

The difference in knowledge scores in pre-test was statistically significant as evident by mean score where mean pre-test knowledge score was 12.125 with SD 1.17 where the post-test knowledge score was 16.43 with SD 1.37 at 0.05 level of significance and t value 12.59. Hence, H_1 stated that there is a significant difference between pre and post-test knowledge scores and it was accepted in this study.

Section III

Association between pre-test knowledge scores and socio demographic variable:

With Regards Age

In terms of association between pre-test knowledge scores and age of the respondent's analysis revealed that chi square tabulated value is 7.82 at df 3 at 0.001 level of significance which indicated that there were significant association found between mean pre-test knowledge scores and age of respondent.

With Regards Education Qualification

In terms of association between pre-test knowledge scores and education of the respondent's analysis revealed that chi square tabulated value table is 7.82 at df 3 at 0.001 level of significance which indicated that there were significant association found between mean pre-test knowledge scores and education of respondent.

With Regards Type of Family

In terms of association between pre-test knowledge scores and type of family of the respondent's analysis revealed that chi square tabulated value is 3.84 at df 1 at 0.001 level of significance which indicated that there were significant association found between mean pre-test knowledge scores and type of family of respondent

With Regards Occupation of Mother

In terms of association between pre-test knowledge scores and occupation of the respondent's analysis revealed that chi square tabulated value is 7.82 at df 3 at 0.001 level of significance which indicated that there were significant association found between mean pre-test knowledge scores and occupation of respondent.

With Regards Monthly Income of Family

In terms of association between pre-test knowledge scores and monthly income of the respondent's analysis revealed that chi square tabulated value is 3.84 at df 3 at 0.001 level of significance which indicated that there were significant association found between mean pre-test knowledge scores and monthly income of respondent.

With Regards Previous Information

In terms of association between pre-test knowledge scores and previous information of the respondent's analysis revealed that chi square tabulated value is 7.82 at df 1 at 0.001 level of significance which indicated that there were significant association found between mean pre-test knowledge scores and previous information of respondent.

Overall analysis revealed that there was a significant association of pre-test knowledge score with socio demographic variables like age, occupation, education, monthly income, type of family, previous information whereas association of pre-test knowledge score with socio demographic variables. Hence, H₂ stated that there is a significant association between pre-test knowledge scores and selected socio-demographic variables it was accepted in this study.

CONCLUSION

This study concludes that there is improvement in the knowledge of mothers of under five children which indicate that the orientation program were effective in enhancing the knowledge hence these kind of education program should be implemented in community as orientation program was an effective strategies can be used in the rural community to increase the knowledge regarding facilities provided in DEIC that enhance their knowledge about care of children and they was aware about the birth defect and all our the millstone.

IMPLICATION

The findings of the study have implications in nursing profession in the field of service, administration, education and research.

Nursing service

- Educational programs are an essential component of the health care practice.
- The expanded role of the professional nurse emphasizes their activities, which promote and maintain healthy behavior among the people.
- The health supervisors and the community health nurse can make use of this orientation program for improving knowledge of mothers of under five children.

Nursing administration

- Orientation program is useful for nurse administrator in staff Awareness to update the knowledge of the community health personnel.
- Findings of this study can be used for improving the knowledge of mothers of under five children in by community health nurse to render the services in community.
- Nurse administrator needs to encourage and plan for staff development program to incorporate orientation program on knowledge regarding facilities provided in district early intervention centers.

Nursing Education

- Nursing students can refer this material for preparing planned educational program.
- The health supervisors can use this orientation program in hospital and field teaching.
- As nurse educator, there is capacious opportunity to educate the nursing personnel by use of orientation program and to provide quality care in the hospital and community.

- Orientation program may be a helpful tool for nursing students to train health workers in hospital and community.

Nursing Research

- The quintessence of research is to build a body of knowledge in nursing as it is an evolving profession. The findings of the present study serve as the basis for the professionals and the students to conduct further studies. More researches can be conducted on knowledge regarding facilities provided in district early intervention centers to reduce burden of health and population.
- Detailed studies can be taken up in the same area and can be tested further.
- Comparative studies can be conducted in rural and urban community and contribute to enhancement of profession in providing health services effectively.

LIMITATIONS

The Limitations of the study where the size of the sample was small to draw generalizations.

RECOMMENDATIONS

- Similar study can be replicated on a larger sample so that their findings can be generalized for a larger population.
- A comparative study can be conducted in different settings such as rural and urban areas.
- True experimental studies or more in-depth studies can be conducted on this topic

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