

Journal of Nursing Research Society of India

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EDITORIAL



Dear readers!

The Journal of Nursing Research Society of India (NRSI) publishes the original articles that reflect trends and issues of contemporary nursing practices in India. It is a platform for documentation of existing knowledge, stimulating innovations and supporting best practices. Our constant endeavor towards refinement and improvement in nursing research is done by reviewing the articles for relevancy, quality, readability, accuracy and depth of research work.

Publishing a research article needs a lot of energy. Yet, publication of research findings in journals is essential to increase nurses' awareness of research findings that might be relevant to their practice. It allows the nurse researcher to network with other scholars and to further refine their ideas in research.

The journal is gaining popularity, subscribers have increased gradually, more and more enthusiastic nurse researchers are looking forward of getting their articles published in this journal. The journal is getting instrumental in developing a habit of publishing their research work among the nurse researchers (both young and not so young).

In this issue, we have included research studies from different specialties in nursing. We invite the reader's views regarding the articles published.

**- Prof. Santa De
Joint Editor**

GUEST EDITORIAL



Building Nursing Visibility

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On the first day of my class with Post-Basic Diploma in Critical Care Nursing, I wanted to have a clear picture of the students' academic standing and career goals. This group of experienced nurses has completed their course work at Choithram College of Nursing and are ready for examinations. Hence, I requested the students to write what new information /knowledge they have learned from this course and what are the changes they are going to implement in their home institutions after they leave Choithram College of Nursing. It was very informative reading for me about the innovative concepts they learned here and what changes they are planning for their sponsoring institutions. Somehow, one issue that led to a productive dialogue among us was that in spite all these life-long education required in nursing, the profession is not receiving due respect from the public, especially from the physicians.

During this exchange I recalled two incidents. Firstly, I recalled the statement of an Indian physician from New Delhi visiting one of the New York hospitals. She claimed that the nurses in the United States are very knowledgeable, confident and they are in-charge of their patients. She was surprised to see a nurse stopping a physiotherapist from doing routine exercises for the patient because the patient was unstable. The physician wished to see nurses in India working with such competence. I reminded her that nurses educated in India have comparable academic and clinical preparation, yet it is unfortunate that the society, especially the medical culture in India keeps them in an invisible role deprived of such decision-making capacity.

Secondly, my students from the USA who visited India in 2012, 2013, and 2014 have observed "passive care" from nurses practicing in India. Students described with examples in their daily reflective notes that nurses in India generally do not assess and solve problems within the scope of their academic preparation and practice. Instead, nurses report and hand over clinical problems to physicians without analyzing or attempting to tackle those problems using their knowledge level and clinical competence. On the other hand, in the United States, the public image of nursing is steadily getting stronger. Nurses were voted by the general public as the most trusted health care professional in the Gallop poll. Nurses' rating is high in ethics and honesty compared to other professionals, physicians and pharmacists to tally behind them. The American Nurses Association (ANA) proudly presents these poll results on their website (ANA, 2015).

I agree that a deliberate attempt is required to change the image of nursing practice in acute care settings in India. India has 1.5 million nurses, and 60,000 nursing students graduate each year, which is a wealth of resources. However, even though Indian nurses have a strong leadership role in community and public health nursing, there is an unfortunate culture of passivity in acute care nursing. Indian nursing education, regulated by the Indian Nursing Council (INC), prescribes a number of theoretical and practical hours much higher than in the United States and lays a solid foundation in professional knowledge. Therefore, it can be assumed that the reason for less-than-optimal professional practice is not inadequate academic preparation, but a culture of passive learning readily transformed to passive practice, which keeps the majority of the nursing service imperceptible and insignificant in the public eyes.

The visibility of nursing as a leading health care profession and the promotion of the vital role of the nurse in the

health care delivery should be our own mandate. No one can uphold our public image except ourselves, the nurses of India! How to promote nursing visibility is one of the tripartite focuses of my Fulbright proposal also. We can do at least two things: one is to take simple measures to promote our professional role as an expert clinician, advocate and a patient educator. To accomplish this one should start from teaching the patients important topics that contribute to their outcome such as indication of a medication, pharmaco-dynamics, side effects, safety highlights, other teaching points of procedure and so forth. Expecting physicians and others to take control of all these teaching moments are depriving us from the visibility and respect in the health care arena.

Secondly, to be recognized as a colleague in healthcare practice, nurses should demonstrate their clinical competence in relation to patient care situation. For example, when a demanding situation arises, nurses should initiate a quick and thorough analysis, intervene on the basis of independent nursing practice, escalate the problem with confidence as a colleague to physicians or other health care team members. Explain what they, as a nurse, have done so far and what can be done in collaborative management. Such egalitarian approach and professional dialogues centered to achieve patient centered goals will augment respect from our health care colleagues. Asking the right questions relevant to the scenario is also a way of asserting one's knowledge and competence. The practice should start from the nursing class rooms.

Asking the right questions is a powerful tool for interaction, stimulating learning as well as critical thinking (Larson & Lovelace, 2013). Asking investigable questions such as why and how things happen will provide students with suitable stimuli in a receptive learning environment, cultivating a culture of curiosity from the beginning level in any educational setting. There are four ways to develop this culture of curiosity: (1) providing students with suitable stimuli, (2) modeling question-asking, (3) developing a receptive learning atmosphere, and (4) including question-asking in evaluation (Lord, 2011). Ratway (2008) used both "fundamental questions" and "focusing questions" to stimulate higher-level thinking. In addition to asking the right questions, a reflective practice contextualized by praxis questions is supported in professional education (Gallagher, 2004).

Asking right questions to practitioners and patients should be the way of life. That habit of intellectual curiosity nurtures self-development, pursuit of excellence, and effective professional practice. It is all about caring for your clients better than the norm. How can it be or why can't it be otherwise is the platform for praxis and the product of critical thinking. Good thinkers are good doers also. Fostering a habit of self-questioning makes a difference as a nurse, and eventually in the profession at large! I still remember a quote which I first heard from my elementary school teacher, written by the Indian-born British author Rudyard Kipling (1865-1936):

I keep six honest serving-men

(They taught me all I knew);

Their names are What and Why and When

And How and Where and Who.

("The Elephant's Child," 1902)

Asking questions promotes inter-professional collaboration and education (IPE). According to Skiba (2015), IPE requires learners to acquire four core competencies: inter-professional communication, values and ethics, roles and responsibilities, and teams and teamwork, as defined by the IPE Collaborative Expert Panel (2011). Health-care professions are in process of finding innovative strategies to improve the future practitioners' skills and competencies. IPE as a criterion for accreditation demands health-care professions learn together in clinical settings for effective teamwork and collaboration. Improving inter-professional communication and collaboration is a current discussion topic in medical student education reform as well. Effective clinical education and commitment of the Nurse Educator towards professional role development of the future nurse is crucial in India as well as abroad. Here, I would like to emphasize the role of the nurse educator in preparing the nursing students for a collaborative practice.

At the ninth Cambridge Conference, Prideaux and colleagues presented a paper elaborating seven roles of the

clinical teacher. Even though the paper focuses on medical education, this can be applied to nursing. I have listed them below.

The first and most important role is that the clinical teacher should be an expert clinician with a sound body of knowledge to assess, interpret data, provide care, perform therapeutic procedures, and so forth. Thus the expertise of the clinician can be transferred for better patient outcomes through the learners. Thus, such clinical supervision results in better patient care. The clinical teacher accomplishes this goal through different activities such as “guidance, demonstration, observation, feedback, correction and reflection” (Prideaux et al. 2000, p. 821).

The second role of the clinical teacher is as a communicator. This is a skill that extends from bedside to classroom and often in the presence of the patient. Good communication can involve the patient and the student at the same time for optimal results. Role-modeling both verbal communication with the patient and verbal and written communication with other health-care team members will occur continuously during the clinical practice of an expert clinical teacher. Good teaching is good communication with students, patients, and colleagues and cannot be separated from good practice.

The third role of the clinical teacher is being a good collaborator; this is an important role that many professionals ignored until recently. Health-care professional educators are mandated to prove their collaborative learning environment for quality education and accreditation proposes. Collaborative skills not only improve patient outcomes but also enhance professional satisfaction and a healthy work environment. Above all, effective collaboration reorients the focus toward the patient.

The fourth role demands that the clinical instructor should be a manager of resources, opportunities, and time. A clinical expert who effectively capitalizes on all the teaching moments and opportunities in a clinical setting is a manager of education. The clinical teacher should be vigilant in utilizing the patient-care environment in such a way that all learners will also be benefited. As emphasized before, a clinical teacher's primary function is to manage the environment to enhance student learning opportunities.

The fifth role is as an advocate for patients, including interceding on the patients' behalf. The teaching opportunities for advocacy are easily available in population-based care or in a community setting, organizing planned activities in communities, home visits, and chart reviews. All of these measures can provide both individual and group advocacy issues.

The sixth role is being a scholar. The clinical teacher should be able to guide the students to use the right resources, introduce technology, disseminate new knowledge, and provide evidences that inform current practice. Scholarship is the cornerstone of academic engagement: scholarship of discovery, integration, application, and teaching (Boyer, 1990).

And the seventh role is being a professional in ethical standards and interpersonal relationships. In essence, it is a call for the nurse educator to enrich the repertoire of the future nurses with relevant skills such as spirit of inquiry, clinical competence, collaborative practice skills, patient advocacy roles and professional scholarship.

I have had an opportunity to meet with graduating students in MS in Nursing and was impressed with the research acumen they received from Indian graduate education in Nursing at Choithram. Indian nursing education has curriculum strength and strong leaders to guide effective teaching/learning process. Nevertheless, there is a perceived deficit in professional image and recognition among nurses themselves as well as the general public. Instead of focusing on the problems, let us become supportive and respectful of each other's professional value, role and competence.

As mentioned above, active learning principles and strategies supported by expert clinical teacher will augment such professional competence among students. Opportunities for interprofessional education and interdisciplinary communication should be provided for future nurses to become confident in decision making. It is the responsibility of the nurse educators to cultivate the spirit of inquiry possible through freedom of expression, questioning, exploration,

reflective thinking and praxis.

I think it is high time that we nurses, especially the educators start showing respect and recognition to our students as future professionals. Instead of focusing on expressed behaviours and norms, let us concentrate on building leadership character of our students. I believe building public image of nursing should be a calling for nurse educators and leaders to precipitate a cultural change. This transformation should be directed towards educating nursing students in active learning principles as problems solvers and initiating public education about nursing profession. Consequently, using our skills as patient educators, advocates, and affirming nursing role in the professional collaboration. All this will advance due respect and recognition of our profession.

All the best!

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A Study on Applicability and Feasibility of Translated Hindi Version 'Home (Home Observation for the Measurement of Environment) Inventory for Infants and Toddlers



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Abstract

Home environment plays a major role in the overall development of children. There are various ways of evaluating the quality and quantity of stimulations available to a child in a home. Home Observation for Measurement of the Environment 'HOME' inventory developed by Bradley & Caldwell (1984) is an evaluative tool used in developed and developing countries in different versions to measure home environment appropriate for development of child. The aim of this study was to evaluate applicability and feasibility of translated 'HOME' inventory in Hindi version for infants and toddlers. A descriptive and evaluative research design was used. The study was conducted in semi urban area of Union Territory (UT) Chandigarh. Using a door to door survey technique, amongst 2532 households with a target population of 1061 healthy infants (357) and toddlers (704) with their mothers, 102 study subjects (37 infants & 65 toddlers) selected through systematic random method were interviewed and observed. Hindi translated HOME inventory comprising of 6 subscales for its applicability after confirming its validity by back translation and interrater reliability was examined for 30 subjects. To determine internal consistency 102 subjects were recruited. Overall inter rater reliability of Hindi version inventory was 0.98 (highly significant). Cronbach's alpha coefficient was 0.75. Service provider's feasibility revealed that overall it took 50-60 minutes to gather and score all information which is a standardized time for HOME. Primary care provider's feasibility with response rate 96.2% found adequate for its language, understanding of questions, clarity and without repeating any question. We confirmed the validity and reliability of translated Hindi version HOME inventory. It was applicable and feasible to observe home environment for rearing infants and toddlers living in a semi urban area of Chandigarh.

Key words: HOME, environment, feasibility, semi urban area, infants, and toddlers, service providers, primary caregivers.

Background

Home occupies first and significant place for the development of the child. Availability of stimulating objects, books, and play materials within home are critical indicators of overall quality of the home environment (Evan, 2003)¹. The nature of environment provides necessary sensory inputs and stimulation form the basis for development of perceptual skills and cognitive skills (Bhardwaj, 2005)². The stimulating physical setting,

parental encouragement, involvement and affection predict intelligence quotient of infant and early childhood (Bradley, 1982)³ and develop socially mature behaviour (Bradley, 1979)⁴. The child's environment has a marked effect on intelligence and emotional development (Ilan, 2006)⁵.

Children's psychosocial development in terms of gross motor, fine motor, conceptual readiness, language, personal social skills are more closely found to be

associated with stimulating child rearing practices and influenced by home environment and parental education especially maternal education (**Kapur et al, 1994**)⁶. Inadequate home environment is likely to cripple the personality of child and they have more of ability and behaviour adjustment problems. Poor environment retards intellectual growth of the child; and the extent to which parents talk to infants and toddlers ease in development of early language (**Hart & Risley, 1995**)⁷ and establish secure relationships and provide stimulating environment shows the highest language scores (**Murray, 2000**)⁸.

Need of the study and Literature Review:

The studies conducted in abroad also demonstrated that the environmental factors and home have significant influences on personality development and independent of socioeconomic status (**Gottfried, 1998; Odeunmi, 1980; Ritcher & Grieve, 1991**)⁹⁻¹¹. The measures of environmental quality and of parent-infant interaction taken in the first year of life are the best predictors of later IQ or language performance (**Bee et al, 1982**)¹². Hence home environment plays an important role to shape the personality, growth and development of a child.

There are many instruments developed to measure home environment abroad and in India. All available HOME inventories/scales developed in India have certain limitations. HOME inventory developed by Mishra in 2004 is too long having 100 items; another HOME inventory developed by Mohite, 2004 has important dimensions such as stimulation through toys, games, and reading material; but modelling, pride, affection and warmth are not covered.

HOME (Home Observation for Measurement of the Environment) inventory is the most widely recognized and commonly used instrument in developed and developing countries to evaluate the quality of home environment. After the first study conducted to assess its psychometric properties (**Elardo et al, 1975**)¹³, this inventory has been used in more than 100 countries including Bangladesh, Brazil, and China to assess the physical and social environment of the home (**Kapur et al, 1994**)⁶. There was also a positive correlation between cognitive development and home stimulation variables measured on the 'HOME'

scale (**Gottfried, 1998**)⁹.

HOME inventory for infants and toddlers (IT-HOME) was originally developed by Caldwell and Bradley in 1984 (**Caldwell and Bradley, 1984**)¹⁴; comprising of 45 items in English version. It is a descriptive profile that yields a systematic assessment of caring environment the child is reared. A study conducted in Korea with a sample of 750 children from Kindergarten, using this scale particularly accessibility of materials such as objects, reading materials, musical instruments, picture decorations etc shows a significant predictor of children's perceived competence (**Lee & Super, 2003**)¹⁵.

No study could be traced out from India related to HOME inventory for infants and toddlers in the available literature, however HOME inventory (3-6 years of age) in simple Hindi version was being adapted in a referral post graduate institute of medical and research, Chandigarh (**Kohli et al, 2005**)¹⁶. Hence, an attempt has been made to evaluate the applicability and feasibility of translated Hindi version 45-items 'HOME-IT' inventory originally developed by Caldwell & Bradley for infants & toddlers (1984) to assess the quality of home environment for the development of infant and toddlers of semi urban area.

Problem Statement

A study on applicability and feasibility of translated Hindi version of 'HOME (Home Observation for the Measurement of Environment) inventory for infants and toddlers.

Aim & Objectives of the study

The main aim of the study is to assess the applicability and feasibility of translated 'HOME' inventory in Hindi version for infants and toddlers of semi urban area of UT, Chandigarh. The objectives are: i) to translate original English version HOME inventory into Hindi language; ii) to check its validity and reliability; and iii) to assess applicability and feasibility of the translated HOME inventory.

Materials and Methods

Research Design & Approach: A descriptive and evaluative research design was employed to determine applicability and feasibility of using translated 'HOME'

(Home Observation for the Measurement of Environment) inventory in Hindi version for infants and toddlers of age group 0-3 years, residing in a selected semi urban area of UT, Chandigarh. A translation process of standardized English version 'HOME' inventory followed by empirical study was the research approach adopted in the present study.

Setting: Study was conducted in a semi urban area situated on northwest corner of UT, Chandigarh, chosen purposely for the study because of its familiarity with the area. It has 3003 houses with estimated population of 18,000. Residents are migrated from northern and southern states belong to low and upper class and mostly they are labourers, sweepers, few are shopkeeper, and petty are in private and in government jobs. The residents' language is Hindi. That is why this inventory was translated into Hindi language.

Population, Sample & Sampling technique: The target population included all the mothers-children (age 0- 3 years) dyads from 2532 occupied houses. A house to house survey was carried out to know the exact number of healthy children of age 0-3 years. One hundred and six subjects were recruited through systematic random method from 1061 mothers-children (including 395 infants and 704 toddlers) dyads. Out of enrolled 106, 4 subjects were dropped out due to unavailability of subjects being shifted to other place, two mothers refused to participate, and one family house was found locked even after three visits. Thus total 102 subjects were included in the study.

Tools: Socio demographic profile sheet, HOME inventory, and feasibility record proforma. Interview schedule were the tools used to collect data.

Socio Demographic Profile Sheet: Interview schedule was developed to gather information regarding socioeconomic demographic profile of the subjects. It included date, name of child/mother, order of birth, total number of siblings, family members, type of family, education and occupation of both parents, total monthly and per capita income.

HOME inventory (Translated Hindi version): A 45-items HOME inventory is a standardized scale to measure quality and quantity of stimulation and support available to a child in the home environment. It has 45 binary items (Yes/No) comprising 6 major subscales: emotional and

verbal responsivity of mother (11 items), avoidance of restriction and punishment (8 items), organization of environment (6 items), provision of appropriate play material (9 items), maternal involvement with child (6 items), and opportunity for variety in daily stimulation (5 items). It was translated from English version to Hindi language after seeking permission from the author of HOME inventory to use in selected semi urban area of Indian setting.

Feasibility record proforma: A feasibility record proforma was developed to record the information gathered from service providers (professional staff) and primary caregivers (mothers) regarding feasibility of translated Hindi version HOME inventory. *Service provider's feasibility* comprises of questions on i) time taken in terms of warm up such as building rapport, motivating, and clarifying objective, administering inventory, and wrap up of the visit including checking that all items are filled properly, and terminating the visit; ii) availability of subjects; iii) ease of interpretation and understanding of questions; iv) appropriate setting; v) clarity of content or repeatability of questions. *Primary caregivers feasibility* comprises of questions such as i) clarity of language, time taken in answering questions, hesitation in answering questions, cooperation, feeling of guilt inducing questions, need for repeatability felt by respondents, clarity of objectives, and response rate.

Ethical consideration: A written permission was taken for using standardized HOME inventory from author through e-mail. Ethical approval for the study was obtained by the institutional Ethical committee. A written permission was obtained from the concerned authority. The family members were explained about objectives, activities and duration of their involvement. Witnessed verbal informed consent was obtained from mother participants. The anonymity and confidentiality of the subjects in relation to the findings was protected while reporting the study.

Pilot study: A pilot study was conducted in another similar setting after getting permission from the concerned authority to assess appropriateness, clarity and adequacy of the translated HOME inventory items, and other research tools. The tools were administered on 10 infant/toddler-mother dyad. The tools were adequate, and

appropriate. The language was clear to subjects and no difficulty was found to communicate with them.

Data Collection Procedure: After getting administrative permission from the concerned authority, the main study was conducted in semi urban area situated on northwest corner of UT, Chandigarh. Survey was conducted to find out the existing number of infants and toddlers. The selected mothers were explained the purpose of the study and assured confidentiality of their responses. Verbal consent was obtained from study subjects. The family members were informed about the date and time of the visit. Information regarding socio-demographic profile and home environment by using structured interview schedule and translated Hindi version 'HOME' inventory from all selected infant/toddler-mother dyad (N=102) through interviewing technique, observations, and either method for a period of one month was gathered. The information on feasibility of using tool was also gathered from providers as well from the participants.

Findings

Section I: Socio-demographic profile

Study showed that more than half of the subjects i.e. 65 (63.7%) were toddlers of 12 months to 36 months and rest 37 (36.2%) were infants in the age range of one month to 12 months of age. Majority of them i.e. 58 (56.6%) (Infants=18, toddlers=40) were females and rest 44 (43.1%) (Infants=19, toddlers=25) were males; 50% were in 1st birth order number. 64 (62.7%) families were Joint and average size of family was 6.1. About 25 (24.5%) mothers were illiterate, and only 7 (6.9%) were studied above senior secondary level. Most the mothers 97 (95.1%) were housewives. Only 12 (11.8%) fathers of subjects were above senior secondary level and mostly i.e. 67 (66.7) were either labourer or semi skilled worker, while only 5 (4.9%) were either semi professional or professional and 12 (11.8%) were self employed.

Section II: Validity and reliability of tools

Validity of socio demographic sheet, survey proforma and feasibility record proforma: The validity was done by 6 experts from the field of nursing faculty, school of public health and psychologists for its content, language, question understanding and completeness. The experts' agreement to content, language and understanding of

these tools was found 100%. The reliability of tools was determined by 'test-retest' method administered on 5 subjects after ethical clearance and getting permission in other similar setting. Spearman Rank correlation coefficient was found significant ($r=1.0$).

Translation validation of HOME inventory: The HOME inventory which was originally in English was translated into Hindi language and it is checked for its language, quality and content. *Language validity* is checked by 'translation and back translation' method. First of all the items of HOME inventory were translated in Hindi, then back to original language by a bilingual expert. The original and back translated versions were compared for equivalency. The quality validation of translated HOME inventory in Hindi version was checked by doing proof reading, back translation, and by checking the sentences for clarity by colleagues and translator. After language validation, *content validity* of translated Hindi version HOME inventory, content validity was checked by five experts from field of nursing, Hindi teacher, paediatric psychologist. All the items were clear and important to be retained.

Reliability of translated Hindi version HOME inventory:

Table 1: Interrater (Spearman correlation) and internal consistency values (Cronbach's alpha) of translated Hindi version HOME inventory

HOME inventory Sub scales	Spearman Correlation Coefficient	Cronbach's α Coefficient
Emotional and verbal responsiveness of mother	0.99	0.66
Avoidance of restriction and punishment	1.00	0.44
Organization of environment	0.92	0.28
Provision of appropriate play materials	0.98	0.71
Maternal involvement With child	0.96	0.61
Opportunity for variety in daily stimulation	1.00	0.21
Overall reliability	0.98	0.75

Table 1 shows the reliability of this translated HOME inventory which was tested using 'inter-rater' method during pilot study for its *equivalence*. The translated Hindi version 'HOME' inventory was administered by two observers (trained to use the translated inventory) at a time on 30 subjects in another similar setting after getting ethical clearance and permission. The findings were analyzed by using 'Spearman Correlation' coefficient and found to be highly significant ($r=0.98$) for total scale and it varies in sub scales from 0.92-1.00. Internal consistency reliability was calculated using 'Cronbach's alpha' on a sample of 102 subjects of main study. The overall Cronbach's alpha coefficient was 0.75 indicating reliability and internal consistency of translated HOME inventory and scale wise it varies from 0.21 to 0.70.

Section III: Rating on translated HOME inventory items

Table 2 (a): Overall and sub scale wise ratings on Translated Hindi version HOME inventory items (N=102)

Subscales	No of Items	Obtained Range scores	Mean \pm SD	Mean score %
Emotional and verbal responsivity of mother	11	2-11	8.05 \pm 1.94	73.1
Avoidance of restriction and punishment	8	2-8	6.09 \pm 1.07	76.1
Organization of Environment	6	0-6	4.26 \pm 0.98	71.0
Provision of appropriate play materials	9	0-9	3.37 \pm 2.17	37.4
Maternal involvement with child	6	0-6	3.75 \pm 1.28	62.3
Opportunity for variety in daily stimulation	5	0-4	2.83 \pm 1.02	56.6
Total HOME scores	45	15-39	28.34 \pm5.05	62.98

Table 2 (a) depicts the maximum scores on overall translated Home inventory obtained were 39 and minimum 15 out of 45, with an average of 28.34 ± 5.05 (mean % =62.98) scores. The highest mean scores i.e. 6.09 ± 1.07 (mean%=76.1) were on 'avoidance of restriction & punishment' subscale followed by emotional and verbal responsivity (mean%=73.1), organization of environment (mean%=71.0), maternal involvement with

child (mean%=62.3), and opportunity for stimulation (mean%=56.6), and the lowest mean scores i.e. 3.37 ± 2.17 (mean % =37.4) were on provision of appropriate play materials subscale.

Table 2 (b): Item-wise rating of subjects on translated HOME inventory (N=102)

Item description	f (%)
I: Emotional and verbal responsivity	
Mother permits child occasionally to engage in 'messy' type of play (I)	66(64.7)
Mother spontaneously vocalizes to child at least twice during visit (O)	85(83.3)
Mother responds to child's vocalizations with verbal response (O)	38(37.3)
Mother tells child the name of object or says name of person in a teaching style (O)	32(31.4)
Mother's speech is distinct, clear and audible (O)	99(97.1)
Mother initiates verbal interchanges with observer, asks questions/spontaneous comments (O)	93(91.2)
Mother expresses ideas freely and easily and uses statements of appropriate length of conversation(O)	94(92.2)
Parents spontaneously praises the child's qualities or behaviour twice during visit (O)	74(72.5)
When speaking to child, mother's voice conveys positive feelings (O)	89(87.3)
Mother cares or kisses child at least once during visit (O)	62(60.8)
Mother shows some positive emotional responses to praise of child offered by visitor (O)	89(87.3)
II: Avoidance of restriction and punishment	
Mother reports that no more than one instance of physical punishment during past week (I)	34(33.3)
Family has a pet (E)	82(80.4)
Mother does not shout at child during visit(O)	93(91.2)
Mother does not express overt annoyance with or hostility towards child (O)	94(92.2)
Mother neither slaps nor spansks child during visit (O)	19(18.6)
Mother does not scold or derogate child during visit(O)	52(51.0)
Mother does not interfere with child's action or restrict child's movements more than 3 times during visit(O)	84(82.4)
At least 10 books are present and visible(O)	41(40.2)
III: Organization of environment	
When mother is away, care is provided by one of the three regular substitutes (I)	95(93.1)
Sometimes mother takes child to grocery store at least once a week (I)	82(80.4)
Child gets out of the house at least 4 times a week (I)	93(91.2)
Child is taken regularly to doctors/clinic (I)	94(92.2)
Child has special place in which to keep his toys and treasures (E)	52(51.0)
Child play environment appears safe and free of hazards (O)	19(18.6)

Item description	f(%)
IV: Provision of appropriate play material	
Child has some muscle activity toys or equipment (E)	56(54.9)
Child has push or pull toy (E)	39(38.2)
Child has stroller or walker, kiddie car, scooter, or tricycle (E)	45(45.1)
Provide learning equipments appropriate to age- cuddly toys or role playing toys (E)	66(64.7)
Provide learning equipment appropriate to age-mobile table and chair, high chair, play pen (E)	20(19.6)
Provide simple eye-hand coordination toys - items to go in and out, fit together toys (E)	15(14.7)
Provide complex eye-hand coordination toys that permit combinations-stacking or nesting toys, blocks, building toys (E)	05(4.9)
Provide toys for literature and music (E)	44(43.1)
Mother provides toys or interesting activities for child during interview (O)	53(52.0)
V: Maternal involvement with child	
Mother talks to child while doing her work (I)	92(90.0)
Mother consciously encourages developmental advance (I)	68(66.7)
Mother invests 'maturing toys' with value via her attention (I)	31(30.4)
Mother structures child's play periods (I)	82(80.4)
Mother provides toys that challenge child to develop new skills (I)	11(10.8)
Mother tends to keep child within range and to look at often (O)	98(96.1)
VI: Opportunity for variety in daily stimulation	
Father provides some caretaking everyday (I)	81(79.4)
Mother reads stories at least 3 times weekly (I)	50(49.0)
Child eats at least one meal per day with mother and father (I)	85(83.3)
Family visits or receives visits from relatives (Approximate once in a month) (I)	71(69.6)
Child has three or more books of his/her own (E)	02(2.0)

Note: I: Interview; O: Observation; E: Either method of gathering information

Regarding emotional and verbal responsiveness of mother sub dimension of HOME inventory, it was observed that speech of majority i.e. 99 (97.1%) of mothers was distinct, clear, and audible followed by 94 (92.2%) mothers who expressed ideas freely, easily and use appropriate statements while conversing; 93(91.2%) mothers initiated verbal conversation, asked questions and gave spontaneous comments; the least number of mothers i.e. 32 (31.4%) were telling the name of object or person in a teaching style.

On avoidance of restriction and punishment items, majority of mothers did not show hostility towards child (92.2%); did not shout at child during visit (91.2%); did not interfere or restrict any action or movements more than 3

times during visit (82.4%), and 82 (80.4%) families were having pet. Whereas only 19 (18.6%) mothers neither slap nor spank child during visit and 34 (33.35) mothers reported that they did not give physical punishment for more than one instance in the last one week.

Regarding organization of environment subscale, it was reported or observed that majority mothers when away, care was provided by one of the regular substitutes (93.1%), child was taken regularly for check up to doctors (92.2%), and also had taken child out at least 4 times in a week (91.2%) to grocery shop at least once a week (80.4%). The play environment of more than 81% houses was not safe and free of hazards for children and in 49% houses child had no particular place to keep toys.

Items analysis on provision of appropriate play material dimension revealed that that 66 (64.7%) mothers made a provision of learning equipment appropriate to the age of child; about 54% mothers made provision of some muscle activity toys, only 15(14.7%) provided simple eye-hand coordination toys, and 5 (4.9%) made provision of complex eye-hand coordination toys.

Data revealed that on maternal involvement with child subscale, 98% mothers kept their children within visual range, 90% used to talk to child while doing work, 80% fixed the time for play of their children, and about 67% mothers encouraged for child's developmental advance.

The opportunity for variety in daily stimulation subscale revealed that majority of parents (83.3%) had at least one meal daily with their children, 69.6% parents either visited their relatives or relatives' visited their house. About 70% of fathers were taking daily care of some of child's activities. Only 2% families were having three or more books for their children.

Ratings (Mean score percentage) of subjects on various subscales of translated HOME inventory

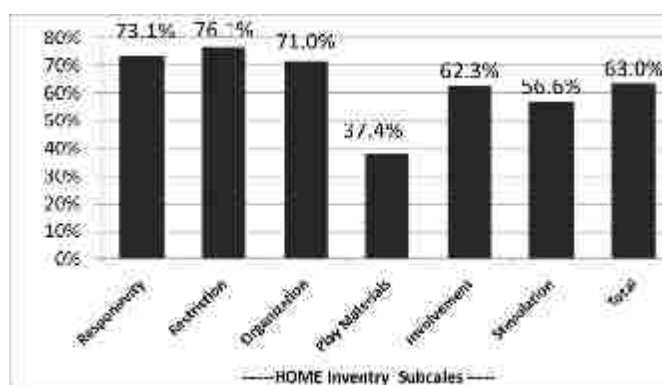


Figure 1: Bar diagram showing Mean percentage scores of subjects on various subscales of translated HOME inventory

Figure 1 depicts that mean percent scores for the total items is 63 % and varies between 37.4% and 76.1% for sub scales items. 76.1% was rated the highest mean % scores by subjects on avoidance of restriction and punishment items followed on emotional and verbal responsivity of mother items (73.1%); on organization of environment subscale (71%); on maternal involvement with child subscale by (62.3%); on opportunity for variety in daily stimulation items (56.6%); and the least on provision of appropriate play material sub scale items (37.4% subjects).

Section IV: Feasibility of Hindi version HOME inventory

Service Provider's (assessor) point of view: Data revealed that all selected participants were easily available. It was easy to administer translated inventory. All required information was able to procure. It took 50-60 minutes to complete gathering information from one family by the provider that includes 10 minutes to warm up in terms of building rapport, motivating and clarifying objective of the study to the respondent; 30-40 minutes to ask questions, to observe, and to score all the items of HOME inventory; and 10 minutes were required to verify scoring, completions of inventory and terminating the visit in a natural setting of home. All items were understood by the assessor. The content of the inventory was clear and there was no question of ambiguity and 99% questions did not require repeatability. No question asked were guilt inducing.

Primary caregivers (mothers) point of view: All questions were clear and easily understood to all respondents; they were interested and motivated to provide information within time limit and without any hesitation. No repeatability required to clear 98.2% items. There was full cooperation and good response from caregivers. No caregiver felt any difficulty and no one felt embarrassment in answering the asked questions.

Discussion

Section I: Socio Demographic Variables

The present study revealed that out of 102 participants

living in semi urban area, majority of them were toddlers (63.7%), females (56.8%) and in 1st birth order (50%); majority of them were from joint families and family size varies from 3 to 14 in number. Majority mothers were housewives and fathers were either labourers or semi skilled workers; majority of mothers (26.5%) were educated up to matriculation and fathers (26.5%) up to middle standard.

Similar study conducted in Thai to evaluate the applicability of translated Thai version HOME inventory on 36 mother toddlers dyads reported 52.8% males and rest females, majority of them were living in joint families and their parents' education was up to primary level. Over 50% of father's occupation was labourers (**Williams et al, 2003**)¹⁷.

Section II: Validity and reliability of tools

The original English version 45 items HOME inventory was translated in Hindi version by bilingual expert and validated for its translated language (through translation and back translation method), quality (by doing proof reading, back translation) and translated content validity. Translation and back translation method of validity is also used in a study conducted in China to translate the French version Doloplus-2 scale into Chinese language (**Chen et al, 2010**)¹⁸.

The inter rater reliability of Hindi version HOME was 0.98 for total scale and ranges from 0.92-1.00 for subscales which is higher than inter rater agreement (90%) reported by **Bradley & Caldwell (1984)**³. This shows that current HOME inventory has a very good level of interrater reliability.

In present study, internal consistency (alpha coefficient) for total items was 0.75 and of subscales ranged from 0.21 to 0.71. Whereas internal consistency of Chinese version HOME inventory reported 0.74 for total scale and it ranged 0.67-0.87 for sub scale (**Chen et al, 2010**)¹⁸; ranged from moderate to strong (0.44 to 0.89) (**Elardo et al, 1975**) and was 0.89 in original tool developed by **Caldwell and Bradley (1984)**³.

Internal consistency of three subscales in current study

i.e. in avoidance of restriction and punishment (0.40), organization of environment (0.28), and opportunity for variety in daily stimulation (0.21) was low and rest subscales have adequate level of internal consistency. Whereas, internal consistency of total score of Thai translated HOME scale was 0.81 and ranged from 0.14 to 0.82 of subscales. Two subscales i.e. opportunity for variety in daily stimulation (0.14) and organization of environment (0.15) has very low internal consistency (William, 2003)¹⁷.

Section III: Rating on translated HOME inventory items

The total mean score of present translated Hindi version HOME inventory was 28.34 ± 5.05 (mean%=62.98) ranged from 15-39. That shows infant-toddler developmental rearing practices in a selected semi urban home environments are on the average about 63%.

William (2003)¹⁷ reported that study conducted in rural Thai on 36 infants reported similar findings (mean= 28.92 ± 3.92 , mean% 64.3), but significantly higher than Hmong study conducted on 132 subjects (mean= 23.62 ± 4.2 , mean % 52.5) and significantly lower than studies conducted in Washington (n=180), and Eskimo (n=68) whose total mean scores were found 35.6 ± 6.87 (mean% =79.1), 32.6 ± 5.49 (mean% =72.4) respectively.

The mean percentage scores of subscale 'responsivity' was significantly higher (73.2) in our study and is comparable to Hmong (61%) , but lower than from Washington (86.6%), rural Thai (81.3%), and Eskimo(80.5%) samples. Mean scores on 'avoidance of restrictions & punishment' in the present study is significantly better than Hmong (66.3%) & rural Thai (69.5%), but lower than from Washington (80.0%), and Eskimo (80.1%) samples.

Mean scores on 'Organization of environment' of our study (71%) is slightly better from rural Thai sample (69.5%) but is lower than Washington (87.3%), Eskimo (79.8%), and Hmong (73.8%). The study conducted in rural Thai reported the least mean scores (23.9%) on

'provision of appropriate play material' subscale, the present study also rated the least on this subscale (37.4%). These findings are significantly higher than Thai study but significantly less than other studies conducted in Washington (73.1) and Eskimo (58%).

The highest rating was given for 'maternal involvement' items in Thai (mean score %=87.5) as compared to the present study (62.3%). Whereas for 'stimulation' items, the present study mean scores (56.6%) are better than Hmong (46.8%) and rural Thai (33.4%) studies but less than studies conducted in Washington (63%) and Eskimo (66%). This shows that there is a difference in the home environments of in rural and semi rural area of different countries, but HOME inventory translated in different languages was able to gather information on all items.

The present study revealed the highest scores on avoidance of restriction and punishment items (mean %=76.1) and the least on provision of appropriate play materials (37.4%). This shows inadequacy in the availability of appropriate play materials than rest of home environmental factors for the development of infants and toddlers.

Section IV: Feasibility of Hindi version HOME inventory

The translated Hindi version HOME inventory was found feasible from both service providers as well from primary caregiver (mothers) point of view.

Conclusion

HOME inventory translated in Hindi version was applicable and feasible to evaluate home environment of rearing infants and toddlers in a semi urban area. Translated HOME inventory can be used by health care workers as guideline for family care intervention and counselling with special emphasis on avoidance of restrictions & punishment, importance of age-appropriate play materials and environmental stimulation available. Mothers can be encouraged to become more responsive and start participating in various aspects child's activities by improving home environment. Tool can be used to evaluate mother-child interaction and overall quality of

services provided by family members and to predict the future development of their child.

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Effectiveness of PIDB (pocket Instructional Drug Book) on the Knowledge of Obstetric Drugs among Trained Midwives



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Abstract

All midwives bear a great responsibility when they administer drugs, as these may act not only upon the mother but also on the fetus during pregnancy, labour and on the baby in the early days of life. Medication administration is an activity that is prone to errors, in part because of the proliferation of new devices and new drug products. Therefore, a pre-experimental study was conducted to assess the pre and post test knowledge level of trained midwives regarding obstetric drugs. A pre experimental research design was used for the study. The population consisted of trained midwives working in maternity units of group A and group B hospitals of Indore. Sample sizes of 40 trained midwives were selected by using purposive sampling technique. Data were collected with the help of self administered questionnaire. The Pocket Instructional Drug Book was distributed to the samples after the pretest and planned teaching programme regarding obstetric drugs was also given with the help of this booklet. The findings of the study revealed that the mean knowledge score of group A hospital was 46.7 and that of group B hospital was 43.55. The mean difference was 3.15, SD 2.47, SE 0.78 and the computed 't' value was 2.37 at degree of freedom 38. This indicated that there was significant difference in the knowledge level of obstetric drugs in trained midwives working in maternity units of group A and group B hospitals at the level of $p \leq 0.05$.

Keywords: Trained midwives, Obstetric drugs, PIDB (POCKET INSTRUCTIONAL DRUG BOOK), Maternity unit, Knowledge

Background

The nurse is the key person and a coordinator who forms the anchor in the patient care unit in the clinical setting. The role of nurse has been expanded and extended especially in specialty care settings, which include collaborative, coordinative and independent functions where she is the sole person in decision making regarding client's health. Administration of medicine is one of the greatest responsibilities of a nurse. She should see that all medicines are administered in such a way as to obtain best results. For this she should have a thorough knowledge of the drugs that are administered by her, the name, classification, dosage, mode of action, absorption,

excretion, routes of administration, time of administration, and indications, contraindications, side effects of drugs etc. **Sabitha (2005).**¹

The Nurse and midwife is recognized as a responsible and accountable professional who works in partnership with pregnant woman to give the necessary support, care and advice during pregnancy, labor and the postpartum period. This care includes prevention of complications, assurance of normal birth, the detection of complications in mother and baby. Midwives who care for pregnant and laboring women are faced with an increasingly frequent use of pharmaceutical agents that facilitate initiation of labor (uterotropics), augment labor (uterotonic) or potentially retard and delay labor (tocolytics). Knowledge

about uterine physiology helps the nurse & midwife to understand the action of these agents. Knowledge of the differences and similarities among oxytocics, ergots, prostaglandins and the various other drugs used as tocolytics is essential for safe and effective care of woman and fetus that may be exposed to these agents. (Bijapurkar M et al, 2009).²

Need of the study & Literature Review

Medication administration is an activity that is prone to errors, in part because of the explosion of new devices and new drug products. Medications are administered through a variety of routes, dosages, and dosing regimens, adding variability. Moreover, medication orders are changed frequently as pharmacists and medical specialists provide input into patient care based on changes in patient clinical status and the results of diagnostic tests. (Nancy LG, et al, 2003).³

An article in American Journal of Maternal Child Nursing addresses the importance of the nursing role in the management of oxytocin during induction and augmentation of labor. It highlights that nurses at the bedside of laboring women have to make oxytocin titration decisions, these must be based on a sound knowledge of the pharmacologic properties of oxytocin, the physiology of uterine contractions, and the response of the woman and fetus to contractions. In addition, nurses must be aware of the standards and guidelines of care that govern their actions during induction / augmentation. (Clay worth, Suellen MN, 2000).⁴

Medication administration is one of the most time consuming aspects of nursing practice. Expertise in medication calculation and administration is essential to the treatment of all patients. However many nurses experience difficulty when calculating medications. In one study the result showed that 56.4% of nurses could not calculate medications correctly in 90% of the problems, suggesting the need for regular self testing of medication and calculation skills. Continuing education programmers implemented for identified medication calculation errors influences nursing practice and patient outcome. (Kapborg, 2007).⁵

Problem Statement

A pre experimental study to assess the effectiveness of PIDB (Pocket Instructional Drug Book) on the knowledge of obstetric drugs among trained midwives in selected hospitals of Indore.

Objectives

- To assess the knowledge of the trained midwives regarding selected obstetric drugs.
- To prepare and administer PIDB on obstetric drugs.
- To find out the association between pre- test knowledge score and selected demographic variables regarding obstetric drugs.
- To evaluate the effectiveness of a PIDB on the knowledge of obstetric drugs among trained midwives.
- To compare the knowledge regarding obstetric drugs in trained midwives of group A and group B hospitals.

Hypotheses

H₁ - There is significant association between pre test knowledge scores and selected demographic variables at the level of $p \leq 0.05$.

H₂ - There is significant difference between the pretest and post test knowledge score regarding obstetric drugs among trained midwives at the level of $p \leq 0.05$.

H₃ - There is significant difference between knowledge level of nurse midwives working in maternity unit of group A hospital and group B hospital at the level $p \leq 0.05$.

Methodology

Research Approach & Design: A quantitative research approach with Pre-experimental research design.

Setting:

Group A: Maternity units of Choithram Hospital and Research Centre, Mission Hospital,

Group B: Sri Prakash chand Sethi Government Hospital and District Hospital, Indore.

Population: In this study population comprised of trained midwives working in maternity unit of group A and group B hospitals, of Indore.

Sample: In this study the sample size was 40 trained midwives.

Sampling technique: The method of sampling employed was non -probability purposive sampling.

Tools: The tools for collection of data for this study consisted of three sections.

Section I: Socio demographic variables consisted of 6 items such as age, professional qualification, total years of experience, total years of experience in maternity unit, source of information regarding obstetric drugs and exposure to in-service education.

Section II: Self administered questionnaire regarding obstetric drugs. This section consisted of 63 items on selected aspects of obstetric drugs.

Scoring:

Good knowledge: 45-63

Average knowledge: 23-44

Poor knowledge: 0-22

Section III: Opinionnaire consisted of 11 statements.

Validity & Reliability: The prepared tool was tested for its validity & reliability. **The calculated** value of "r" using split half method was $r = 0.98$ by Karl Pearson formula.

Data Collection Procedure: To conduct the research study in the selected hospitals, written permission was obtained from the concerned authorities before data collection. The data were collected from 40 trained midwives from Maternity units of selected Hospital of Indore from 1st March to 15th April 2014 after selecting the subjects by purposive sampling technique. Pre test was administered to trained midwives by self administered questionnaire. Average time taken for pre test was 30-35 minutes. A planned teaching through Pocket Instructional Drug Book regarding generic name, trade name, classification, mode of action, route of administration, dosage, indication, contraindications, side effects and nurse's responsibilities in administration of selected

obstetric drugs was given to the trained midwives. The average time taken was 50-55 minutes. Post test was obtained on 8th day after the pretest by administering the same questionnaire. The data was analyzed by using statistical measurements.

Findings

Section I. Socio demographic variables of trained midwives.

Data showed that out of 20 samples, more than half i.e. 14 (70%) samples working in maternity unit of group A hospitals were in the age group of 21-25 years. Similarly, out of 20 samples, less than half i.e. 6(30%) samples were working in the maternity unit of group B hospital, were in the age group of 26-30 years. Regarding professional qualification, less than half i.e. 9 (45%) samples were working in maternity unit of group A hospitals were B.Sc. Nurses, 6(30%) were ANMs, 5(25%) were Diploma Nurses. Similarly, out of 20 samples in group B hospitals, more than half i.e. 16(80%) of samples who worked in maternity unit were Diploma Nurse and 4(20%) were B.Sc. Nurse. Regarding total years of professional experience, more than half i.e.14 (70%) samples from group A hospitals had experience between 1-5 years whereas only 6 (30%) samples from group B hospitals had experience between 6-10 years and 16-20 years respectively. More than half i.e. 15 (75%) of the samples from group A hospitals had in between 1-5 years of experience in maternity unit. Similarly, out of 20 samples, more than half i.e. 11 (55%) samples of group B hospitals had also in between 1-5 years of experience in maternity unit.

Regarding source of information about obstetric drugs, more than half i.e. 12 (60%) of samples of group A hospitals got information regarding obstetric drugs from the obstetric books. Similarly, less than half i.e. 9 (45%) of samples who from group B hospitals got information from the Doctors.

Regarding exposure to In-service education on obstetric drugs, out of 20 samples in each hospital, 5 (25%) of samples of group A hospitals & 4(20%) of the samples of group B hospitals were exposed to in-service education.

Section II: Pre test & Post test knowledge scores of obstetric drugs among trained midwives working in maternity unit of group A and group B hospitals.

PRETEST KNOWLEDGE SCORES OF GROUP A AND GROUP B HOSPITALS

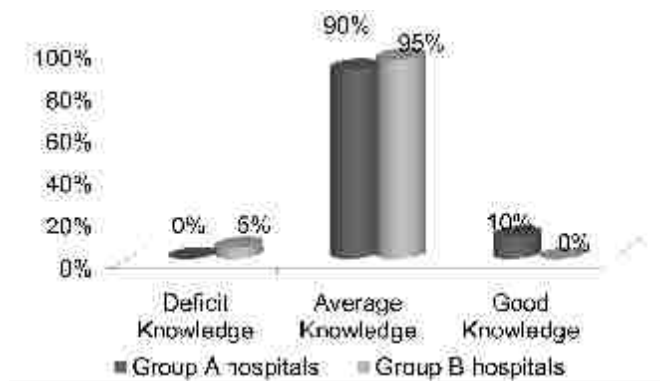


Figure No. 1: Bar Diagram showing the percentage distribution of pre test knowledge score of group A & Group B Hospital

POSTTEST KNOWLEDGE SCORES OF GROUP A AND GROUP B HOSPITALS.

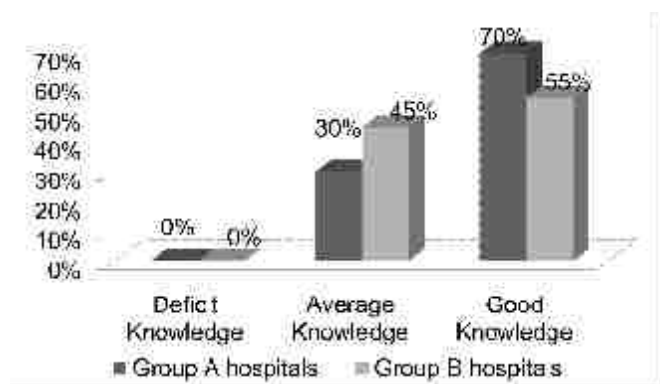


Figure No. 2: Bar Diagram showing the percentage distribution of post test knowledge score of group A & Group B Hospital

Figure No.1 & 2 reveals that in group A, more than half i.e. 18 (90%) had average knowledge, 2(10%) had good knowledge and none of them had deficit knowledge regarding obstetric drugs in pretest whereas in post test more than half i.e. 14 (70%) had good knowledge, 6(30%) had average knowledge and none of them had poor knowledge regarding obstetric drugs. Similarly, in group B, more than half i.e. 19 (95%) had average knowledge, only 1(5%) had deficit knowledge and none of them had

good knowledge regarding obstetric drugs in pre test whereas in post test more than half i.e. 11 (55%) had good knowledge, 9(45%) had average knowledge and none of them had deficit knowledge regarding obstetric drugs.

Section VI: Association between pretest knowledge scores on obstetric drugs and selected demographic variables among trained midwives working in maternity unit of both groups

The computed chi-square value between the pretest knowledge scores and the socio demographic variables like age, professional qualification, and total years of professional experience, source of information regarding obstetric drugs and exposure to In-service education on obstetric drugs were not associated with knowledge. The association with total years of experience in maternity unit was found statistically significant with chi-square values of 20.73 at $p \leq 0.05$ level. Hence, H_1 was accepted for only this demographic variable..

Section VII: Effectiveness of Pocket Instructional Drug Book on knowledge regarding obstetric drugs among trained midwives working in maternity unit of group A hospitals.

Table no. 1 Mean, Mean difference, SD, SE, df and 't' value of pretest and post test knowledge score of group A hospitals n=20

Variable	Mean	Mean diff.	SD	SE	df	't' value
Pretest	34.1	12.6	3.6	0.81	19	13.89*** S
Posttest	46.7					

*** $p \leq 0.001$ df = degree of Freedom NS Not significant S Significant

Table no. 1 shows that the mean post test knowledge score 46.7 was higher than mean pre test knowledge score 34.1, with computed't' value ($t_{19} = 13.89$) at the level of $p \leq 0.001$, thus indicating highly significant difference and effectiveness of PIDB in increasing the knowledge of trained midwives of group A hospitals. There was significant difference in mean pre test and post test score on knowledge among trained midwives working in maternity unit of group A hospitals. Hence H_2 was accepted.

Section IX: Comparison between knowledge level of trained midwives working in maternity unit of group A hospitals and group B hospitals.

Table No.2: Mean, Mean Difference, SD, SE, df and 't' value of knowledge level of Group A & B hospital

N=20+20

Variable	Mean	Mean diff.	SD	SE	df	't' value
Group A Hospitals	46.7	3.15	2.47	0.78	38	2.37*** S
Group B Hospitals	43.55					

*** $p \leq 0.001$ df = degree of Freedom S Significant

Table 2 shows the mean knowledge score of group A hospital is 46.7 and that of group B hospital is 43.55 with mean difference of 3.15, standard deviation 2.47, standard error 0.78. The computed 't' value was 2.37 at degree of freedom 38. This indicated that there was significant difference in the knowledge level of obstetric drugs in trained midwives working in maternity units of group A and group B hospitals at the level of $p \leq 0.05$. Hence, H_3 was accepted.

Section X: Frequency and percentage distribution of opinion regarding PIDB of trained midwives working in maternal unit of group A and group B hospital.

The opinion of midwives regarding the PIDB revealed that 40(100%) midwives believed that PIDB is a good source of learning. All of them (100%) said that the simple language is used in the PIDB and said it is easy to understand respectively, 38(95%) said that PIDB included all important drugs of obstetrics, which all midwives should know, 35(87.5%) felt that pictures of PIDB provide better understanding, each and every one (midwives) doesn't need any help to read this book, 40(100%) said that reading of the PIDB is worth, Everyone reported that PIDB provide sufficient knowledge regarding obstetric drugs, 40(100%) the entire samples found that PIDB is interesting in reading, All believed that PIDB should be made available to all trained midwives and it is easy to carry in their pockets.

Discussion

Association between pre test knowledge score and selected socio-demographic variables

The computed chi- squares values between the pre test

knowledge scores and socio demographic variables like age, professional qualification, and total years of professional experience, source of information regarding obstetric drugs and exposure to in-service education on obstetric drugs were not associated with knowledge. The association of total years of experience in maternity unit was found statistically significant with chi square value of 20.73 at $p \leq 0.05$. Hence, H_1 was accepted i.e. there was significant association between the knowledge score regarding obstetric drugs and selected socio-demographic variables among the trained midwives at the level of $p \leq 0.05$.

The above finding was supported by the study conducted by **Bijapurkar M et al (2009)²** to assess the effectiveness of Obstetric Drugs Self Instructional Module on the Knowledge of Obstetric Drugs among Nurses Working in Maternity Unit. Findings revealed that the total years of experience in maternity unit showed an association with pretest knowledge at $p \leq 0.05$ level of significance. No association was found between other variables.

Effectiveness of pocket instructional drug book on knowledge regarding obstetric drugs among trained midwives

The mean post test knowledge score 46.7 was higher than mean pre test knowledge score 34.1, and computed 't' value ($t_{19} = 13.89$) was more at the level of $p \leq 0.001$, thus indicating highly significant difference and effectiveness of Pocket Instructional Drug Book in increasing the knowledge of trained midwives regarding obstetric drugs. Thus, H_2 was accepted i.e. there is significant difference between the pretest and post test knowledge score regarding obstetric drugs among trained midwives at the level of $p \leq 0.05$.

The above finding was supported by the study conducted by **Shettigar SP (2008)⁶** to assess the Effectiveness of self instructional module (SIM) for the staff nurses on management of antenatal woman during oxytocin induction. Results revealed that the mean posttest knowledge score 27.5 of the subjects was higher than the mean pre test knowledge score 13.6 with 't' value $t_{39} = 17.29$ which was significant at $p \leq 0.05$ level. Hence it can be inferred that SIM was effective in increasing the knowledge of staff nurses regarding management of antenatal woman during oxytocin induction.

Comparison between knowledge level of trained midwives working in maternity unit of Group A and Group B hospital

The mean knowledge score of group A hospital is 46.7 and that of group B hospital is 43.55. The mean difference is 3.15, standard deviation 2.47, standard error 0.78. The computed 't' value was 2.37 at degree of freedom 38. This indicates that there is significant difference in the knowledge level of obstetric drugs in trained midwives working in maternity units of group A and group B hospitals at the level of $p \leq 0.05$. Hence H_3 was accepted i.e. there is significant difference between knowledge level of trained midwives working in maternity unit of group A hospital and group B hospital at the level $p \leq 0.05$.

The above finding was supported by the study done by **Nancy LG et al (2003)**,³ A randomized control trial was done on the medication administration error rate among nurses of two hospitals (A and B) in Chicago. The result of the study showed that at both hospitals the combined total error rate was 15.7% for medication nurses and 14.9% for general nurses ($p < 0.84$). Comparing the 2 hospitals the total error rate for medication nurses at hospital B was significantly higher than it was at hospital A (19.7% vs 11.2%; $p < 0.04$). The study suggests that use of dedicated medication nurses does not reduce medication error rates.

Conclusion

Study concluded that trained midwives working in maternity unit of group A and group B hospitals had average knowledge regarding obstetric drugs but after intervention with the Pocket Instructional Drug Book there was a marked gain in knowledge of trained midwives. Therefore the trained midwives working in maternity unit should be taught about obstetric drugs regarding generic name, trade name, mode of action, dose, routes of administration, indications, contraindications and midwife's responsibilities so that the trained midwives can render best care to the mother and child. PIDB provides a quick reference material on obstetric drugs for nurses and midwives in midwifery units.

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Conflict of interest: Nil

Financial resource: Self

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Impact of Educational Intervention on Knowledge of Breastfeeding among Primi Postnatal Mothers in Urban Slum of Delhi: A Community Based Study



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Abstract

Scientific research studies conducted during the last three decades have clearly proved that breastfeeding provides the most suitable nutrition for an infant. However in India breastfeeding is inadequately practiced partly due to lack of knowledge and ignorance. This Pre experimental study assesses the effectiveness of educational intervention on knowledge of breastfeeding among 405 primi postnatal mothers residing in the urban slum area of Delhi. One group pretest post test design was adopted. By using simple random sampling, the samples were selected. Structured interview schedule was used to collect the data. Educational intervention was developed to impart knowledge on breastfeeding. Results revealed that out of total about half of samples were in the age group of 21-25 years (51%), belonged to Nuclear family (51%) with the monthly family income Rs 2001-4000 (48%). In pretest it was found that their overall knowledge was on an average of 42.5%. Out of maximum knowledge scores of 33, the study subjects had a mean knowledge score of 14.04 with a standard deviation of 3.50. Their overall knowledge in posttest was on an average of 80.2%. Out of total 405, majority of mothers 327 (80.7%) had adequate knowledge. Out of maximum knowledge scores of 33, the overall mean knowledge of subjects in posttest was 26.46 with the standard deviation of 2.60. The association of 12 mothers' posttest level of knowledge with selected demographic variables revealed that the age of mothers ($X^2 = 37.4$, $P = 0.001$), nature of family ($X^2 = 12.5$, $P = 0.01$), education status ($X^2 = 14.9$, $P = 0.01$), and occupation status ($X^2 = 9.93$, $P = 0.01$) were closely associated with the mother's posttest level of knowledge. Overall the study results indicated that to be successful in breast feeding, besides nutritional and care support women need breast feeding education and timely counseling.

Key words: Breastfeeding, Primi postnatal mothers, Pretest, Posttest

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Background

Human life begins in the womb, like in all mammals, where the fetus gets all that is required for growth and development from the mother. After birth all mammalian off-springs need mother for survival, so the human baby. It includes prevention from diseases, optimal nutrition for growth and stimulation and bonding for quality development. Breast milk meets these needs and gives them the best start in life. It is the most precious gift of nature and first vaccination to the newborn to prevent him

from diseases. Scientific research during the last three decades has clearly proved the health benefits of breast milk for both the infant and mother (**Faridi¹, Bushra², Shams³ Karen⁴**) The World Health Organization (WHO) advocates initiation of breastfeeding within one hour of delivery and promotion of exclusive breastfeeding practice for the first six months of an infant's life as most effective interventions for reducing infant morbidity and mortality in resource-constrained settings (**WHO**)⁵.

Despite these evidences, there is universal decline in

breastfeeding. Only 39% of babies worldwide are being breastfed exclusively during the first six months. The National Family Health survey III (NFHS-III)⁶ data released in 2005-06 in India has revealed that only 23.4% newborns across the country are given breast milk within the first hour of birth. Only 46.3% of babies are exclusively breastfed in India. The rate of exclusive breastfeeding in Delhi is only 34.5%. In India, breastfeeding is culturally well accepted but it is inadequately practiced due to ignorance, lack of knowledge, misconceptions, cultural taboos and economic compulsions (Bramham)⁷. Since the primipara mothers are generally young, and lack knowledge and experience, they tend to face more breastfeeding problems than those with many children. The knowledge on breastfeeding practices of mother has great bearing in determining the health of the baby and reduction of infant mortality rate (Khan ME)⁸ Hence this study was conducted to assess the effectiveness of educational intervention on knowledge of breastfeeding among primi postnatal mothers residing in the urban slum area of Delhi.

Need of the study & Literature Review

Even though world-wide promotion of breastfeeding has been recommended as the most powerful infant survival tool and various steps for promoting, protecting and supporting optimal infant feeding practices have been undertaken, the infant feeding practices are far from satisfactory. There is often a sharp decline in breastfeeding particularly exclusive breastfeeding in the weeks or months after delivery. The prevalence and duration of breastfeeding have declined in all parts of the world.

Besides, child birth is a stressful situation to the mothers especially primipara mothers, the stress of varying nature can lead to reduction of milk supply. The mother needs support and help for successful breastfeeding. She needs to be encouraged to breastfeed her baby. Since the primipara mothers are generally young, and lack knowledge and experience, they tend to face more breastfeeding problems than those with many children. The knowledge on breastfeeding practices of mother has great bearing in determining the health of the baby and reduction of infant mortality rate. It has been observed that

the mothers, particularly the primipara mothers lack adequate knowledge and appropriate practices of breastfeeding and hence the need of this study

Chatman M Leia.et.al⁹(2004) conducted a cross sectional study on "Influence of Knowledge and Attitudes on Exclusive Breastfeeding Practice Among Rural Jamaican Mothers in rural Jamaica, The objective of this study was to gather information about factors that influence exclusive breastfeeding and its duration. The study was conducted on 599 mother-child pairs in 11 health centers within the parish of Saint Ann, Jamaica. A pretested questionnaire was used to collect information on breastfeeding knowledge and attitude toward intention to breastfeed and other relevant socio demographic characteristics. The study results revealed that the prevalence of breastfeeding initiation was 98.2 percent; of mothers who initiated breastfeeding, 22.2 percent practiced it exclusively (at least 6 months).

Marion Mossman et, al¹⁰ (2008) conducted a prospective correlational study to examine the influence of adolescent mothers' breastfeeding knowledge, attitudes and confidence on breastfeeding initiation and duration. A convenience sample of 100 pregnant adolescents who were contemplating breastfeeding completed the Breastfeeding Self-Efficacy Scale Short Form (BSES-SF) and the Breastfeeding Attitude Questionnaire (BAQ). The BSES-SF was re administered during the first week postpartum to those adolescents who initiated breastfeeding (n = 84). Adolescents who were breastfeeding at the initial contact received a follow-up contact at 4 weeks postpartum. Comparisons were made between those adolescent mothers who initiated breastfeeding (n = 84) and those who did not (n = 16). Significantly more mothers with higher prenatal attitude scores initiated breastfeeding. Mothers with higher prenatal breastfeeding attitude scores and higher prenatal and postnatal confidence scores were more likely to continue breastfeeding to 4 weeks postpartum.

Chezem Jo Carol et. al.¹¹(2006) conducted a study at Oberlin College, Oberlin to explore relationships among breastfeeding knowledge, breastfeeding confidence, and infant feeding plans and their effects on feeding practices in first-time breastfeeding mothers. Prospective

descriptive design was used. Telephone interviews were conducted prenatally and at 6 weeks, 3 months, and 6 months postpartum on 83 first-time mothers with prenatal intentions to breastfeed. The majority were White (95%), between the ages of 21 and 30 years (73%), with a posthigh school education (85%), and household incomes of more than 200% of the federal poverty guideline (88%). The study findings showed that Breastfeeding knowledge was strongly correlated with breastfeeding confidence ($r = .262$; $p = .025$) and actual lactation duration ($r = .455$; $p = .0001$)

Yeo JH and Hong SC¹² (2003) conducted a study on the Knowledge, Attitude and Practice rate on Breastfeeding in Korea. The purpose of this descriptive study was to provide basic data for developing an effective breast feeding program through investigating the level of knowledge, attitude and practice rate on breast feeding according to the infants' age. The subjects were 116 mothers whose infants were 1-12 months old. The data were collected from October 1 to December 31, 2002, using mail questionnaires and were analyzed by using the SPSS program with frequency, mean, χ^2 -test, t-test, ANOVA, and the Pearson Correlation Coefficient. The study findings revealed that the average practice rate of breast feeding in the 1st month was 61.7%, however it decreased to 13.8% in the 6th month. The major reasons for interrupting breast feeding were insufficient breast milk 49.1% and job 19.3%. There was no significant difference found in the mother's knowledge level of breast feeding according to type of feeding at any age of infant. There was significant difference found in the mother's attitude toward breast feeding according to type of feeding in the 1st month ($F = 4.011$, $p < 0.05$). There was no significant correlation between the mother's knowledge level of breast feeding and type of feeding at any age of infant.

Problem Statement

A Pre Experimental Study to Evaluate the Effectiveness of an Educational Intervention on knowledge of Breastfeeding among Primi Postnatal Mothers in Selected Area of New Delhi.

Objectives

- To develop an Educational Intervention program in

terms of Knowledge and Practice of breastfeeding.

- To assess the Knowledge of breastfeeding among primi postnatal mothers before and after administration of an Educational Intervention.
- To correlate the pretest and posttest level of Knowledge on breast feeding among primi postnatal mothers.
- To associate the Knowledge of breastfeeding among primi postnatal mothers with selected demographic variables.

Hypothesis

RH1- There is a significant difference in the posttest knowledge score of primi postnatal mothers regarding breastfeeding than the pretest knowledge at the level $p \leq 0.05$.

RH2 - There is a significant association between knowledge score of primi postnatal mothers on breastfeeding and selected demographic variables ie age, religion, Nature of family, education, occupation, income, food, sex of the baby and sources of knowledge.

Research Methodology

Research approach and design: A pre experimental study with one group pretest post test design.

Setting: The study was conducted in an urban slum area of Delhi called Sundernagri. Rationale for selecting this area was availability of the subjects and feasibility of conducting the study. It is one of the largest resettlement colonies, accommodated in 11 blocks with the population of about 55,378. The main occupation here is weaving. Many women and men in the Sundernagri area are uneducated.

Population: Postnatal mothers from Sundernagri.

Sample and Sample size: This study was conducted among 405 primi postnatal mothers

Sampling Technique: The samples were selected initially by total enumeration method from the list obtained from the Community health centre. Then from the list primi postnatal mothers who fulfilled the inclusion criteria such as Primi Postnatal mothers who had normal delivery,

available and willing to participate in the study were included in the study as sample by simple random sampling. In the beginning, 425 mothers were included in the study. Excluding the dropouts, 405 primi postnatal mothers were finally confirmed as samples.

Tools: The tool used for data collection was a structured interview schedule consisting of two parts.

Part 1: Demographic variables and

Part 2: Knowledge Questionnaire on breastfeeding comprising of 33 structured items. The questions were multiple choice questions with a single correct answer.

Every correct answer was given a score of 1 point and every incorrect answer was accorded 0. The maximum score on the knowledge was 33. To assess the knowledge, the scores were classified into 3 grades such as <50 inadequate knowledge, 51-75 moderately adequate knowledge & above 76 adequate knowledge. Educational intervention to impart knowledge on breastfeeding was developed. With the help AV aids various teaching methods such as lecture, group discussion, demonstration and return demonstration were adopted to impart an education to the mothers.

Validity: The tools used were validated by experts before administration.

Reliability: The reliability of the structured interview schedule was established by using Kuder Richardson -20 formula. The reliability coefficient was found to be 0.77.

Ethical Consideration: Before conducting the study, prior approval for conducting the study was obtained from the competent authority of Community Health Centre which has adopted the study area. Consent was obtained from the samples and confidentiality was assured to the samples on the collected data.

Data Collection Procedure: Before data collection, a formal permission was obtained from the Head of the department to get the list of subjects from the register of health center. An informal permission was obtained from the sample subjects. After obtaining their consent the validated interview schedule was administered to collect their demographic data and to assess their knowledge on breast feeding. The educational intervention was done on

the second day. With the help of AV aids, they were educated about various aspects of breast feeding. The post test was given to them after one week. The data collected from the samples were analyzed using descriptive and inferential statistics.

Findings

Section I: Demographic Data

Out of total about half of samples were in the age group of 21-25 years (51%), belonged to Nuclear family (51%) with the monthly family income Rs 2001-4000 (48%). Majority of samples (75%) were housewives and belonged to Hindu religion (65%). Only 33% of them were educated up to primary school. Out of total, 45% of samples received knowledge on breastfeeding from family members.

Section II(a): Assessment of Pretest and Post Test Knowledge Mean Score

Table No.1: Mean Score of Pretest and Post Test Knowledge score N=405

Knowledge	No. of questions	Min Max Score	Pretest knowledge		Post test knowledge	
			Mean	Proportion with 95% confidence interval	Mean	Proportion with 95% confidence interval
Introduction to Breast Feeding	2	0-2	1.25	62.5% 57.6-67.2	1.92	96.0% 93.6-97.7
Advantage of Breast Feeding	2	0-2	0.72	36.0% 31.3-40.9	1.71	81.7-88.8 81.7-88.8
Time of initiation of Breast Feeding	2	0-2	0.27	13.5% 10.3-17.2	1.68	84.0 80.1-87.4
Importance of Colostrum	2	0-2	0.52	25.5% 21.3-30.1	1.63	81.5% 77.3-85.2
Importance of Exclusive Breast Feeding	2	0-2	0.38	19.0% 15.3-23.2	1.65	78.4-86.1 70.8-79.4
Preparation of Breast Feeding	3	0-3	0.66	22.2% 18.2-26.5	2.26	75.3% 68.7-77.5
Techniques of Breast Feeding	12	0-12	5.73	47.8% 42.8-52.8	8.80	73.3% 68.7-77.5
Common problems of Breast Feeding	8	0-8	4.53	56.6% 51.6-61.5	6.81	85.1% 81.2-88.4

Findings in Table No.2 show the percentage of knowledge on each aspect of breastfeeding among primi postnatal mothers before administration of an educational

intervention. In all aspects except introduction of breastfeeding (Mean Score 1.25), common problems of breastfeeding (Mean Score 4.53) and techniques of Breast Feeding (Mean Score 5.73) primi postnatal mothers had below average knowledge on breast feeding, Whereas, in post test the percentage of knowledge in each aspect of breastfeeding after administration of educational intervention was improved.

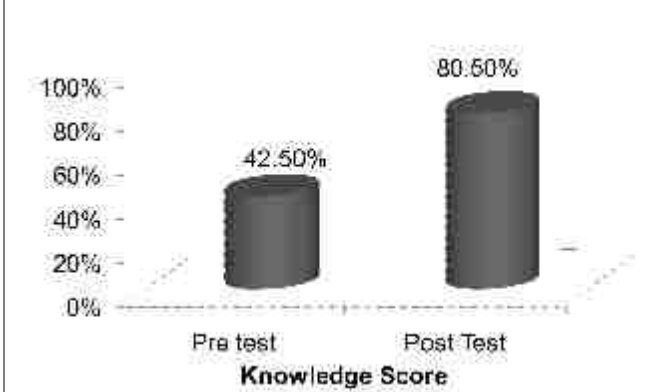
Section II(b): Assessment of Pretest and Post test Knowledge Score

Table No.2: Frequency and Percentage of Pre test and Post test Level of Knowledge N=405

Level of Knowledge	Pre Test		Post Test	
	No. Of Mothers	%	No. of mothers	%
Inadequate	310	76.5%	0	0.0%
Moderately adequate	95	23.5%	78	19.3%
Adequate	0	0.0%	327	80.7%
Total	405	100%	405	100%

Table No.2 depicts the level of knowledge of primi postnatal mothers on breast feeding before and after administration of educational intervention. In pre test out of total 405, 76.5% of the mothers had inadequate knowledge and only 23.5% of them had moderately adequate knowledge and none of them had adequate knowledge. Whereas, in post test 80.7% of the mothers had adequate knowledge and 19.3% of them had moderately adequate knowledge and none of them were the inadequate knowledge category.

Section III: Effectiveness of educational intervention on Breastfeeding among Primi Postnatal Mothers



Considering the overall aspects, the pre test mean

knowledge score was 42.5% and in post test it was found to be 80.2%. Primi postnatal mothers gained 37.7 percent of more knowledge on breastfeeding which indicates the effectiveness of educational intervention

Section IV: Association between Demographic Variables and Mothers Posttest Level of

Knowledge

The association of mothers' posttest level of knowledge with selected demographic variables revealed that the age of mothers ($X^2 = 37.4$, $P = 0.001$), nature of family ($X^2 = 12.5$, $P = 0.01$), education status ($X^2 = 14.9$, $P = 0.01$), and occupation status ($X^2 = 9.93$, $P = 0.01$) were closely associated with the mother's posttest level of knowledge. Statistical significance was calculated using Pearson chi square test.

Discussion

Socio Demographic Data

In the present study, out of total samples, about half of samples were in the age group of 21-25 years (51%), belonged to Nuclear family (51%) with the monthly family income Rs 2001-4000 (48%). Majority of samples (75%) were housewives and belonged to Hindu religion (65%). Only 33% of them were educated up to primary school. Out of total, 45% of samples received knowledge on breastfeeding from family members. These findings are similar to the findings of the study conducted by **Ahmed A. Shoshan¹³ in 2007**. In this study, Infant feeding practices were observed and weaning habits were examined for 1791 Saudi mothers who were admitted for delivery at maternity hospitals in Riyadh. Even though not significant, percentage of mothers who breast-fed was in lower family income and less educated mothers than their contrast. 62% of mothers said they are influenced by health providers in their decision for feeding their babies. Insufficient breast milk was the main reason for diverting to mixed feeding while advices by others and mother's own experience were the most source of information.

Assessment of Pretest and Post Test Knowledge Mean Score

While assessing the percentage of knowledge on each aspect of breastfeeding, in pretest it was found that in all

aspects except introduction of breastfeeding and common problems of breastfeeding primi postnatal mothers had below average knowledge. Their overall knowledge in pretest was on an average of 42.5%. Out of total 405, majority subjects 310 (76.5%) had inadequate knowledge, 95 subjects (23.5%) had moderately adequate knowledge, and none of the subject in the study (0%) had adequate knowledge. Out of maximum knowledge scores of 33, the study subjects had a mean knowledge score of 14.04 with a standard deviation of 3.50 in their pretest. These findings are consistent with the study done by **Dangi Sunita**¹⁴ in (2007) to investigate the effectiveness of planned teaching programme regarding breastfeeding in terms of knowledge and practice of postnatal mothers in selected hospital at Uttaranchal. Interview technique and observation checklist were used to collect the data. The study revealed that maximum deficit of knowledge was in the area of advantages of breastfeeding (21.66%). The maximum gain in knowledge was in the area of position of breastfeeding (68.18%) and in management of problems of breastfeeding (52.5%). The study finding revealed that the planned teaching programme was effective in improving the knowledge and practice of mothers regarding breastfeeding.

Assessment of Pretest and Post test Knowledge Score

After implementation of an educational intervention, in all aspects of breastfeeding the subjects had adequate knowledge. Their overall knowledge in posttest was on an average of 80.2%. Out of total 405, majority of mothers 327 (80.7%) had adequate knowledge, 78 mothers (19.3%) had moderately adequate knowledge and none of them had inadequate knowledge. Out of maximum knowledge scores of 33, the overall mean knowledge of subjects in posttest was 26.46 with the standard deviation of 2.60. These findings are supported by the study by **Pugin.et.al**¹⁵ (1996) at **Santiago, Chile** on the effect of a hospital breast feeding promotion programme for mothers. While comparing the subjects overall knowledge in pretest (42.5%) and posttest (80.2%), it was observed that the mothers gained 37.7% of more knowledge on breastfeeding. Hence, H_1 was accepted at $p < 0.05$.

Association between Demographic Variables and Mothers Posttest Level of Knowledge

However the association of mothers' posttest level of knowledge with selected demographic variables revealed that the age of mothers ($X^2 = 37.4$, $P = 0.001$), nature of family ($X^2 = 12.5$, $P = 0.01$), education status ($X^2 = 14.9$, $P = 0.01$), and occupation status ($X^2 = 9.93$, $P = 0.01$) are closely associated with the mother's posttest level of knowledge. It indicated that as age increases, their level of knowledge on breastfeeding increases. In nature of family, mothers living in joint and extended family gained more knowledge than nuclear family mothers. Similarly, as the mother's level of education increases, their level of knowledge also increases. Employed mothers had better knowledge than others. These findings were supported by a study conducted by **Deshpande D. Anjali and Gazmararian**¹⁶ (2000) on Breastfeeding education and support: Association with the decision to breastfeed in Atlanta. The findings of the present study are also similar to the study conducted by **Acharya Urmila**¹⁷ (1999). Her Findings showed a significant association between knowledge of mothers with their age (X^2 is 13.06), education (16.91), occupation (12.84%) and gravida (17.56 %).

Conclusion

Infants are the determinants of health of nation. The future of the country depends on the care and nutrition given to children. Providing better care and nutrition to the children is an essential pre requisite to build up a better nation and a healthy society. In this context, the nurses need to play a vital role to promote exclusive breast feeding so as to prevent infant mortality and morbidity This study has helped the primi postnatal mothers to enhance their knowledge on breastfeeding.

Apart from incidental health teaching, the nursing personnel should conduct planned health teaching programme to mothers on breastfeeding. The nursing personnel working in community area should conduct counseling sessions to educate public on breastfeeding.

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Existing Practices on Humanized Birth Care among Midwives



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Abstract

Humanization of assistance is of utmost importance to ensure that a special moment, such as childbirth, is experienced in a positive and enriching way. Therefore, a study was adopted to assess the existing practices on humanized birth care among midwives in the selected government hospitals of Indore. The sample was 30 midwives (ANM, GNM, Post Basic (N), B. Sc N,) selected by purposive sampling from different government hospital of Indore. Tool was filled by the investigator by interviewing the samples and through observational method. The findings of the study revealed that more than three-fourth i.e. 24(80%) of midwives had practiced negative humanized birth care and only 6(20%) had practiced positive humanized birth care. The dimension which mostly affected existing practices on humanized birth care was consented care (Score- 71.34%), followed by positive aspects of care (Score- 71.24%), confidential care (Score- 68.34%) and dignified care (Score- 63.34%). The fourth affected dimension is selected evidence based practice related to birthing by WHO (Score- 58.52%), physical abuse (Score-42%), abandonment of care (Score- 41.67%), and discrimination based on specific patient attributes (Score- 16.67%). Study concluded that midwifery plays an important role in strengthening women's birthing process. It could be concluded that midwives and other healthcare workers need to improve their humanized care aspect while helping mothers during their child birth.

Keywords : Existing practices, Humanized Birth Care, Midwives

Background

Humanization of childbirth is arguably an alternative model to the medical and technological models. Most of the previous literature defines the humanization of birth as birth without any unnecessary medical intervention. A women-centered care approach in which women are respected regarding their values, beliefs, autonomy, choices, and their control over their bodies and births are considered as key concepts of humanized birth care. (Behruzi R,2013)¹.

Humanization does not remain restricted merely to technical attributions, but includes the capacity to understand and respect human beings in their different forms of being and existing. In sum, humanization is a

process of transforming organizational culture, which needs to acknowledge and values clients' and professionals' subjective, historical and socio cultural aspects in order to improve work conditions and care quality by promoting actions that integrate human and scientific values. (Backes DS, 2007)².

In Humanization resuming human contact, listening, accepting, explaining, and creating a bond are indispensable factors in care. As important as physical care, performing proven beneficial procedures, reducing the interventionist measures, privacy, autonomy, and respect for the parturient, aspects advocated by the Prenatal, Delivery, and Childbirth Humanization Program, established by the Ministry of Health, in 2000.

Humanization starts through communication, the relationship between subjects, based on respect and expressed by acts of love, listening, caring, and observing. (Ferreira AGN, 2013)³.

Need of the study & Literature Review:

We believe that something is missing in health and social care. Patients and service users are telling us in different ways that they do not feel fully treated as human persons in the way that care is organized and practiced. In other words, people are seen as categories and often respond expressing the heartfelt question: Where am I in all of this? This intelligent feeling appears to be telling them that something important is in danger of being lost when overly relying on technological solutions for covering crucial dimensions of what care means to them. It is within this context that the recently established Global Institute for Research in Humanizing Care Contexts has produced a document that notes that the attempt to humanize health care requires a dedicated research focus (Reis V, Deller B, Carr C, Smith J, 2012)⁴.

The World Health Organization (WHO), after evaluating maternity care, recommended that informal perinatal care systems (including traditional midwives), where they exist, must coexist with the official birth care system and collaboration between them must be maintained for the benefit of the mother. Such relations, when established in parallel with no concept of superiority of one system over the other, can be highly effective. Midwives are at the center of the "women's world." Midwives are strong, independent women in the community. Every attempt at ending the practice of midwifery has failed. It seems that there will always be women who want to be midwives and women who want midwives to attend them when they give birth (Wagner M 2007)⁵.

The theme of Humanized Birth Care is relevant because it deals with situations involving an important time for women, the time of giving birth, at which, often, there isn't a sensitive and appropriate listening on the part of professionals in order to understand the context of this moment, frequently unique in the woman-mother's life. Based on the review of literature and clinical experience of the investigator it is found that, midwifery plays an

important role in strengthening women's control over their own bodies and reproduction. The struggle will be difficult, but if midwives and women's groups work together, it can happen. So there is a need to assess the existing practices on humanized birth care so as to make childbirth a positive and satisfying experience for both the women, and their family as a whole.

Problem Statement

An exploratory study to assess the existing practices on Humanized Birth Care among midwives in the selected government hospitals of Indore in the year 2013-2014.

Objectives

- To determine the existing practices on humanized birth care among midwives in the selected government hospitals of Indore.
- To associate between the existing practices on humanized birth care with selected socio demographic variables.

Hypothesis

H₁: There is significant association between the existing practices on humanized birth care and selected socio-demographic variables of midwives at the level of significance $p \leq 0.05$.

Methodology

Research Design: Non experimental exploratory research design

Sample: Midwives working in the government hospitals of Indore (6.67% B.Sc., 13.33% Post basic B.Sc, 66.67%GNMs, 13.33%ANMs)

Sampling technique & size: By using purposive sampling technique, 30 subjects were selected.

30 women were also observed during their child-birth.

Setting: Government Hospitals of Indore

Tool: The tool for collection of data for this study consisted of three sections: Section A: Socio demographic variables of midwives consisted of 5 items.

Section B: Socio demographic variables of women participants consisted of 5 items.

Section C: Non- participant observational checklist consisted of 8 dimensions. Total score ranges from 0-40.

The scoring is done as follows: 0-20: Negative Humanized care, 21-40: Positive Humanized care

Validity & Reliability: Seven experts in midwifery validated the tool. The reliability of the checklist was calculated using split half method which was computed by Karl Pearson correlation formula and it was found $r = 0.86$.

Data collection procedure: Written permission was obtained from the administrative authority and research ethical committee prior to data collection. A total of 30 participants were selected through purposive sampling technique who met the inclusion criteria. The actual data collection period was from 1st April 2014 to 1st May 2014. The confidentiality of all the samples was assured. Section A & B of the tool was filled by the investigator by interviewing the samples and section C of the tool was filled by the investigator through participant observation method on the eight dimensions of respectful maternity care /humanized birth care (consented care, positive aspects of care, confidential care, dignified care, evidence based practices related to birthing by WHO, physical abuse, abandonment of care, discriminations based on specific patient attributes). The time taken to complete the observation check list depended upon the duration of childbirth.

The eight dimensions were retrieved from Respectful Maternity care given by white ribbon alliance 2011, WRA launched a global campaign to promote a clear standard for RMC that is rooted in international human rights. Working with global organizations, WRA produced a ground breaking consensus document, the Respectful maternity care charter: the Universal rights of child bearing women, which demonstrates the legitimate place of maternal health rights in the broader context of human rights.

The data collection is done through participant observation & the researcher tried to observe the data throughout the child birth process on these given dimensions. The investigator had gone through the

mother's files and records while observing the practices of midwives. The analysis of the pilot study revealed that the objectives of the study could be fulfilled.

Findings

Section I: Socio Demographic Variables of midwives

Among 30 samples, one third, 10(33.33%) were in the age group of 41 years and above followed by nearly one fourth 8 (26.67%) between 26-30 years. Regarding professional qualification of midwives, nearly two third 20 (66.67%) were GNM whereas only 2(6.67%) of the samples had professional qualification of B.Sc. nursing. Regarding professional experience around one third, 12(40%) had 6-10 years of experience and less than one fifth of the sample 6 (20%) had 16-20 years of professional experience. Regarding total clinical experience in maternity ward majority of the samples, 11(36.66%) had 1-5 years of experience, 11(36.66%) had 6-10 years, 3(10%) between 11-15 years, 3(10%) between 16-20 years and rest 2(6.68%) were having 21 and above years of clinical experience in maternity ward. It was found that most of the samples 28(93.33%) were competent to conduct delivery independently. It was evident that majority of the samples 22(73.33%) attended in-service education for professional development. Most of the midwives 26 (86.67%) sought help from obstetrician as and when needed. It was evident that half of the samples i.e. 15(50%) sought help from neonatologist in caring for neonate with some problem. Two- third of the samples 20 (66.67%) did not involve family members in child birth process and only one- third 10(33.33%) involved family members in child birth process.

Section II: Socio Demographic Variables of Women Participants

Majority of the women participants 14 (46.67%) were under the age group of 21-25years. With regard to their educational status out of 30, 13 (43.33%) had primary school education, 7(23.33%) had never attended school, 5(16.67%) had high school education, only 3(10%) had higher secondary school education and only 2(6.67%) of them were graduates and above. About the work status of women participants 20 (66.67%) were housewives. More than half of the women participants 18(60%) resided in

rural area. Regarding the type of admission majority 23(76.67%) was booked cases. Regarding parity more than half 18 (60%) of women participants were multigravida. One third of women participants 10(33.33%) had anganwadi workers with them, 7(23.33%) had significant others, 3(10%) had mothers-in-law with them and none of the women participants had husbands with them during birthing. Majority of the women participants 11(36.67%) had between 6-10 years of marital life. With regard to their financial status, it was also found that 11(36.67%) had 3001-5000 Rs. Per month as family income, 9(30%) had Rs.1001-3000 as family income.

Section III: Dimensions affecting existing practices on humanized birth care

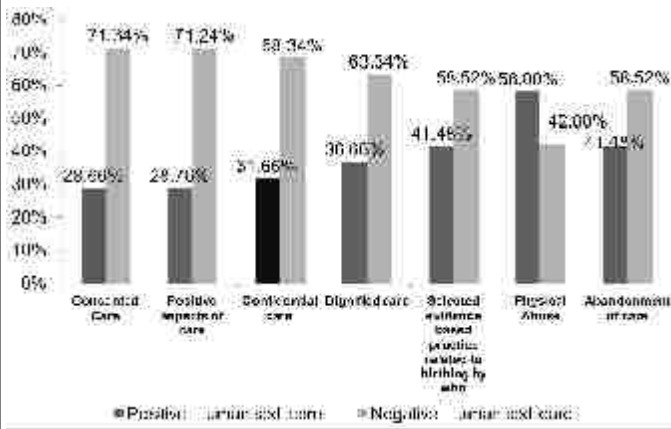


Figure No.1 : Frequency distribution of Dimensions affecting existing practices on humanized birth care

Data presented in figure No.1 reveals that, the dimension which mostly affected existing practices on humanized birth care were mostly high in negative. In the dimension of Consented care, negative Score was 71.34%, followed by positive aspects of care (Negative Score- 71.24%), confidential care (Negative Score- 68.34%) and dignified care (Negative Score- 63.34%). The fifth affected dimension is selected evidence based practice related to birthing by WHO (Negative Score- 58.52%), physical abuse (negative score 42%), abandonment of care (Negative Score- 41.67%), and discrimination based on specific patient attributes (Negative Score- 16.67%).

Section IV: Assessment of subjects to individual statement in each dimension through participant observation

Table No. 1(a): Dimension “consented care of parturient women”- frequency & percentage distribution. N=30

Parameters	Yes	%	No	%
Consented care of parturient women				
Information & verbal consent protocols for obstetric procedures like: Episiotomy/IUD insertion/Augmentation of labor/ Administration of drugs	6	20%	24	80%
Freedom of decision related to position for birth	6	20%	24	80%
Information & option regarding the choice of companion during child birth process	6	20%	24	80%
Allow food & fluids during child birth process	11	36.66%	19	63.33%
Freedom to ambulate during child birth process	14	46.66%	16	53.33%

Data in Table No. 1(a) depicts that with regard to consented care of parturient women more than three-fourth, 24 (80%) of nurses did not provide information and did not obtain verbal consent, also did not follow protocols for obstetric procedures like episiotomy, IUD insertion, augmentation of labor and administration of drugs. Regarding freedom of decision related to position of birth, majority, 24 (80%) had not provided freedom related to position for birth, while 6 (20%) had provided freedom related to position for birth like squatting position, sitting position & left lateral position. 24 (80%) nurses had not given information & option regarding the choice of companion during labor. With regard to food and fluids during labour less than two- third of the sample i.e. 19(63.33%) had not allowed food & fluids during labor whereas 11(36.66%) did allow the parturients to take food & fluids during labor. Majority, 16 (53.33%) of women participants were not given freedom to ambulate during child birth process whereas 14(46.66%) were allowed to

ambulate during first stage of child birth process.

Table No. 1(b): Confidential care of parturient women in terms of frequency & percentage distribution.

(N=30)

Parameters	Yes	%	No	%
Confidential care of parturient women				
Privacy during child birth process	11	36.66%	19	63.33%
Privacy during vaginal examination	8	26.66%	22	73.33%

Table No. 1(b) reveals that as many as 19 (63.33%) midwives had not provided privacy during child birth process. About privacy during vaginal examinations 22 (73.33%) had not provided privacy during vaginal examination and only 8(26.66%) had provided privacy during vaginal examinations.

Table No.1(c): Dignified care of parturient women in terms of frequency & percentage distribution.

(N=30)

Parameters	Yes	%	No	%
Dignified care of women				
Threatened in labor with negative outcomes if they did not comply with instructions	13	43.33%	17	56.66%
Women being denied moral support & encouragement	25	83.33%	5	16.66%

Table No. 1 (c) reveals that as many as 17(56.66%) of the parturients were not threatened in labor with negative outcomes if they did not comply with instructions whereas 13(43.33%) parturients were threatened in labor with negative outcomes, if they did not comply with instructions. More than three-fourth i.e. 25(83.33%) parturients were being denied moral support & encouragement.

Physical abuse of parturient women in terms of frequency & percentage distribution.

Results revealed that 18(60%) of parturients were beaten on thighs and arms. As many as 7 (23.33%) were slapped during childbirth process. 21 (70%) of the parturients were verbally abused during childbirth process. 3(10%)

were pinched during child birth process. However, none of them were tied down during the child birth process.

9 (30%) parturients were threatened that if they don't cooperate they will be operated. Out of 30 midwives majority 23(76.66%) had given unnecessary fundal pressure before dilatation of cervix. About postpartum suturing of vaginal tears and episiotomy cuts, only 16(53.33%) of midwives had sutured vaginal tears & episiotomy cuts with the use of local anesthesia. As many as 25(83.33%) nurse midwives had roughly pulled women's legs apart for vaginal examinations.

Table No. 1(d): Abandonment of care - frequency & percentage distribution

N=30

Parameters	Yes	%	No	%
Abandonment of care				
Leaving the women alone or unattended during child birth process	23	76.66%	7	23.33%
Failure of providers to monitor women & intervene in life threatening situation	3	10%	28	93.33%

Table No. 1(d) depicts that out of 30 midwives, majority 23(76.66%) had left the women alone or unattended during childbirth process. However, regarding failure of providers to monitor women & intervene in life threatening situation most of the midwives, 28 (93.33%) didn't fail to monitor & intervene women in life threatening situation while.

Table No. 1(e): Discrimination based on specific patient attributes in terms of frequency & percentage distribution.

(N=30)

Parameters	Yes	%	No	%
Discrimination based on specific patient attributes				
Abandonment of treatment on the basis of Race/ ethnicity/age/HIV/AIDS/economic status/education	0	0%	30	100%
Detention of women in facility due To lack of payment of facility fees	10	33.33%	20	66.66%

Table No 1(e) reveals that none of the midwives i.e. 30(100%) had abandoned the treatment on the basis of race/ethnicity, age, HIV/AIDS and economic status/

education. About two-third of the sample i.e. 20(66.66%) had not detained the women in facility due to lack of payment of facility fees, however 10(33.33%) of midwives had detained the women in facility due to lack of payment of facility fees.

Dimension regarding “Selected evidence based practice related to birthing by WHO” in terms of frequency & percentage distribution

Findings of the study showed that more than three-fourth 24 (80%) of the midwives provided routine supine position during childbirth process. 28(93.33%) of the midwives did not monitor the progress of labour by the use of WHO partograph. Out of 30 parturients, 18(60%) had experienced repeated or frequent vaginal examinations by more than one caregivers. In more than two-third i.e. 21(70%) of parturients routine prophylactic insertion of intravenous cannula & infusion in labor was done. 18 (60%) midwives had given prophylactic oxytocin in the 3rd stage of labour in women with a risk of PPH or endangered by even a small amt of blood loss.

Regarding routine use of enema, 22(73.33%) of the midwives had not given routine enema to the parturient women. 25 (83.33%) of the midwives had not practiced routine use of pubic shaving while 5(16.66%) had practiced routine use of pubic shaving. 17(56.66%) of the midwives had not practiced sustained, directed bearing down efforts (Valsalva maneuvers) during the second stage of labour. None of the midwives had taught non pharmacological methods of pain relief during labour such as Lamaze method, abdominal effleurage & relaxation technique to the parturient mother.

Dimension related to “positive aspects of care” in terms of frequency & percentage distribution

Study revealed that most of the midwives 24(80%) had not maintained individuality of the parturient mother. Regarding usage of delivery kits by the caregivers, majority, 23(76.66%) had not used delivery kits. 21(70%) of the midwives had not provided safety and comfort to the parturient women. It was found that more than half , 16 (53.33%) of the midwives did not listen to the parturients during childbirth process.

24(80%) did not allow spontaneous labour. Two-third of

the midwives 20 (66.66%) appreciated the parturients for cooperation during childbirth process. Almost none of them, 27(90%) of the midwives made child birth decisions with parturients.

Section V: Overall existing practices on Humanized Birth Care among midwives

EXISTING PRACTICES ON HUMANIZED BIRTH CARE AMONG MIDWIVES

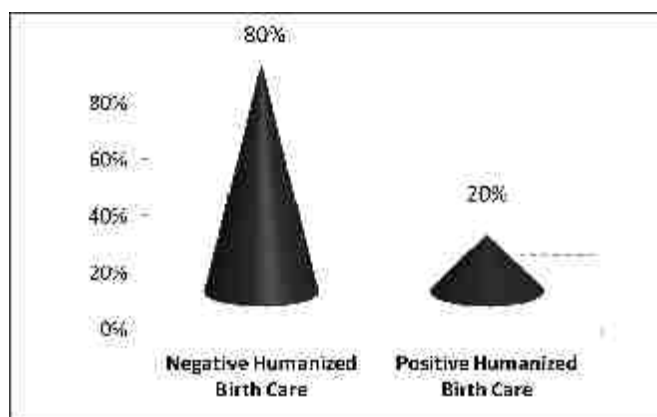


Figure No. 2: Cone diagram showing the score of Humanized Birth Care among midwives

Data presented in Figure No. 2 reveals that more than three-fourth i.e. 24(80%) of midwives had practiced negative humanized birth care and only 6(20%) had practiced positive humanized birth care.

Section VI: Association of existing practices on humanized birth care with socio-demographic variables

Results showed that no significant association was found between the existing practices on humanized birth care and selected demographic variables Thus, the hypothesis H_1 made by the researcher was rejected.

Discussion

Assessment of humanized birth care

The findings of the study revealed that majority 24 (80%) midwives have practiced negative humanized birth care and only 6(20%) have practiced positive humanized birth care.

Results also revealed that most of the midwives did not provide any information regarding obstetrical

interventions like episiotomy; drug administration etc and parturients were not involved in making any decisions throughout labour process. It was also observed that the women was without any sheet or screen and was exposed continuously to many staff and other patients during child birth process and during vaginal examination & during childbirth process which is against the concept of humanization of care.

The study has also shown that If the woman is not in active labor she is kept in a room with other patients and she is not observed for hours unless the relatives or the patient herself comes and informs the staff about the progress of labour. Another reason for leaving the parturient alone for long period of time was the shortage of midwives.

It was observed that the infection control protocols were not sufficiently followed. Women gave birth to their babies without sheets on the beds and only plastic covers were put on the table, which were already blood-stained. Same gloves were used for more than one parturient for performing per vaginal examination by simply washing them under running water. There was no proper sterilization of instruments because of which same instruments were used for cutting umbilical cord of another baby.

The findings were supported by **Brown H, Smith H, Garner P et al (2007)⁷** on promoting childbirth companions in hospital deliveries in South Africa. The results showed that the majority of hospitals did not allow a companion, or access to food or fluids. A third of women were given an episiotomy. Some women were shouted at (17.7%, N = 2085), and a few reported being slapped or struck (4.3%, N = 2080). Despite an initial positive response from staff to the childbirth companion intervention, no difference between intervention and control hospitals in relation to whether a companion was allowed by nursing staff, good obstetric practice or humanity of care.

The present study's findings were not exactly supported but a number of common factors were revealed in the study by **Behruzi R, Hatem M, Goulet L, Fraser W (2011)⁶** who conducted a study on the facilitating factors and barriers encountered in the adoption of a humanized

birth care approach in a highly specialized university affiliated hospital. Results revealed that the most cited barriers were: the shortage of health care professionals, the lack of sufficient communication among the professionals, the stakeholders' desire for specialization rather than humanization, over estimation of medical performance, finally the training environment of the hospital leading to the presence of too many health care professionals, and consequently, a lack of privacy and continuity of care.

Conclusion

Hence on the basis of the above cited findings, it could be concluded that there is a need to evolve new social and political forms for the medical profession and for medical care. All those working in the field of maternal care need to change their attitude so that instead of drifting away from physiology and from social and cultural environment, the focus should be towards respecting and working with nature and with the women and family, turning control of medical care over to the people. The decisions of the woman throughout her delivery process are essential so that the birth will be humanized and natural. This will happen when professionals understand that this process does not only address scientific evidence, but they need to take into account the factors like educating mother and the family and involving them in the care and decision making.

The implementation of humanization of birth practices in hospitals would aim at making the experience of hospitalization more reassuring, comfortable and pleasant for women and their families. From the finding of this study researcher concluded that mothers, children & families must benefit from obstetric technology, but still a balance between security & humanity is essential. Eventually the new millennium will see a system of maternity services which are midwife-centered, evidenced based, focusing on low-risk births, and honour the freedom of women and families.

It seems that there will always be women who want to be midwives and women who want midwives to attend them when they give birth (**Wagner M 2007**).

Acknowledgment: Researcher wishes to thank all the

midwives who participated in the study and the administrative authority who gave permission to conduct the study.

Conflict of interest: Nil

Financial resource: Self

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Effectiveness of Structured Teaching Programme on Knowledge Regarding Nutrition Related Side Effects of Chemotherapy and Radiation Therapy and Their Management among Patients with Cancer



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Abstract

Nutrition not only nourishes the body and replenishes the tissues but also helps individuals to stay fit and healthy. Good nutrition is essential for growth and development, provides resistant to infection and reduces the mortality and morbidity. So nutrition is a basic need that must be met for all clients (Soni D, 2010)¹. The uncertainty about how to cope with the life threatening situations such as cancer, its treatment, and resulting stress can be decreased by providing information about the treatment and side effects (Dodd MJ et al)². Therefore, a pre experimental study was conducted to assess the effectiveness of structured teaching programme on knowledge regarding nutrition related side effects of chemotherapy and radiation therapy and their management among patients with cancer. A total of 60 subjects were selected using purposive sampling technique, admitted in Cancer unit and those attending oncology OPD of CH& RC. After pretest, structured teaching programme was administered and 14 days later post test was taken. The findings showed that the mean post -test score was 29.5 which was higher than pretest score 16 and 't' value was computed to be $t_{99} = 16.12$ which was found significant at the level of $p < 0.001$, thus indicating high effectiveness of structured teaching programme in increasing the knowledge of cancer patients regarding nutrition related side effects of chemotherapy and radiation therapy and its management. It was also evident that no significant association was found between pretest knowledge score and selected clinical variables of cancer patients.

Key words: Side effects, Knowledge, Management, Structured teaching programme

Background

Cancer is a term used for diseases in which the abnormal cells divide without Control and are able to invade other tissues, to many cancers implies a sentence; it implies suffering and pain. Even today, despite considerable advances in treatment, cancer remains a fatal disease for number of patients. It is however, only rarely acutely fatal such that cancer can be regarded as a chronic disease. Thus, the traditional aims of treatment i.e. prolongation of life and relief of suffering have largely been achieved although it must be recognized that such treatment may intrude into every area of the patient's life. (Black JM et al, 2004)³

Chemotherapy is a kind of treatment that uses drugs to attack cancer cell. It is called a "systemic treatment" since the drug, entering through the blood stream, travels throughout the body and kills cancer cells at their sites.

B.T. Basavanthappa, 2003)⁴

Since chemotherapy also affects normal actively dividing cells as those in the bone marrow, the gastrointestinal tract, the reproductive system and in the hair follicles, most patients may experience some degree of side effects, which may include the following: pain, nausea and vomiting, fatigue, hair loss, anxiety, susceptibility to infections, decrease in blood cell count, mouth sores and ulcers. Other side effects may include fluid retention,

rashes, irritable bladder, swelling and numbness and aching of the joints, hands and feet etc., and may be associated with significant cognitive impairment (**Black JM, 2005**)⁵.

Need of the Study and Literature Review

Health is the state of the organism when it functions optimally without evidence of disease or abnormality. Health is a dynamic state in which an individual's capacity to cope with all the circumstances of living is at an optimal level. Today increasing emphasis is placed on health, health promotion and wellness. For that a wide range of health promotion strategies including health monitoring, risk reduction, nutrition and health education are being evolved. Among these, nutrition plays a vital role in maintaining health of the individual. (**Smeltzer SC et al, 2010**)⁶

Cancer is the word used for a tumor that spreads & destroys the host and it is one of the leading causes of morbidity and mortality in developed and developing countries. Cancer prevalence in India is estimated to be around 2.5 million with over 8, 00, 000 new cases every year (**Dinshaw KA et al**)⁷.

Common side effects of chemotherapy and radiation therapy include mucositis, nausea, vomiting, taste changes and fatigue. Chemotherapy and radiation therapy presents a challenge to patients because of their altered abilities for self-care. Nurses are in a strategic position to lead efforts at changing attitudes and behaviors about cancer by providing adequate knowledge. Knowledge acquired will enable them to adapt measures to relieve discomforts caused by the side-effects of chemotherapy and radiation therapy. (**Smeltzer SC et al**)⁸.

Problem Statement

“A pre experimental study to assess the effectiveness of structured teaching programme on knowledge regarding nutrition related side effects of chemotherapy and radiation therapy and their management among the patients with cancer in a selected hospital at Indore during the year 2013-2014”

Objectives

1. To determine the pretest level of knowledge regarding side effects of chemotherapy and radiation therapy and their management among patients with cancer
2. To find the effectiveness of structured teaching programme on knowledge regarding the side effects of chemotherapy and radiation therapy and their management.
3. To determine the association between the knowledge level and the selected demographic variables and clinical characteristics of cancer.
4. To compare the health belief and self efficacy statements before and after structured teaching programme.
5. To compare the occurrence of side effects of chemotherapy and radiation therapy before and after structured teaching programme

Hypothesis

- H1:** There is a significant difference between pretest & post test knowledge score at the level of $p \leq 0.05$
- H2:** There is a significant association between pre-test knowledge score and selected socio demographic variables at the level of $p \leq 0.05$

Research Methodology

Research Design: Pre experimental one group pretest post test design.

Population: Cancer patients receiving chemotherapy or radiation therapy.

Sampling technique: Purposive sampling technique.

Sample size: 60 samples

Setting: Choithram Hospital & Research Centre, Indore

Tool: The tool for collection of data for this study included 5 sections which were.

Section A: Socio-demographic Data

First section consists of 7 items for obtaining information about socio demographic factors of sample such as age,

gender, religion, annual income, marital status, occupation and educational status.

Section B: Clinical characteristics of Cancer

Section B consisted of 6 items for obtaining information regarding course of cancer and its treatment; it included the category of cancer, site of cancer, stage of cancer, treatment, course of chemotherapy, course of radiation therapy.

Section C: Knowledge questionnaire

Section C consisted of 40 questions based on knowledge regarding side effects of chemotherapy and radiation therapy and its management.

Section D: 5-Point Likert Scale

Section D consisted of a 5 point Likert scale, which included 10 questions based on health belief, and self efficacy statements. The questions were to be answered under 5 options : "STRONGLY DISAGREE", "DISAGREE", "NO OPINION", "AGREE", "STRONGLY AGREE".

Section E: Assessment of prevailing side effects

Section E consisted of a checklist including 10 most common side effects to assess its prevalence in cancer patients

Validity: A prepared tool along with the objectives, answer key, and blue print was given to 7 experts who were from the field of oncology, medical surgical department and dietetics department. They were requested to check the relevance and suggest their opinion which helped in developing the final tool.

Reliability: The tool was tested for reliability on 6 patients attending oncology units of Choithram Hospital and Research Center. For structured knowledge questionnaire the reliability of the tool was computed by split half method using Karl Pearson's correlation formula. The reliability coefficient was found to be 0.823 which showed that the tool was reliable.

Data Collection Procedure: Written permission was taken from the administrative authority of the hospital prior to the data collection. An informed consent was

taken from the respondents prior to the study. A total of 60 patients were selected for the main study who attended day care, radiation unit and chemotherapy unit of Choithram Hospital and Research Center. Samples were selected based on inclusive and exclusive criteria. The purpose of the study was explained to the subjects and confidentiality was assured to the entire subjects. The average time taken for filling the pretest was 20 minutes followed by structured teaching session on side effects of chemotherapy and radiation therapy and their nutritional management with the help of booklet, lesson plan and power point. The time taken for session was 45-60 minutes ensuring a rest period of 6-7 minutes. After 14 days a post test was taken. The analysis of the pilot study revealed that objectives of the study could be fulfilled.

Findings

Section I(a): Socio Demographic profile

Among all study participants 16(26.66%) belonged to age group of 41-50 years and 16(26.66%) belonged to the age group of 51 to 60 years. 32 (53.33%) were male and 28 (46.66%) were females. It was depicted that 38 (63.33%) samples were Hindus and 12 (20.00%) were Muslims. 23 (38.33%) had family income between 50,000-1,00,000 and 23 (38.33%) above 1,00,001. Majority of the samples 41 (68.33%) were married and 19(31.66%) were unmarried. Regarding area of working, 24 (40.00%) sample's occupation was private or government service and 12(20.00%) were involved in other occupations. With regard to education, 16 (26.66%) were 12th pass and 15(25.00%) were graduates.

Section I(b): Clinical variables of subjects

It was found that 25 (41.66%) samples were suffering from carcinoma and 14(23.33%) were suffering from lymphoma. Out of 60 samples, 7 (11.66%) had prostate cancer, 38(63.33%) had other type of cancer. It was found that 25 (41.66%) samples were on Ist stage of cancer whereas 19(31.66%) were on III stage of cancer. It was seen that 31 (51.66%) samples were undergoing combined therapy and 21 (35.00%) were undergoing chemotherapy. It was found that 22 (36.66%) samples were undergoing IInd cycle of chemotherapy and 11 (18.33%) were undergoing IVth cycle of chemotherapy.

18 (30.00%) samples were undergoing IVth cycle of radiation therapy and 22 (36.66%) never had any course of radiation therapy.

Section III: Pretest and Post Test Knowledge Score Regarding Management of Nutrition Related Side Effects

Pretest and Post Test Knowledge Score

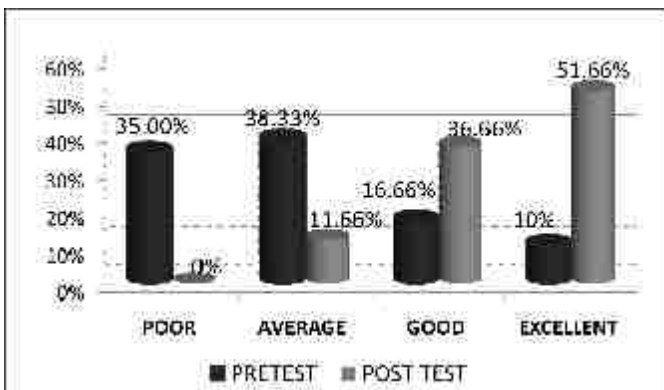


Figure -1: Cylindrical diagram showing percentage distribution of pretest and post test knowledge scores

Fig 1 depicts that during pre test 21(35.00%) of the respondents scored poor grades, and 23(38.33%) scored average grades, 10(16.66%) scored good grades and only 6(10.00%) scored excellent grades. Whereas in post test 07(11.66%) scored average grades, 22(36.66%) scored good grades and 31(51.66%) scored excellent grades.

Section IV: Effectiveness of Structured Teaching Programme In Terms of Improving Knowledge Regarding Nutrition Related Side Effects of Chemotherapy / Radiation Therapy

Table No. 1: Mean Score, SD, Mean difference and t-value of pretest and post-test knowledge score

Knowledge Score	Mean	SD	Mean diff.	Df	t' value	Table value
Pretest	16	6.59	13.5	59	16.128	2.001
Post test	29.5					

(N=60)

p< 0.05* **p< 0.01**** **p< 0.001***** **df Degree of freedom** **S-significant**

Table No. 1 depicts that mean post test knowledge score (29.5) was apparently higher than the mean pretest knowledge score (16) and the computed paired 't' value ($t_{59}=16.12$, $p<0.001$). This indicated the effectiveness of structured teaching programme in increasing the knowledge level regarding nutrition related side effects of chemotherapy and radiation therapy and their management.

Section V(a): Association between pretest knowledge score and selected socio-demographic variables.

There was no significant association between pretest knowledge score and selected socio demographic variables like age, gender, marital status, income, religion, occupation and educational status of cancer patients.

Section V(b): Association between pretest knowledge score and selected clinical variables of cancer.

There was no significant association between pretest knowledge score and selected clinical variables of cancer like type of cancer, site of cancer, stage of cancer, treatment, course of chemotherapy and course of radiation therapy.

Section VI: Comparison of Health Belief and Self Efficacy Statements of Pretest and Post-Test

Table No 2(a): Health belief and self efficacy statements (n=60)

Variables	Pretest		Post-test	
	(f)	(%)	(f)	(%)
Nutrition is important in managing my side effects of chemotherapy/ radiation therapy				
Strongly Agree	5	8.33	11	18.33
Agree	17	28.33	37	61.66
Disagree	15	25.00	13	21.66
Strongly Disagree	17	28.33	0	00.00
No opinion	6	10.00	9	15.00
To date, side effects of my Treatment have caused me to avoid or limit some foods				
Strongly Agree	5	8.33	8	13.33
Agree	8	13.33	31	51.66

Variables	Pretest		Post-test	
	(f)	(%)	(f)	(%)
Disagree	21	35.00	4	6.66
Strongly disagree	18	30.00	0	00.00
No opinion	8	13.33	17	28.33
I am responsible for managing the nutrition related side effects of Chemotherapy/ radiation therapy				
Strongly Agree	5	8.33	14	23.33
Agree	10	16.66	27	45.00
Disagree	13	21.66	4	6.66
Strongly disagree	17	28.33	0	00.00
No opinion	15	25.00	15	25.00
I have enough knowledge to manage the nutrition related Side effects of Chemotherapy/ radiation therapy				
Strongly Agree	3	5.00	18	30.00
Agree	9	15.00	30	50.00
Disagree	16	26.66	3	5.00
Strongly disagree	9	15.00	2	3.33
No opinion	23	38.33	7	11.66

During pretest it was asked that "is Nutrition important in managing the side effects of chemotherapy and radiation therapy"? It was found that 17 (28.33%) strongly disagreed, and 17(28.33%) agreed whereas at the time of post test 37 (61.66%) agreed and none of them strongly agreed for the same.

It was found that 21(35.00%) disagreed and 8(13.33%) agreed that to date, side effects of their treatment have caused them to avoid or limit some foods. Whereas at the time of post test 4 (6.66%) disagreed, 17 (28.33%) had no opinion, 31 (51.66%) agreed, and 8(13.33%) strongly agreed.

During pretest it was found that out of all 60 samples, 17 (28.33%) strongly disagreed that they were responsible for managing the nutrition related side effects of chemotherapy/radiation therapy whereas 15(25.00%) of them had no opinion. But at the time of post test 27(45%) agreed and 14(23.33%) strongly agreed for the same.

Regarding enough knowledge to manage the nutrition related side effects of chemotherapy/radiation therapy

majority 23(38.33%) had no opinion and 16(26.66%) disagreed in the pre test. At the time of post test it was increased to 30 (50.00%) who agreed and 18(30.00%) who strongly agreed for the same.

Table No 2(b): Health belief and self efficacy statements (n=60)

Variables	Pretest		Post-test	
	(f)	(%)	(f)	(%)
I have the skills needed to manage the nutrition related side effects of Chemotherapy/ radiation therapy				
Strongly Agree	6	10.00	20	33.33
Agree	12	20.00	31	51.66
Disagree	17	28.33	1	1.66
Strongly disagree	9	15.00	0	00.00
No opinion	16	26.66	8	13.33
I have enough knowledge when I should take food after medication for nausea and vomiting				
Strongly Agree	2	3.33	18	30.00
Agree	8	13.33	25	41.66
Disagree	16	26.66	7	11.66
Strongly disagree	9	15.00	0	00.00
No opinion	25	41.66	10	16.66
I have enough knowledge regarding accurate and exact time when I should avoid meal				
Strongly Agree	0	0.00	15	25.00
Agree	8	13.33	28	46.66
Disagree	16	26.66	5	8.33
Strongly disagree	6	10.00	0	00.00
No opinion	30	50.00	12	20.00
I have enough knowledge regarding which type of food I can take				
Strongly Agree	2	3.33	25	41.66
Agree	7	11.66	19	31.66
Disagree	16	26.66	6	10.00
Strongly disagree	19	31.66	0	00.00
No opinion	16	26.66	10	16.66

Findings in Table No.2(b) reveals about the skills needed to manage the nutrition related side effects of chemotherapy/radiation therapy. It was found that

majority 17(28.33%) disagreed, 16(26.66%) had no opinion and 12(20.00%) agreed for this. At the time of post test 31 (51.66%) agreed and 20(33.33%) strongly agreed for the same.

During pretest it was found that maximum i.e. 25(41.66%) had no opinion and 16(26.66%) disagreed for having enough knowledge of taking food after medication for nausea and vomiting whereas at the time of post test 18(30.00%) strongly agreed for the same.

About having enough knowledge regarding accurate and exact time they should avoid meal only 8(13.33%) agreed and 16(26.6%) disagreed but in post test 28(46.6%) agreed and 15 (25.00%) strongly agreed for the same.

Out of all 60 samples only 16(26.6%) disagreed and 19(31.66%) strongly agreed that they had enough knowledge regarding how much amount of water or fluid they should take daily but at the time of post test majority i.e.25(41.6%) strongly agreed and 19(31.66%) for the same.

Section VIII(a): Comparison of occurrence of Side Effects during Pretest and Post Test

Table No. 3(a): Frequency and Percentage of Side effects during pretest and post test (N=60)

Variables	Pretest		Post-test	
	(f)	(%)	(f)	(%)
Alteration of taste and smell				
Always	31	51.66%	24	40%
Sometimes	10	16.66%	21	35%
Never	19	31.60%	15	25%
Xerostomia				
Always	29	48.33%	16	26.66%
Sometimes	18	30.00%	29	48.33%
Never	13	21.66%	15	25.00%
Skin problems				
Always	28	46.66%	12	20.00%
Sometimes	18	30.00%	32	33.33%
Never	14	23.33%	16	26.66%
Anorexia				
Always	38	63.33%	18	30.00%
Sometimes	17	28.33%	26	43.33%
Never	5	8.33%	16	26.66%
Mucositis				
Always	25	41.66%	13	21.66%
Sometimes	22	36.66%	29	48.33%
Never	13	21.66%	18	30.00%

Data in Table No.3(a) depicts that out of all the 60 samples 31(51.66%) patients always had alteration of taste and smell After post test it was evident that the number of samples were reduced to 24(40%)who always had complaint of alteration of taste and smell. It was revealed that 29(48.33%) cancer patients always had complaint of xerostomia. But after post test it was found that, the number was reduced to16 (26.66%) cancer patients who had xerostomia.

It was seen that during pre test 28 (46.66%) subjects always had skin problems whereas the number was reduced to 12 (20.00%) during post test. 38(63.33%) subjects always had anorexia, during pretest, but at the time of post test the number was reduced to 18(30.00%) cancer patients who had this problem always. 25(41.66%) samples always had mucositis at the time of pre test assessment and the number was reduced to 13(21.66%) during post test.

Section VIII (b): Comparison of Occurrence of Side Effects during Pretest and Post Test

a) Diarrhea

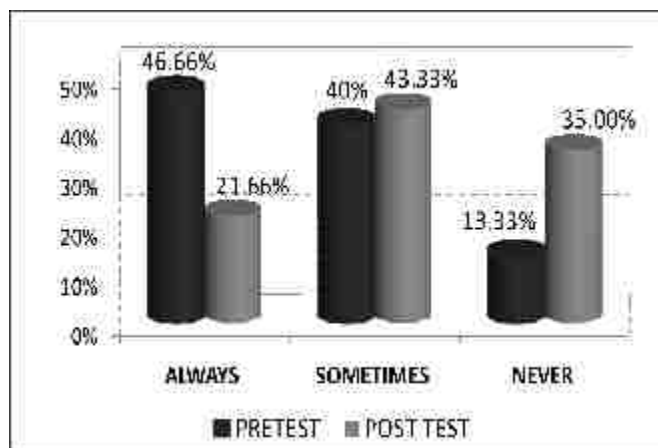


Figure 1: Cylindrical diagram showing distribution of diarrhea

It was found that 28(46.66%) samples always had diarrhea at the time of pre test assessment, later the number was reduced to 13(21.66%) during post test.

B) Constipation

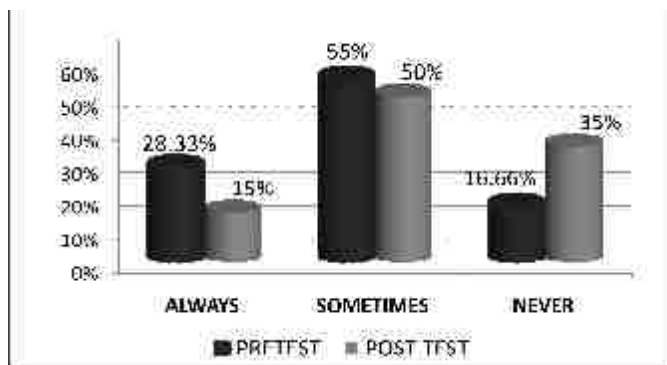


Figure 2: Cylindrical diagram showing distribution of constipation

The figure shows that in pre test 17(28.33%) always had constipation but at the time of post test the number decreased to 9(15.00%) who always had constipation.

c) Nausea and Vomiting

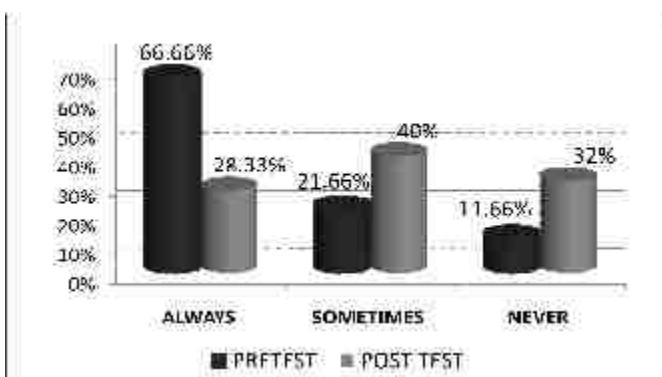


Figure 3: Cylindrical diagram showing distribution of nausea and vomiting

Data in Fig.3 depicts that at the time of pretest 40(66.66%) were always having nausea and vomiting. The number of samples reduced to 17(28.33%) at the time of post test who always had this complaint.

d) Sore Throat

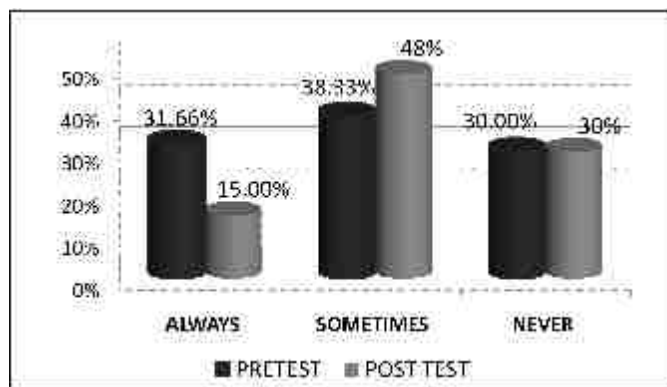


Figure 4: Cylindrical diagram showing distribution of sore throat

It was found that during pretest 19 (31.66%) always had sore throat. Later during the time of post test it was evident that only 9(15.00%) had sore throat.

e) Dehydration

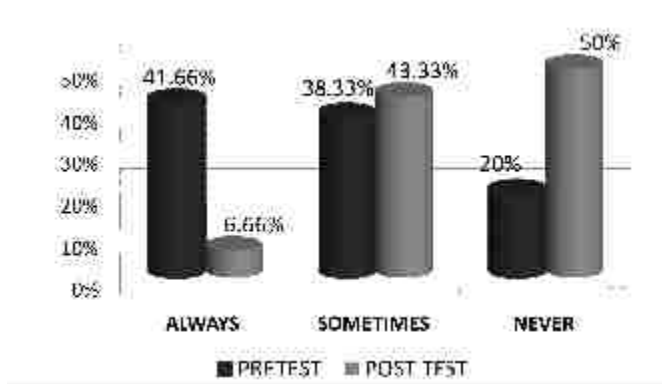


Figure 5: Cylindrical diagram showing distribution of dehydration

During pretest it was assessed that 25 (41.66%) were always having dehydration, whereas during post test 4(6.66%) always had dehydration.

Discussion

Effectiveness of planned teaching on knowledge score.

After administering structured teaching with lesson plan, majority 23 (38.33%) had average knowledge, 10 (16.66%) had good knowledge, whereas 6 (10.00%) scored excellent knowledge scores. The study showed that there is good effect of structured teaching on knowledge of cancer patients regarding nutrition related side effects of chemotherapy and radiation therapy and its management. The 't' value for pretest and post test knowledge score ($t_{59} = 16.25$) was highly significant at the level of $p < 0.001$ level

These values showed that there was marked improvement in knowledge of cancer patients regarding nutrition related sideeffects of chemotherapy and radiation therapy and its management after structured teaching. On the basis of above findings **H1** There is significant difference between pretest and post test knowledge score of cancer patients at the level $P \leq 0.05$ was accepted.

The above findings were supported by the study

conducted by **Julie Thompson, Kathryn Silliman, (2008)**⁹ Impact of early education multimedia intervention in managing nutrition related chemotherapy side effects. The overall result indicated the mean score on four knowledge items, significantly increased ($p < 0.05$). All participants responded that DVD and self instructional module was informative and most ($n=11$) 79% responded it was useful. This short multimedia nutrition education intervention was found primarily to increase knowledge and could form a useful component of counseling services for patients undergoing chemotherapy

Conclusion

Cancer is one of the leading causes of morbidity and mortality worldwide and is expected to increase in coming decades. In patients suffering with cancer side effects of treatment modality increases their suffering. It not only interferes with the patient's treatment but also with his daily activities and quality of life. Side-effects of chemotherapy and radiation therapy are increasing at an alarming rate. Thus, there is a need for extensive research in this area so that strategies can be developed for educating the nurses to include assessment of side effects of chemotherapy and radiation therapy to improve the quality of life of every cancer patient so that they may lead a better quality of life.

The basic training of nurses in India includes Oncology Nursing, which should be further updated with the assessment of quality of life during treatment sessions of cancer patients as part of the course, in medical surgical nursing. Theoretically, the focus should be on assessing the side effects of chemotherapy and radiation therapy. Nurse's role is to participate in early detection and diagnosis of these side effects in order to improve the quality of life of cancer patients.

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Ethical Clearance: this study was conducted after getting approval from the Institutional ethics Committee and after obtaining written consent from all subjects.

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Knowledge Regarding Life Style Diseases and their Prevention among Undergraduate Students



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Abstract

Life style disease is a disease that potentially can be prevented by changes in diet, environment and lifestyle, such as heart disease, stroke, obesity and osteoporosis. Therefore, a study was conducted in Women's College Kollam to assess the knowledge regarding life style diseases and its prevention among undergraduate students. A sample of sixty was selected. The knowledge was assessed with the help of structured questionnaire. Results showed that 68% of samples had poor knowledge regarding life style diseases and the demographic variables like age, religion, type of family, education status of father, occupation of father, occupation of mother, source of knowledge and the habit of taking food outside had significant association with the knowledge.

Key Words: Knowledge, life style diseases and its prevention, undergraduate students

Background

Life style diseases are public health problem concerned globally. These are non communicable diseases which include hypertension, diabetes mellitus, hyper lipidaemia and obesity. These diseases share similar modifiable risk factors like tobacco, smoking, alcohol consumption, faulty dietary habits and physical inactivity (**Mary Mathew, 2012**)¹.

A cross sectional study was conducted on awareness of risk factors on life style among rural adolescents to assess their risk factors of Non Communicable Diseases (NCDs) and to find out their life style behaviors. Total 340 adolescents in the age group of 11-16 were assessed. The study revealed that only 0.3% had good level of knowledge regarding life style risk factors, daily consumption of fast food is very low (6.8%), majority (93.2%) play games daily. About 68.5% students consume fruits and vegetables daily. Majority (62.6%) had no idea about prevention of NCDs and only 37.4%

students felt NCDs are preventable. 34.4% students had misconceptions that the NCDs were communicable in nature. Thus, the study concluded that the awareness of risk factor of NCDs and knowledge regarding prevention of NCDs are low among rural school children which recommend the strategic delivery of health recommendation is essential to target risk behaviors among adolescents. (**Anju Adea et. Al, 2012**)².

A study to assess the awareness of school children regarding the risk factors of NCDs among 375 school children was undertaken. The socio economic status of the children was mainly in the upper lower or lower class. It was found that awareness among the school children of NCDs is not satisfactory. The areas of least knowledge were found regard to passive smoking, early age at marriage and re use of cooking oil as risk factors for NCD. The study recommends the need for curriculum based health education regarding the prevention aspects and the motivation of the children to incorporate healthy life style practices into their daily lives. (**Manu Raj, 2012**)³.

Need of the Study & Literature Review:

A cross sectional study on cumulative prevalence of risk factors for atherosclerotic cardio vascular disorders in Iranian adolescents was done. 1000 girls and 1000 boys aged 11-18 years were studied. The researcher observed that prevalence of physical inactivity, dylipidemia, smoking, high blood pressure and obesity were 66.6%, 23.7%, 8.7%, 5.7% and 2.2% respectively. Of the subjects studied 71.1% had at least one and 27.6% had atleast two cardio vascular (CV) disease risk factors. **(Roya Kelishadi et.al, 2005)⁴**.

A study to assess life style associated risk factors in adolescents to evaluate the prevalence of life style associated risk factors for NCDs for apparently in 510 healthy school children between 12-18 years of age in urban area Delhi. The study observed that inappropriate dietary practices (fast food consumption and low food consumption), low physical activity, higher level of experimentation of alcohol and to lesser extend smoking, high prevalence of obesity and hypertension in the school children. The study also showed an association between BMI, systolic diastolic BP among children and other life style factors. The study recommends that interventions are required to reduce the morbidity of NCDs. **(Akhil Kant Sing et.al , 2006)⁵**.

The non-communicable diseases due to the present life style practices are preventable. These life style diseases are the important public health problem in India. Kerala ranks first in these life style diseases like diabetes, heart disease, hypertension and obesity. The intervention aiming to change lifestyle behavior is by educating individuals for modifying life style behaviors, where in assessment of their preexisting knowledge play a major role. Thus the study was conducted to assess the knowledge of young adults in the college regarding life style diseases.

Problem Statement

A study to Assess the knowledge regarding Life Style Diseases and its prevention among Undergraduate students.

Objectives

- Assess knowledge regarding life style diseases and its prevention.
- Associate knowledge regarding life style disease and its preventives with selected demographic variables
- Prepare and distribute an information Booklet on lifestyle diseases and its prevention.

Hypothesis

H₁, There is significant association of knowledge regarding lifestyle diseases and its prevention with selected demographic variables.

Methodology

Research approach: Quantitative research approach & descriptive design was used for the study .

Setting: The study was conducted at SN Women's College ,Kollam

Sample & Sampling Technique: Sample of study included undergraduate students of SN Women's College. A total of 60 students were taken for the study by convenient sampling for a period of two weeks.

Tools: The tool consists of two parts.

Part I: It includes the questionnaire to assess the demographic variables like age, religion, living locality, Marital status, Educational status of the father, Educational status of the mother, occupation of father, occupation of the mother source of knowledge, attendance of seminars, habit of food from outside and family history of lifestyle diseases.

Part II: Questionnaire included items related to the knowledge & prevention of life style diseases regarding diabetes mellitus, hypertension, coronary artery disease and cancer. It consisted of 47 questions carried a maximum of 4 marks and total score was 188.

Scoring :

The total score was converted into percentage and was

interpreted as follows.

>80%	-	Good knowledge
>50-79%	-	Average knowledge
<50%	-	Poor knowledge

Validity & Reliability: Content validity of structured questionnaire was obtained from experts. The reliability was assessed by test retest method and the tool was found reliable with the score of 0.8.

Pilot study: The study was conducted among 10 undergraduates of S.N.Women's College, Kollam and few modification were made in the questionnaire.

Data collection procedure: The investigator selected sixty undergraduate students by non-probability convenient sampling technique, introduced and maintained good rapport and explained the purpose of the study, with the informed consent the data was collected by structured questionnaire among the 60 under graduate students. After the study, an information booklet on lifestyle diseases and its prevention was given to the students who had undergone the study.

Findings

Section I: Socio Demographic Variables

Study revealed that majority of students 46 (77%) were between the age group of 17-19 years and 13 (21%) were in the age 20-22 years and only 1 (2%) was in the age group of 23-25 years. In terms of religion 44 (73%) were Hindu, 6 (10%) were Christian and 10 (17%) were Muslims. 27 (45%) samples belonged to urban community and 33 (55%) were from Rural communities. Most of the subjects i.e. 55 (92%) belonged to Nuclear family and only 3 (8%) belonged to joint family. All students (100%) were unmarried.

In this study 65% of father had high school education, 18% were L.P. School, 12% had college education, 3% were professionals and 2% were illiterate.

70% mothers had high school education, 10% completed college education and only a few i.e. 2% were illiterate and

professionals respectively and only 10% completed L.P School. Regarding father's occupation 60% were labourers, 25% were working in private sector, 3% fathers were working in Government sector and as professionals and 9% were unemployed. 68% of mothers were unemployed, 22% were labourers, 3% were working in private sector, 5% in government sector and only 2% were working as professionals.

Study revealed that 60% of students obtained source of knowledge from newspaper, 25% from television and radio, 10% from internet, 3% from books and magazines; only 2% received information by health worker. 38% of students acquired knowledge through seminars. With regard to food habits only 24% of sample had food from outside, 18% had outside food sometimes, 5% had often outside food, 53% of them were not taking food from outside. Majority of samples had no family history of life style diseases, 11% of them had family history of life style diseases.

Section II: Assessment of Knowledge score of undergraduate students

Knowledge score

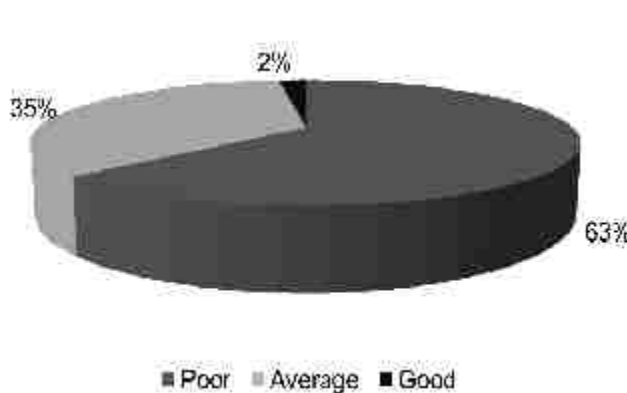


Fig 1 : Frequency distribution of sample according to knowledge score level

Fig no. 1 shows that, with regard to knowledge score 63% of samples had poor knowledge regarding life style diseases; 35% had average knowledge and only 2% had good knowledge.

Section III: Association of demographic variables with knowledge score

Table No. 2: Chi square value of selected demographic variables and knowledge score.

N=60

Demographic Variables	Knowledge						
	Poor		Average		Good		
	N	%	N	%	N	%	
Age in years							$X^2=33.6$ $p<0.05$ S
17-19	29	63	17	37	0	0	
20-22	9	69.2	3	23.07	1	7.73	
23-25	0						
>25	0						
Religion							$X^2=44.67$ $p<0.05$ S
Hindu	28	64	15	34	1	2	
Christian	4	67	2	33	0	0	
Muslim	6	60	4	40	0	0	
Area of Residence							$X^2=1.725$ $p<0.05$ S
Urban	15	56	11	40	1	4	
Rural	22	67	11	33	0	0	
Type of Family							$X^2=68.11$ $p<0.05$ S
Nuclear	35	64	20	36	0	0	
Joint	3	60	1	20	1	20	
Education of father							$X^2=875.3$ $p<0.05$ S
Illiterate	1	100	0	0	0	0	
L.P.School	9	82	2	18	0	0	
High School	24	62	15	38	0	0	
Degree	3	43	4	57	0	0	
Professered	1	50	0	0	1	50	
Education of Mother							$X^2=9.08$ $p<0.05$
Illiterate	0	0	1	100	0	0	
LP School	5	50	5	50	0	0	
High School	31	74	11	26	0	0	
Degree	2	23	4	67	0	0	
Professional	0	0	0	0	0	1	
Occupation of father							$X^2=66.89$ $p<0.05$ S
Unemployment	4	80	0	0	1	20	
Labour	24	67	12	33	0	0	
Govt. Sector	2	100	0	0	0	0	
Private Sector	7	47	8	53	0	0	
Professional	1	50	0	0	1	50	
Occupation of Mother							$X^2=66.89$ $p<0.05$ S
Unemployment	26	63	15	37	0	0	
Labour	10	77	3	23	0	0	
Govt. Sector	2	67	1	33	0	0	
Private Sector	0	0	2	100	0	0	
Professional	0	0	0	0	1	100	
Source of information							$X^2=5.06$ $p>0.05$
News paper	23	60.5	13	3	0	0	
T.V, Radio	9	23.6	5	1	1	0	
Internet	4	10.5	2	1	0	0	
Books	1	2.63	1	2.6	0	0	
Magazine	1	2.6	0	0	0	0	
Health worker Attended seminar							$X^2=0.64$ $p>0.05$
Yes	15	5	8	35	0	0	
No	23	62	13	35	1	3	
Habit of taking food from outside							$X^2=25.20$ $p<0.05$ S
Yes	7	50	7	50	0	0	
No	23	72	9	28	0	0	
Family History							$X^2=0.29$ $p>0.05$
Yes	5	71	2	29	0	0	
No	33	62	19	36	1	2	

Table no. 1 shows that the demographic variable like age,

religion, type of family, educational status of father, occupation of father, Occupation of mother and habit of taking food from outside had significant association with knowledge regarding life style diseases and its prevention. Therefore, research hypothesis H_1 was accepted.

Discussion

Assessment of Knowledge of undergraduate students:

The present study showed that 63% of the students had poor knowledge regarding life style diseases, 35% had average knowledge and only 2% had good knowledge.

Similarly, in a study conducted in school of Delhi among children revealed that cardio vascular risk factors are highly prevalent among school children (12-16 years) lack adequate knowledge regarding cardiovascular risk factors (physical activity, diet, smoking). Only 25.4% had adequate knowledge thus, school based interventions are required for cardiovascular risk reduction in childhood (**Grace Mary George et. Al, 2014**)⁶.

Similar study was conducted to assess the knowledge regarding risk factors of hypertension among entry year students of a medical university. Study identified gaps in the knowledge regarding both modifiable and non modifiable risk factors of hypertension among students and it is crucial to device sound prevention and control programme to improve knowledge, attitude and life style practices early in life (**Shaikh RB et.al, 2011**)⁷.

A descriptive survey was conducted among 100 adult patients 18-15 years age. The study revealed the mean overall knowledge of samples regarding prevention of selected life style diseases was 52.30 and S.D was 7.059. Only 19% had good knowledge regarding diet in preventing selected life style diseases (**Mary Mathews, 2012**)².

Association of demographic variables with knowledge score:

Demographic variables like age, religion, type of family, education status of father, occupation of father, occupation of mother and habit of taking food from outside

had significant association with knowledge regarding life style diseases and its prevention. Thus, the research hypotheses, H_1 , i.e. there is significant association of demographic variables with knowledge regarding life style diseases and its prevention is accepted for the above mentioned demographic variables.

Conclusion

The Who has identified India as one of the nations that is going to have most of the life style disorders is near future. These diseases are affecting younger population from 40+ to 30+ and even younger.

The study revealed that the knowledge regarding life style diseases and its prevention among under graduate students were poor. Thus, stressing the importance of creating awareness through health education of these younger populations for the prevention of life style diseases.

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Conflict of interest: Nil

Financial resource: Self

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Effectiveness of Structured Teaching Program on Knowledge regarding Swine Flu among Higher Secondary School Children



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Abstract

Swine flu has become a massive havoc among the common people of India and has created fear across the various strata of the society. The distribution of proper information to the public on the status of H1N1 virus is important to achieve a broad awareness of the potential risk and optimal code of behavior among them. Therefore, a study was conducted to assess the effectiveness of structured teaching program on knowledge regarding swine flu among higher secondary school children in selected schools at Makrana. Population was higher secondary school children of selected schools at Makrana. A pre experimental study was done in the month of March 2015 during an epidemic situation among 120 higher secondary school children with structured knowledge questionnaire and structured teaching programme was administered. Data was analyzed using descriptive and inferential statistics. Findings revealed that after administering the STP majority of candidates (88)73.33% had excellent knowledge on swine flu. The computed 'z' value ($z_{119}=20$) was higher than the table value ($z_{119}=1.98$) at 0.05 level of significance that showed a significant difference suggesting that the STP was effective. There was no significant association found between the knowledge score of higher secondary school children on swine flu and demographic variable except subject of study at $p < 0.05$ level of significance.

Key words: Effectiveness, Structured Teaching programme, Knowledge, Swine flu.

Background

According to World health organization, globally influenza is responsible for 250,000 to 500,000 deaths annually and in India a sharp increase has been reported in the spread of H1N1 influenza. (MOH,2010)¹ Reuters reported that India experienced a similar H1N1 pandemic in 2009 and the pandemic this year has been India's worst resurgence since more than 2,700 died from May 2009 to December 2010.(Shuansim, 2015)²

Swine flu has tightened its grip over India, with the death toll climbed to 2,172 in the country while the number of persons affected by the H1N1 virus reached the 35,000-mark.(dnaindia, Feb.2015)³

In Rajasthan, the toll reached to 430 while the number of

affected persons climbed to 6,677. Twelve people have died of **swine flu** in Delhi, which has seen 4,261 cases of the deadly disease.(dnaindia, April 2015)⁴

New York state health department reported that reducing the spread of swine flu requires that everyone should take personal responsibility to embrace the adoption of effective mitigation measures and to work in collaboration at the community level to implement them. Dr. Narendra Gupta, a Chittorgarh based physician and convener of Jan Swasthya Abhiyan Rajasthan reported that the high number of deaths in Rajasthan was due to lack of awareness among people.

A cross sectional study was conducted in various shopping malls of Riyadh and Jeddah to identify awareness, attitude, and practice related to influenza A

(H1N1) among Saudi public. 1,548 adult subjects were interviewed using a questionnaire. The study revealed that public has low level knowledge about the disease **(Hannan Balkhy et al, 2010)⁵**.

A cross sectional survey was conducted in Sydney by approaching in shopping and pedestrian malls in seven areas between 2nd May-29th May 2009 to assess community attitude toward swine flu. 620 members were interviewed. The study revealed that 590 were aware of swine flu, but 44% felt they did not have enough information about the situation **(Holly Seale et al 2009)⁶**.

Need of the study & Literature Review

A cross sectional study was conducted by **(Sumeet Singh et al)⁷** in the first half of April 2013 immediately after an epidemic situation to assess the awareness, perception and myths regarding swine flu among educated common public in Patiala. 400 educated people were selected and assessed by a predefined questionnaire. The study revealed comparatively lower level of awareness in almost 88% as compared to other studies in India regarding swine flu. Some key elements such as route of spread and method of prevention were problem areas.

Choudhary et al⁸ in 2010 conducted a cross sectional study to find out the awareness, perception and myths of school going children of class IXth to XIIth towards swine flu at Bareilly Uttar Pradesh. 200 students from randomly selected senior secondary school were selected and administered structured questionnaire. The results revealed that almost all the students had heard about swine flu, but in practice only three-fourth of the students were taking precautions to protect themselves from swine flu.

A quasi experimental study was conducted to assess the effectiveness of planned teaching program on knowledge of swine flu among people of selected slums in some areas of Pimpri Chinchwad. 60 samples were selected and administered structured questionnaire on knowledge regarding swine flu. This study revealed that the planned teaching was effective in increasing the knowledge of people regarding swine flu. **(Kavita Kelkar et al, 2011)⁹**.

A cross-sectional questionnaire survey was conducted in Udaipur, Rajasthan from 23 July to 27 August 2009 to assess public knowledge, attitude and behavioral changes during the Influenza A (H1N1) outbreak in 2009. 791 individuals were selected and administered structured questionnaire. The study revealed that in spite of having acceptable knowledge and attitude, behavioral response to Influenza-A (H1N1) was poor. **(Kamate et al, 2009)¹⁰**.

Bholanath¹¹ conducted a cross sectional study among senior secondary school students of class XI and XII of leading private schools in Kanpur to assess the knowledge, attitude, and practice regarding swine flu. 483 students were selected and administered questionnaire on swine flu. The study revealed that 43% know that it was a viral disease. 62% knew about the mode of transmission, 69% of students knew that fever was a major symptom. Less commonly occurring symptoms such as diarrhea and vomiting were known to fewer students. The study recommends that knowledge regarding swine flu needs to be enhanced among senior secondary school students through appropriate awareness programme.

A study was conducted to spread awareness in people of industrial town Vapi regarding swine flu. 100 participants were selected and administered well prepared questionnaire for assessing the awareness about the disease. The study revealed that low percentage of people had clear idea about the causes, contingency and treatment or how to protect from the virus. And study suggests that it can be improved by informative based awareness programme which will be helpful in developing better health care system. **(Darshan Patel, 2015)¹³**.

A cross sectional study was conducted among out-patient department of a tertiary and primary health care facilities in Pondicherry to assess the knowledge about swine flu and factors determining it. 267 participants were selected and interviewed. The study revealed that there was low knowledge level regarding swine flu among study subjects. There were needs for future research for evaluating the impact of need based health message on

health seeking behavior among the people (**Preetham**)¹⁴.

One of the main reasons for the fast spread of the disease across nations was the lack of knowledge about the disease at the individual level. This disease spreads rapidly among the younger generation, especially among school children who are in close contact with each other in classrooms, play ground, library, shared toilets and other gathering places commonly used by the students. As the population of students within the school is significantly high, this disease can affect many students at the same time. During a pandemic, this virus could spread among students more rapidly and could lead to severe outcomes. If an outbreak occurs among school children, there would be loss of productivity, and also an academic delay. There might be a possibility of some human causalities too. If the students become aware of this type of pandemic, they can prepare themselves effectively by taking necessary preventive measures to help reduce the rapid spread of the disease at the school. Thus, this study focuses on assessing knowledge about H1N1 influenza among higher secondary school children and encourages them to take up the various health education programs to increase awareness about the disease.

Prevention is the most appropriate measure to control H1N1 flu pandemic and awareness of H1N1 flu is ranked very high in preventive measures. The sharing of proper information to the public on the status of the H1N1 virus pandemic will be important to achieve awareness of the potential risks and the optimum code of behavior during the pandemic.

Problem statement

A study to assess effectiveness of structured teaching programme on knowledge regarding swine flu among higher secondary school children in selected schools at Makrana, Rajasthan.

Objectives

- To assess knowledge level of higher secondary school children regarding swine flu.
- To evaluate effectiveness of STP on knowledge

regarding swine flu among higher secondary school children.

- To find out the association between the pre test knowledge score of swine flu of higher secondary school children and their demographic variables.

Hypotheses

- **H1:** There will be significant difference between the mean pre- and post-test Knowledge score on swine flu.
- **H2:** There will be significant association between pre-test knowledge scores and selected baseline characteristics like age, religion, sex, type of family, class of study, subject of study, any information earlier obtained.

Methodology

Research approach and design: This study adopted an evaluative approach with one group pretest post test design.

Setting: Class rooms of selected schools namely Raj public school, Anjuman higher secondary school, Government girls higher secondary school, Samrat pritiviraj higher secondary school, Maheshwari higher secondary school.

Population: The study population consisted of the students of selected higher secondary schools at Makrana.

Sample and Sample size: 120 higher secondary school children.

Sampling Technique: Purposive sampling technique was used in the study.

Tools: The tools used in the study were divided into two sections-

Section I: Baseline Characteristics

The first part consisted of seven items related to baseline characteristics (age, religion, sex, type of family, class of study, subject of study, and source of information).

Section II: Structured knowledge questionnaire:

It consisted of thirty items related to knowledge regarding swine flu. Each correct answer had a score of one and zero for wrong answers, thus the maximum score was 30. The tool was prepared in Hindi and English to facilitate better comprehension for higher secondary school students from selected schools.

Validity: Validity of the tool was established by 10 nursing experts.

Reliability: Reliability of the tool was established using split half method where "r" value of 0.72 indicated high reliability.

Data collection procedure: The investigator obtained written permission from the principal of the selected schools at Makrana. Also, consent was taken from the higher secondary school children before data collection.

The data collection period extended from 01.03.2015 to 31.03.2015 as per the convenience of the school authority. The purpose of the study was explained to them and confidentiality was assured to all the respondents. The higher secondary school children were selected by purposive sampling. Pre-test was conducted on a total of 120 respondents before administration of STP and post-test was conducted on the fifth day. Respondents cooperated well with the investigator. Data collection process was terminated by distributing pamphlets on swine flu and thanking the respondents for their cooperation and patience.

Findings

Section I: Description of baseline characteristics

Out of 120 samples, majority of the samples 42.5% were of 17 years, 60% of students belonged to Hindu religion, 65% of the samples were males and 35% females. 63.33% belonged to joint family and rest 36.66% to nuclear family. 100% of students were studying in XI class. 40% of students are belonged to arts batch, 30.83% of them to commerce batch and 29.17% were from science batch. 71.67% of subjects had previous knowledge on swine flu and remaining 28.33 didn't have.

Section II: Comparison of knowledge level of higher secondary school children on swine flu based on pre

and post-test knowledge score.

Table 1: Frequency and percentage of the pre and post test knowledge score on swine flu. N=120

Level of Knowledge	Range of score	Pretest		Post test	
		F	%	F	%
Very poor	0-6	01	0.83	00	00
Poor	7-12	08	6.67	00	00
Average	13-18	43	35.83	01	0.83
Good	19-24	68	56.67	31	25.83
Excellent	25-30	00	00	88	73.33
TOTAL		120	100	120	100

Findings in Table No.1 shows that in pre-test majority 56.67% of the respondents had good knowledge, 35.83% had average knowledge, 6.67% had poor knowledge, 0.83% had very poor knowledge and none of them were in the excellent category whereas in the post-test 73.33% of the respondents had excellent knowledge, 25.83% had good knowledge, 0.83% had average knowledge and none of the respondents had poor or very poor knowledge.

Section III: Analysis of pre test and Post test knowledge level

Table No. 2: Mean, Mean%, SD of Pre and post test Knowledge Scores on swine flu N=120

	Total Score	Max obtained	Mean	Mean %	S.D	Level of knowledge
Pre test	30	24	18.4	61.33	3.6	Good
Post test	30	30	25.97	86.57	2.44	Excellent

Findings in Table No.2 reveal that in Pretest maximum obtained score was 24 with mean score and mean percentage as 18.4 and 61.33 respectively and SD as 3.6. Whereas in post test maximum obtained score was 30 with Mean score of 25.97, mean percentage was 86.57 and standard deviation was 2.44.

Section IV: Assessment of effectiveness of Structured Teaching Programme.

To evaluate the effectiveness of the STP a null hypothesis was formulated i.e.H1 There will be no significant difference between mean pre- and post-test knowledge scores on swine flu. The hypothesis was tested using paired 'Z' test. The value of 'Z' was calculated to analyze the difference between mean pre and post-test knowledge scores.

Table No. V: Mean, mean difference, standard deviation, and 'Z' value of pre-test and post-test knowledge score of higher secondary school children on swine flu N=120

Sample	Mean knowledge Score		Mean diff.	SD		Z & p value
	Pre test	Post test		Pre test	Post test	
Higher sec. school children	18.39	25.99	7.6	3.6	2.44	20 (0.05) S

***Significant at $p \leq 0.05$**

The data in Table no. 5 shows that the mean post-test knowledge score (25.99) was higher than the mean pre-test knowledge score (18.39) with a mean difference of 7.6.

The computerized 'z' value ($z_{119}=20$) was higher than the table value ($Z_{119}=1.98$) at $p \leq 0.05$ level of significance. Hence, the research hypothesis was accepted and it was inferred that the mean difference between pre- and post-test knowledge score was a true difference and not by chance. This indicates that the STP was effective in increasing the knowledge level of higher secondary school children on swine flu.

Section VI: Association between pre-test knowledge score and selected variables:

There was no significant association found between the pre-test knowledge score of higher secondary children on swine flu and selected demographic variables at $p \leq 0.05$ level of significance such as age, religion, sex, type of family, class of study, previous information on swine flu except subject of study at $p < 0.05$ level of significance. Therefore, H2 was accepted for association between subjects and the pre-test knowledge score.

Discussion

Effectiveness of structured teaching program on swine flu

In the present study Paired 'Z' test was computed where the mean difference between pre-test and post-test knowledge score of higher secondary school children on swine flu was found to be statistically significant ($z_{119}=21.71$, $P < 0.05$). Hence the null hypothesis was rejected and research hypothesis was accepted. This result clearly showed that structured teaching programme was useful in improving the knowledge of higher secondary school children on swine flu. The gain in knowledge was the effect of structured teaching programme and the result was highly significant at $p \leq 0.05$ level.

These findings were consistent to the findings drawn by **Dhital AD, Badhu BP, Paudel RK, Uprety DK (2005)¹⁴** who conducted an experimental study with pretest - posttest control group design to find out the effectiveness of structured teaching program in improving knowledge of 200 adolescent school students on reproductive health in four selected schools with similar settings in Dharan town of Nepal. Experimental and control group comprised of two subgroups of 50 boys and 50 girls. The mean (+/-SD) pretest score of the experimental group on knowledge of reproductive health was 39.83 (+/- 16.89) and of the control group was 39.47(+/- 0.08). The same of experimental group after administration of the structured teaching program (84.60+/-10.60) and of the control group with conventional teaching method (43.93+/-10.08) was statistically significant ($p < 0.001$) which showed that the structured teaching program was effective in improving knowledge of the adolescents on reproductive health.

Similar findings were found in the study of **Sowmya M.A & Philomena Fernandes (2013)¹⁵** to assess the effectiveness of structured teaching programme on knowledge of polycystic ovarian syndrome among 80 adolescent girls. The mean pretest score was 1.31 and mean post test score was 3.62 and t value obtained was 65.205 which showed statistical significant at $p \leq 0.05$. The study finding showed that the structured teaching program was effective in improving knowledge of adolescent girls regarding polycystic ovarian syndrome.

Conclusion

On accumulation of the findings in the above mentioned studies and the present study it was evident that structured teaching programme on swine flu can bring great change in the knowledge level which helps to prevent swine flu infection and thereby improve health status of the society. Instructional materials can be developed in order to increase the awareness among people on swine flu. The STP tested in the study was

found to be effective in improving the knowledge of higher secondary school children. Nurses can utilize the STP in the day to day health education programmes through In-service education which can be provided to the nursing personnel at various levels to make them aware on swine flu, enabling them to provide health education to the nurses and society on swine flu and its prevention. The nursing administrators should implement the outreach programmes to make the public aware about swine flu.

Competing Interest: The author had no conflict of interest.

Source of funding/ Financial Resource: The author did not receive any financial support from any sources.

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Ethical Clearance: This study was conducted after getting approval from the Institutional Head and after obtaining written consent from all subjects.

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Effect of Information Booklet on Knowledge of Adolescent Group Regarding Common Genetic Problems



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Abstract

Nearly all human diseases are influenced by genes, because individuals have different variants of genes, it follows that the risk of developing various diseases will also differ among individuals. Awareness about genetic disorder is important because in Indian population chromosomal disorders are commonly seen. In order to increase awareness about common genetic problems, a study was undertaken to develop an information booklet for the adolescents regarding common genetic problem. A Quasi experimental research was done. One group Pre test post test design study was conducted at Government junior college and private college of city, 300 late adolescents were selected by non probability purposive sampling. Semi structured questionnaires was used in the study. Ethical clearance and administrative permission was taken. Consent was obtained prior to data collection from samples. Data were analyzed using SPSSvs.18 in accordance with objectives laid down. It was found that after the introduction of self information booklet there was a significant ($p < 0.05$) increase in the knowledge of the adolescents irrespective of their stream, parental education, monthly income and religion. There was significant ($p < 0.05$) association between the level of knowledge score and age as well as with gender. Females had more knowledge than male the adolescents. After administrating information booklet there was significant increase in knowledge score. This indicates that the use of information booklet is a good method of teaching.

Key Words: Effectiveness, Information booklet, Knowledge, Adolescent group, Common genetic problems.

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Background

Birth of an infant is a much awaited. It is biological wealth that is considered an important event, full of excitement and promise. If the infant turns out to have an abnormality, all hopes are thrashed to the ground and a feeling of disappointment and despair sets in. Thus, there is growing realization of the importance of ensuring birth of a healthy baby. India is a country remarkable for its diversity; biological and human. The biological diversity owes itself to the country's position at the tri junction of the African the northern Eurasian and the oriental realm; its great variety of environmental regimes, and its relative stability of biological production. It has biological wealth

that has attracted to the subcontinent many streams of people at the different times, from different directions; bringing together a great diversity of human genes and human cultures. Genetically and culturally India is perhaps the most diverse country on the face of the earth. Studies have shown that there is a high prevalence of genetic disorders which commonly occur in the Indian population, most are chromosomal disorders. (ICMR, 2000-2002)¹

Need of the study & Literature Review

There is a high prevalence of generic disorders in India. As estimated 495,000 infants with congenital

malformations, 390,000 with G6PD deficiency, 21,400 with Down syndrome, 9,000 with B-thalassaemia, 5,200 with sickle cell disease, and 9,760 with amino acid disorders are born each year. The prevalence of late-onset multi-factorial disorders (including coronary artery disease, hypertension and psychiatric disorders) is also large. Due to inadequate diagnostic, management and rehabilitation facilities, the burden of these disorders is greater than in western countries. **(India, Central statistical Organization)²**

A study was done on how to effectively communicate genetic risk information, using a combination of observation and self report data, this study examined potential threats to effective risk communication in 17 families whose infants received a positive newborn screening test for cystic fibrosis. Five specific problems are identified (a) co presence of interactions (b) Disturbance in communication (c) Variations in parents' initial knowledge (d) Rigidity in counselor's behavioural scripts (e) Emotional interference with information. **(Bamshad M, Wooding S, et al., 2004)³**

Considering the high prevalence of genetic disorders researcher decided to assess the effectiveness of an Information booklet on knowledge of adolescent group regarding common genetic problems. Information booklet mainly focuses on causes, early identification different modalities of treatment and references for treatment.

Problem Statement

A study to assess the effectiveness of information booklet on knowledge of adolescent group regarding common genetic problem in selected colleges of Pune city.

Objectives

- To assess the knowledge of adolescent group regarding common genetic problems before providing information booklet.
- To assess the knowledge of adolescent group regarding common genetic problems after providing information booklet.
- To compare the knowledge score before and after providing information booklet.

- To associate the knowledge of adolescent group regarding common genetic problems with selected demographic variables.

Null Hypothesis

H₀-There is no significant difference between levels of knowledge among adolescence regarding common genetic problems before and after providing the information booklet.

Methodology

Research approach - Quantitative research approach was used for this study.

Research design The research design adopted for this was quasi experimental research design, Single Pre test post test design.

Setting -Government junior college and private college of Pune city.

Sample- 300 (150 Male + 150female adolescents) from all streams were included in the study.

Sampling technique- Purposive sampling technique was used to select the sample

Tools:

Section I: Deals with demographic variables, included personal data of adolescences and basic information of parents.

Section II: It consisted of 20 semi structured questions related to knowledge about genetic disorder. This included causes, classification, treatment, preventive measures, premarital counseling, prenatal diagnosis and genetic counseling.

Scoring:

0-8 - poor knowledge,

9-16 - good knowledge,

17-20 - excellent knowledge.

Validity and Reliability -Content Validity of research tool and information booklet done by 21 experts from nursing profession and Genetic counselors. Reliability done by Rational equivalence method. Reliability coefficient 'r' of

the tool was found 0.92 hence, the tool was found to be reliable.

Data collection procedure: Researcher obtained the permission from Junior colleges of city. On the first day after getting the informed written consent from subjects pre-test knowledge assessment was done by using a structured questionnaire. Data were collected in a group class- wise under supervision to avoid contamination. After the pre-test, each subject was provided with a copy of self information booklet. They were instructed to read the information booklet carefully at their convenient time and they were required to give post test after 7 days. Re-administering the knowledge assessment questionnaire to each subject on the 7th day of pre test was carried out. The collected data were analyzed using descriptive and inferential statistics.

Findings

Section I: Assessment of knowledge of adolescence group regarding common genetic problems before providing information booklet.



Figure no 1: Knowledge of adolescence group regarding common genetic problems before providing information booklet.

Cone diagram shows that maximum number of adolescence i.e. 141 scored poor knowledge regarding common genetic disorders and only 7 students showed excellent knowledge regarding common genetic disorders.

Section II- Assessment of the knowledge of adolescence group regarding common genetic

problems after providing information booklet.

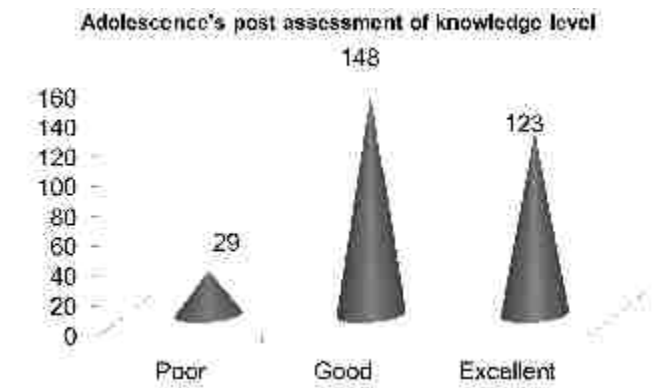


Figure no. 2 Knowledge of adolescence group regarding common genetic problems after providing information booklet

Cone diagram shows maximum 148 adolescence scored Good knowledge regarding common genetic disorders and 123 students scored excellent knowledge regarding common genetic disorders after providing the information booklet.

Section III- Comparison of knowledge score before and after providing information booklet

Table no 1- Mean, S.D. and Z value of knowledge score before and after providing information booklet

N=300

Phase	mean	S.D	Z cal	Z table	p value
Pre test	8.35	5.593523	16.032	2.36	0.00000
Post test	14.56	3.6983201			

Table No. 1 shows that in the pre test phase adolescence group's mean score of knowledge regarding common genetic problem was 8.35 whereas, in the post test it increased up to 14.56. Calculated Z value 16.03 is more than Z table value i.e. 2.36 at p value less than 0.05 hence, it indicates that knowledge level increased after administering information booklet. These findings indicated that the Information Booklet was effective in increasing the knowledge of the samples regarding common genetic disorders. Thus, null hypothesis is rejected.

Section IV Association of the knowledge of adolescence group regarding common genetic problem with selected demographic variables

Table no 2 Chi square values between pre assessment of knowledge score and selected demographic variables N=300

Demographic Variables	Pre test knowledge score			Chi square	p value	Interpretation
	Poor	Good	Excellent			
Age in years						
18	39	41	3	16.27	0.0034	S
19	60	63	2			
20	42	48	2			
Sex						
Male	74	85	3	12.24	0.0021	S
Female	60	70	70			
Stream						
Arts	52	48	2	3.81	0.18	NS
Commerce	41	56	2			
Science	18	48	3			
Mothers Edu.						
Primary	2	0	0	3.84	0.39	NS
Secondary	33	36	3			
Higher Sec.	65	60	3			
Graduate	24	30	0			
Post Graduate	17	26	1			
Fathers Edu.						
Primary	0	0	0	2.17	0.13	NS
Secondary	14	13	1			
Higher Sec.	85	81	4			
Graduate	29	36	2			
Post Graduate	13	22	0			

S - Significant Association, NS - No Significant Association

Table no. 2 reveals that there is significant association of age and gender of adolescents with knowledge level

about common genetic problems. Whereas, no significant association was found between stream of education of adolescents, mothers and fathers education with knowledge level of adolescence.

Discussion

Comparison of knowledge score before and after providing information booklet

Study showed that maximum 148 adolescents scored Good knowledge regarding common genetic disorders and 123 students' scored excellent knowledge regarding common genetic disorders after providing the information booklet.

In the post test phase majority of the adolescence group, 48.7 % gained excellent knowledge regarding common genetic disorders. This indicates that information booklet was very effective to increase the knowledge level regarding common genetic disorders.

In the pre test phase adolescence groups mean score of knowledge regarding common genetic problem is 8.35 whereas in the post test, it increased up to 14.56. Z calculated value 16.03 and Z table value is 2.36, p value less than 0.05 hence it indicates that knowledge level increased after administering information booklet. These findings indicate that the Information Booklet was effective in increasing the knowledge of the samples regarding common genetic disorders. Therefore, H_0 i.e. there is no significant difference between levels of knowledge among adolescents regarding common genetic problems before and after providing the information booklet is rejected.

Similarly, the study was done by **J.W.Kawaski, 2011⁴** to assess the knowledge and impression regarding concept of mutation among Japanese University students. The result showed that the health care professionals should create an awareness regarding concept of mutation and knowledge.

Conclusion

Educating adolescent groups especially for prevention and management of common genetic disorder by the use of a booklet has shown a significant effect in improving

their knowledge. Thus, it helps for birth of healthy child and will lessen the problems faced by the adolescents to select the life partner by increasing their awareness about premarital and genetic disorders. The nurse may encounter many situations a few of them are premarital counseling, genetic counseling, prenatal diagnosis. Genetic disorder can also be detected in the community. She can carry out adolescent group and community education in the best possible ways one of them being use of this information booklet.

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Assessment of the Maternal Factors Associated with Birth Weight of Newborn



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Abstract

Birth weight is a major factor in determining child survival, future physical growth, mental development; it is also sensitive to changes in the physical and socio-demographic status of the mother. Therefore, an exploratory study was conducted to assess maternal factors associated with Birth Weight of newborn in selected Hospital, Indore. A total of 50 antenatal mothers were selected through convenient sampling technique. An interview schedule was conducted using structured questionnaire to collect the data. Content validity of the tools was determined by experts. Both descriptive and inferential statistics were used for data analysis. Mothers were interviewed using a structured questionnaire to identify the demographic profile, maternal factors (General Health Status, Obstetric History, Pregnancy Associated Ailments and Nutritional Intake) affecting the birth weight of newborns. The finding of the study revealed a significant association between monthly income ($\chi^2 = 10.16$) and maternal factors like general health status (Hemoglobin level $\chi^2 = 6.7$, weight gain during pregnancy $\chi^2 = 19.10$ and total no. of ANC visits $\chi^2 = 9.52$) and pregnancy associated ailments (Anemia, $\chi^2 = 7.7$) with birth weight of the newborn at $p < 0.05$. No association was found between other demographic profile and maternal factors with birth weight of the newborns. The study concluded that proper nutrition and regular antenatal visits can enhance the factors contributing to the birth weight of the newborn.

Keywords: Mothers, maternal factors, and birth weight.

Background

The incidence of Low Birth Weight (LBW) babies is linked to maternal nutritional status. The quality of the maternal diet is related to level of education and income, and affects the health status of the mother. Moreover, the fear of experiencing a difficult labor and birth prompts some pregnant women to restrict their food intake during the third trimester. There are other cases in which low income and /or demanding physical labor of expectant mothers seem to be significant factor that results in LBW babies. As a rule, LBW might constitute the single most important factor affecting neonatal mortality and morbidity, as evidenced by the fact that LBW babies are 40 times greater contributors to neonatal mortality and morbidity. Even if a LBW baby survives, it is likely to suffer a high

incidence of malnutrition, diarrhea, acute respiratory infection, infectious diseases, Neurological development problems such as cerebral palsy, and physical defects. In addition, LBW also determines the postnatal mental, physical and neurological development of children. (Hardeep Kaur, 2013)¹.

According to UNICEF estimate, almost every third newborn (30%) in India is LBW. Low birth weight is a major public health problem in developing countries including India. The epidemiological observations depicted that infants weighing lesser than 2500g are approximately 20 times more likely to die than heavier babies, closely associated with the fetal and neonatal mortality and morbidity (UNICEF, 2004)².

Need of the Study & Literature Review

The birth weight of an infant is the single most important determinant of its chances of survival, healthy growth and development. By International agreement, low birth weight (LBW) has been defined as a birth weight less than 2.5 kg, measurement being taken preferably within first hour of life. There are two main groups of low birth weight babies - preterm (28 to 37 weeks) and those with fetal growth retardation also called as term- small for gestational age babies (weighing less than 10th percentile at term). Majority of low birth weight babies are small for gestational age. More than half of these low birth weight babies are full term babies in India. (Park K, 2009)³.

In spite of consistent efforts to improve the quality of maternal and child health, more than twenty million low birth weight (LBW) babies are born every year, throughout the world. Half of all perinatal and one third of all infant deaths are directly or indirectly related to LBW. It is generally acknowledged that the etiology of LBW is multifactorial. (JS Deshmukh, et al, 1998)⁴.

Maternal and child health is a very important component of family welfare services which contributes to improved community health status. They are more dependent and vulnerable members of the society. They are at high risk of morbidity and mortality. In children the risks are due to low birth weights as they are having low body resistance. Most of the causes of low birth weight are related to poor health status of pregnant women. So, present study intends to explore the maternal factors associated with birth weight of newborns.

Problem Statement

An exploratory study to assess maternal factors associated with Birth Weight of newborn in selected hospital of Indore in the year 2013-2014.

Objectives

- To determine the maternal factors such as: General health assessment, Obstetric history, Pregnancy associated ailments & Nutritional status.
- To assess the birth weight of newborns.
- To find out the association between selected demographic variables with birth weight of new born.
- To find out association between General Health status and birth weight of newborn.
- To find out association between Obstetric history and

birth weight of newborn.

- To find out association between “Pregnancy associated ailments” and birth weight of newborn.
- To find out association between Nutritional intake of mother and birth weight of newborn.

Hypotheses

H1:-There is significant association between selected socio demographic variables and birth weight of newborn at the level $p \leq 0.05$

H2:-There is significant association between General Health Status and birth weight of newborn at the level $p \leq 0.05$.

H3:-There is significant association between Obstetric History and birth weight of newborns at the level $p \leq .05$

H4:-There is significant association between Pregnancy Associated Ailments and birth weight of newborn at the level $p \leq .05$

H5:-There is significant association between Nutritional Intake and birth weight of newborn at the level $p \leq .05$

Research Methodology

Research Design: Non experimental exploratory research design.

Population: Antenatal Mothers in their ninth month of pregnancy and going to be delivered in the selected hospital of Indore.

Sampling technique: The samples were selected by convenient sampling technique.

Sample size: 50 mothers

Setting: Govind Vallabh Panth District Hospital, Indore.

Tool: The tool for collection of data for the study consisted of three sections.

Section I: Socio demographic Variables

Section II: Structured questionnaire to assess maternal factors associated with birth weight of newborn.

Section III: Outcome of pregnancy

Validity: The developed tool was sent to 6 experts in the field of nursing and their valuable suggestions were incorporated.

Reliability: The tools were tested for reliability on 8 respondents by split half method. The tool was found to be

clear and understandable. The reliability was calculated using Karl Pearson correlation coefficient for structured questionnaire $r = 0.80$ which proved that the tools were reliable. The reliability of weighing machines used for mothers and newborns was done by rater inter rater method and were found reliable.

Procedure for data collection: Written permission was obtained from the Civil Surgeon, Medical Officer of Govind Vallabh Panth District Government Hospital, Indore. Prior to the study, informed consent was obtained and confidentiality was assured to the subjects. Interview was conducted. The average time for interviewing each subject was 20-25 minutes. Height was taken with help of inch tape and mothers were asked to stand bare foot against the wall. Pre pregnant weight was obtained from records and current weight was taken with the help of portable circular weighing machine. BMI was calculated. Dietary intake of mothers was calculated by using diet recall method. Other information like hemoglobin level of mothers etc. were obtained from medical records and after delivery weight of the baby was taken with the help of digital electronic weighing machine.

Findings

Section I: Frequency and percentage distribution of Socio demographic variables of antenatal mothers

The findings of the study indicated that that out of 50 antenatal mothers, majority 49 (98%) belonged to age group 18-29. Nearly half of them 26 (52%) were having high school education. Majority of antenatal mothers 43(86%) were housewives. More than half of the mothers 32(64%) belonged to joint family while 18 (36%) belonged to Nuclear family. Majority of mothers 37 (74%) were having family income between 5000-10,000Rs/month. Around 3/4th i.e. 39 (78%) mothers belonged to Hindu religion. More than half of the mothers 27(54%) were gravida I, 16 (32%) were II gravida. 40(80%) mothers said they were not using contraceptives before pregnancy.

Section II: Frequency and percentage distribution of maternal factors (General health assessment, Obstetric history, Pregnancy associated ailments & Nutritional assessment)

Out of 50 antenatal mothers, majority 46 (92%) were greater than 145 cm in height. More than 3/4th 35(70%) antenatal mothers had weight gain between 7 to10 kg whereas as 9(18%) mothers had weight gain below 7kg. Half of the mothers 26 (52%) had Hemoglobin level less

than 10 gm/dl, whereas, nearly half of the mothers 24 (48%) had Hemoglobin greater than 10gm/dl. Majority of mothers 26(52%) had BMI between 18.5 to 24.9 kg/m² while 21(42%) had BMI less than 18.5 kg/m². Majority of the antenatal mothers had more than 4 Visits i.e. 44(88%) whereas 6 (12%) had less than 4 visits.

Out of 50 antenatal mothers, 22 were multi- parous and out of 22 multi-parous mothers, 16 (72.7%) mothers did not have any history of abortion. 21(95.45%) of them did not have any history of preterm labor. None of the antenatal mothers 22(100%) had any history of multiple pregnancies. 14 (63.65%) mothers had history of LBW babies whereas 8(36.35%) did not have any such history. None of the antenatal mothers 22(100%) had any history of still births. Nearly half of them 12(54.55%) antenatal mothers had birth spacing more than three years between two children whereas 10(45.45%) mothers had less than three years spacing between two children.

Out of 50 antenatal mothers 25(50%) had anemia. Majority of the antenatal mothers 46 (92%) were not having PIH. None of the antenatal mother's 50 (100%) had Gestational Diabetes Mellitus. More than 3/4th mothers 48 (96%) did not have Antepartum hemorrhage. 44(88%) did not have Oligohydramnios, whereas, 6(12%) had oligohydramnios during pregnancy. 2(4%) had polyhydramnios during pregnancy.

Most of the mothers 35(70%) were taking less than 8 glasses of water/day. Majority of the mothers 49(98%) had taken the iron and calcium supplement during their pregnancy and nearly half of the mothers 20(40%) were taking less than 1800 calorie /day.

Section III: Frequency and percentage distribution of birth weight of babies

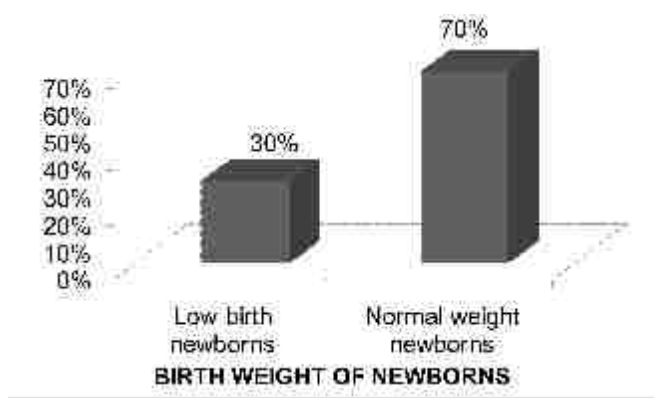


Figure 1: Bar diagram showing distribution of birth weight of newborns.

Fig.1.depicts that there were total 50 antenatal mothers out of which 15(30%) mothers gave birth to low birth weight newborns and 35(70%) mothers gave birth to normal weight newborns.

Section IV: Association of selected socio demographic variables with birth weight of newborns

There was significant association found between selected demographic level i.e. with monthly income of the family ($X^2=10.16$) and birth weight of newborn at the level of $p \leq 0.05$. But there was no significant association found between birth weight of newborns and selected demographic variables like age, education, employment status of the mother, type of family, religion, gravida, parity and contraceptive use before pregnancy.

Section V: Association of general health status of antenatal mothers with birth weight of newborns

With regards to general health assessment of antenatal mothers, there was significant association found between weight gain during pregnancy ($X^2=19.10$), Hemoglobin level ($X^2=6.73$) and number of ANC visits ($X^2=9.52$) with birth weight of newborns at the level $p \leq 0.05$ and there was no significant association found between Height, Pre pregnant BMI, Night rest, T.T. immunization, using tobacco, day time rest (hrs/day), and antenatal registration.

Section VI: Association between obstetric history of antenatal mothers with birth weight of newborns.

The findings revealed that, there was no significant association between obstetric history i.e. history of abortion, history of preterm labor, history of multiple pregnancies, history of still birth, birth spacing between two child and birth weight of newborns at the level $p \leq 0.05$.

Section VII: Association between “pregnancy associated ailments” with birth weight of newborns.

Regarding Pregnancy associated ailments significant association was found between anemia ($X^2=7.71$) and birth weight of newborns at the level $p \leq 0.05$ but there was no significant association found between Pregnancy induced hypertension, gestational diabetes mellitus, ante-partum hemorrhage, Oligohydramnios and Polyhydramnios and birth weight of newborns.

Section VII: Association of selected nutritional intake of antenatal mothers with birth weight of newborns

With regard to nutritional intake no association was found between iron, calcium supplement and calorie intake with birth weight of newborns.

Discussion

Association between selected socio demographic variables with birth weight of newborns

The findings revealed that, there was significant association between the selected socio demographic variables like monthly income of the family with birth weight of newborns at the level $p \leq 0.05$. Hence H1 was accepted at the level $p \leq 0.05$.

Above findings were supported by a cross sectional descriptive study conducted by **Naeem Aasma, Huma Zill et al.(2013)⁵** in department of Obstetrics and Gynecology Unit-IV, Sir Ganga Ram Hospital, Lahore from 20th March 2007 to 20th March 2008 to identify the association of maternal bio-social, medical and obstetric risk factors with low birth weight babies. 100 pregnant women by Non probability convenience sampling were selected. The factors like maternal education, inter-birth interval, low BMI, Maternal Socio-economic status had significant effect in causing low birth weight. It was concluded from this study that maternal malnutrition, illiteracy, low family income, close birth spacing have strong association with low birth weight.

Association between maternal factors with birth weight of newborns

The findings revealed that, there was significant association found between weight gain during pregnancy, hemoglobin level of the mother, total no. of ANC Visits and anemia of antenatal mother with birth weight of newborns at the level $p \leq 0.05$ and there was no significant association found between other maternal factors with birth weight of newborns. Hence H2 was accepted.

Above findings were supported by the study done by **Singh S. D., Shrestha S.et al(2010)⁶** who conducted hospital based case control study in Dhulikhel hospital to identify the risk factor of LBW among the babies, Kavre, Nepal from Jan 1st 2008 to 30th May 2010. A total of 401 cases and an equal number of age matched controls were taken to assess the different risk factors of the mother for

LBW babies. Ethnical group, nutrition during pregnancy, age of mother and parity was found to be statically insignificant for LBW. Study concluded maternal height, hemoglobin, total weight gain and ANC visit to be the significant risk factors contributing to LBW.

Also a Cross-sectional study was conducted by **Idris Zafar Mohammad, Gupta Anuradha, (2000)**⁷ to study the incidence of low birth weight and its association with maternal health in Queen Mary Hospital, K G Medical College, Lucknow. An appropriate sample of 934 mothers was to be drawn by systematic random sampling method by including all the mothers delivering on alternate days during the months of August to April. Mothers were interviewed next day of delivery and the available health records were reviewed. LBW was found to be significantly associated with maternal complications of current pregnancy, past obstetric history, maternal diseases, ANC status, dietary intake and nature of work during pregnancy.

Conclusion

Birth weight remains an important factor affecting the neonatal and infant mortality and morbidity. Low birth weight babies are more likely to have disabilities in the form of developmental delay, poor growth and mental disabilities. For reducing the prevalence of low birth weight, public health strategy needs to focus attention on better maternal nutrition and education. Women should be educated and encouraged for regular ANC checkups, which augments the detection of these risk factors at the earliest to improve the weight of a newborn. Good nutrition during pregnancy would result in increased birth weight of newborn.

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Competing Interest: The author had no conflict of interest.

Source of funding/ Financial Resource: The author did

not receive any financial support from any sources.

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Knowledge on Self Administration of Insulin among Diabetic Patients



***Prof. Rekha R**

Abstract

Diabetes mellitus is a lifelong disease. The nurses should be concerned with encouraging self administration of insulin for health promotion and wellness. A study was conducted in SIMS Hospital Kollam to assess the knowledge on self administration of insulin among diabetic patients attending OPD. A total of 30 samples were selected. The knowledge was assessed with the help of structured questionnaire. Results showed that 16.6% had poor knowledge and 83.4% had average knowledge. The Demographic variables like, age, sex, religion, area of residence, family education, occupation, monthly income and source of information had no significant association with knowledge on self administration of insulin. There is still a scope for creating awareness regarding self administration of insulin among diabetic patients.

Key words: Knowledge, self administration of insulin, diabetic patients

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Background

There are 194 million diabetic patients, world wide of this 350 million were in India. According to the International Diabetes Federation (IDF) and the Madras diabetes research foundation report in 2011 India had 62.4 million people suffering with type 2 diabetes. In India the crude prevalence rate of diabetes in urban is 9% and in rural area has also increased. **(Viji P.T 2014)**¹

Insulin is necessary for normal carbohydrate, protein and fat metabolism. People with type I diabetes mellitus (DM) do not produce enough hormone to sustain life and depend on insulin for survival where as type II DM are not dependent on exogenous insulin for survival, overtime these individuals will show decreased insulin production therefore supplemental insulin for adequate blood glucose control especially during times of stress or illness is necessary. **(American Diabetic Association 2009)**²

As per surveillance of World Health Organization (WHO)

it is expected that approximately 60 million people by the year 2017 and 80 million people by 2030 in India and 366 million people in the world by 2030 will be affected by diabetes mellitus. **(Seema Abhijeet Kaveeshwar 2014)**³

Need for the study & Literature Review:

Diabetes mellitus is one of the common lifelong non-communicable diseases increasing worldwide especially in India and particularly in the Kerala state. The rise in the incidence of diabetes is due to the life style practices adopted by the people.

To control diabetes when patients are on lifelong insulin administration, here if the patients are having knowledge on self administration of Insulin their treatment will be effective. It is the responsibility of the health personnel to assess the level of knowledge of patients on self administration of insulin and train patients in the self administration of insulin to effectively control diabetes and prevent future complications.

On assessing 500 diabetic patients; on practice related to self care activities 54% had inadequate level of practice, 36% had inadequate practice and only 10% had adequate practice. (Viji 2014)¹

Knowledge assessment on self insulin administration revealed that 41 (68%) of the subjects had inadequate knowledge and remaining 19 (32%) of them had moderately adequate knowledge. More of them had adequate knowledge. The overall mean score percentage of the knowledge was 46.9% (± 3.98). (Surendranath et al 2012)⁴

Problem Statement

"A study to assess the knowledge on self administration of insulin among diabetic patients attending the outpatient department of SIMS hospital Kollam."

Objectives

- To assess the knowledge on self administration of insulin among diabetic patient attending the outpatient attending the outpatient department of Sims Hospital
- To associate the knowledge in self administration of insulin among diabetic patients with selected demographic variables.

Hypothesis

H₁, There is significant association between knowledge of patients on self administration of insulin with selected demographic variables.

Methodology

Research approach: A quantitative approach was selected to assess the knowledge on self administration of insulin among diabetic patients attending OPD.

Research design: Descriptive research design was used for their study to assess the knowledge on self administration of insulin

Setting: OPD of SIMS hospital, Kollam.

Sample size and sampling technique: 30 diabetic patients taking insulin who were attending outpatient department of SIMS Hospital Kollam were selected by non-probability convenient sampling technique.

Tools: The tool consists of two parts.

Part I: It included the questionnaire to assess the demographic variables like age, sex, religion, area of residence, family, educations status, occupation, monthly income and source of information.

Part II: It included questions on knowledge regarding self administration of insulin. It consists of 36 questions each correct answer carries one mark each.

Scoring key: The score was converted into percentage and was interpreted as follows:

> 75%	-	Good knowledge
50-75%	-	Average knowledge
< 50%	-	poor knowledge

Validity & Reliability- Validity of the tool was obtained by getting opinion from experts. The reliability of tool was elicited by using test-retest method the score was 0.8.

Pilot Study: Pilot study was conducted among 3 diabetic patients who was taking insulin by itself in SIMS Hospital and few changes were made in the questionnaire.

Data collection procedure: The investigator selected thirty diabetes patients by non-probability convenient sampling technique, introduced and maintained good rapport and explained the purpose and the data was collected individually after getting informed consent from them.

Findings

Section I: Socio demographic variable

Study revealed that majority of the patients 83.4% were in the age group of >50 years and 16.6% were in between the age group of 40-49 years. 63.3% patients were males and 36.7% were females. 63.3% of patients were from Hindu Religion background, 30% of them were

Christian and 6.7% were Muslims. Majority 53.3% study samples belonged to rural population, 6.67% from municipality and 40% from cooperation. 73.4% were from nuclear family, 6.6% were belong to extended family and 20% belonged to joint family.

According to education majority 40% of the patients had high school education, 33.3% had primary education, 16.7% had degree and P. G. education and 10% had higher secondary education. Results also revealed that 36.6% were housewife, 26.6% of them were private employees, 23.4% of them were daily wages and 13.4% were government employees. 63.4% of them had monthly income Rs. <5000/-, 16.6% were earning in between Rs. 5000-10,000/-, 13.4% had Rs>15,000 income and 6.6% had monthly income of 10,000/- 15,000/- Most of the subjects i.e. 66.6% of them got information form newspaper and health magazines and 33.4% from electronic medias.

Section II: Assessment of knowledge score of diabetic patients

Knowledge Score

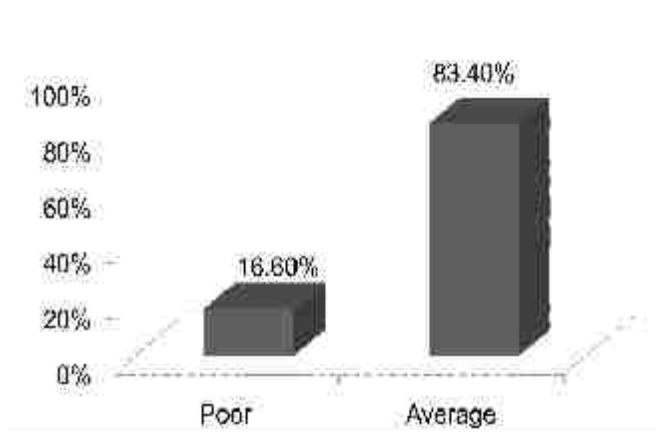


Fig No. 1 Knowledge score on self administration of insulin

Figure no. 1 shows that with regard to knowledge score 83.4% had average knowledge regarding self administration of insulin whereas 16.6% had poor knowledge and none of them had good knowledge on self administration of insulin.

Section III: Association of knowledge of patients on self administration of insulin with selected demographic variables

Table No. 1: Chi square value of knowledge of patients on self administration of insulin and selected demographic variables N=30

Demographic Variables	Level of knowledge				Chi square
	Poor		Average		
	F	%	F	%	
Age					
40-49	1	3.3	1	3.3	1.71
>50	4	13.4	24	80	NS
Sex					
Male	3	10	16	53.4	0.028
Female	2	6.6	9	30	NS
Religion					
Hindu	2	6.7	17	56.7	2.01
Muslim	0	0	1	3.3	
Christian	3	10	7	23.3	
Area of Residence					
Village	3	10	13	43.3	0.44
Municipality	0	0	2	6.6	
Corporation	2	6.6	10	33.4	
Family					
Nuclear	2	6.7	20	66.6	2.21
Extended	0	0	2	6.7	NS
Education					
Primary	1	3.3	9	30	6.67
High School	2	6.7	10	33.33	
Higher Secondary	2	6.7	1	3.3	
Degree		0	5	16.7	
Housewife	0	0	10	33.3	4.15
Daily wages	2	6.6	5	16.7	
Private	3	10	7	23.4	
Government	0	0	3	10	NS
Monthly income					
Rs< 5000/-	3	10	16	53.4	0.33
Rs.5000-10000/-	1	3.3	4	13.3	
Rs.10000-15000/-	0	0	2	6.7	
>Rs.15000/-	1	3.3	3	10	
Source of information					
News paper	4	13.4	16	53.3	0.48
Electronic Media	1	3.3	9	30	

NS - not significant

Table No. 1 shows that, association of knowledge with demographic variables like age, sex, religion, area of residence, type of family, education, occupation, monthly income and source of information, there was no significant association was found of knowledge with the above demographic variables.

Discussion

Knowledge regarding self administration of insulin

Study revealed that majority 83.4% had average knowledge regarding self administration of insulin and 16.6% had poor knowledge and none of them had adequate knowledge on self administration of insulin.

Similar study was conducted among diabetic patients in diabetic clinic at Sri Deveraj Urs Medical College and Hospital, Kolar revealed that 41(68%) of the subjects had inadequate knowledge and remaining 19(32%) of them had moderately adequate knowledge. None of them had adequate knowledge. The overall mean score percentage of knowledge was 46.9% (± 3.98). (Surendranath et al 2012)⁴

Association of knowledge with demographic variables

There was no significant association of knowledge with the demographic variables like age, sex, religion, area of residence, type of family, education, occupation, monthly income and source of information. Therefore, H_1 , i.e. there is significant association between knowledge of patients on self administration of insulin with selected demographic variables was rejected.

Conclusion

Nurses play a key role in care of diabetic patients, they are expected to give nursing care and assess the awareness of diabetic patients in self administration of insulin. With the alarming rise in the number of diabetic

patients the need for the awareness on the self administration of insulin is increasing. The study revealed that majority of the diabetic patients had an average knowledge, none of them had adequate knowledge on self administration of insulin. Demonstration and redemonstration of self administration of insulin will enhance skills of the diabetic patients.

Acknowledgment: The author wishes to thank all the diabetic patients who participated in the study and their contributions for the successful study.

Conflict of interest: Nil

Financial resource: Self

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Regional Conference (North Region) of NRSI: A Report

Date : 16th & 17th October, 2015



CONFERENCE REPORT

The 3rd Nursing Research Society of India Regional (North Zone) Conference was organized at College of Nursing, CMC & Hospital, Ludhiana on 16th & 17th October, 2015 on the theme "Collaborative Research : to improve patient care through clinical research". The Chief Guest for the conference was Ms. Surekha Sama, Vice President, TNAI. The overall aim of the conference was to provide a platform for nursing academicians, doctoral students and researchers to share knowledge on application of research in selected fields of Nursing. The sub themes of the conference were to review old and new techniques in prevention & control of infection, role of pediatric nursing in preventive pediatrics, role of psychiatric nurse individual & family counseling and role of obstetric nurse in prevention of antenatal, intranatal & postnatal complications.

A total of 153 delegates participated in this conference, majority were from Punjab, remaining from Delhi, Haryana and Uttrakhand.

Inaugural Session : The inaugural session started at 9:00 A.M. Prof.(Mrs.) Seema Barnabas, Organizing secretary welcomed all delegates to the conference. The session started with the invocation song by the students of College of Nursing, Bible reading & Prayer by Rev. Alex Peter. This was followed by the formal welcome address by Prof.(Mrs.) Ponnamma R. Singh, Principal, College of Nursing, CMC, Ludhiana. The presidential address was delivered by Prof. H.C. Rawat, President, NRSI (North Zone) and he was honored by Dr. Abraham G. Thomas, Director, CMC, Ludhiana. The keynote address was given by Prof.(Mrs.) Amarjeet Kaur Sandhu, Secretary, NRSI (North Zone) and she unfolded the theme of the conference. The Chief Guest of the conference Ms. Surekha Sama, Vice President, TNAI in her inaugural address expressed that nurses play a vital role in collaborative research and there is enough data in India itself that can be used for research purpose. The guest of honor of the conference, Dr. Abraham G. Thomas in his address emphasized on dual role of nurses i.e. in teaching institutions along with the clinical area. A Souvenir was released at this occasion.

Six plenary sessions were taken by eminent nursing professionals from North region. Plenary session I i.e. Collaborative research to improve patient care through clinical research was presented by Prof. Prabhjot Saini, DMC, Ludhiana and other resource persons presented on different topics.

Scientific papers were presented by 25 participants from various colleges.

Nine research scholars participated in the research poster competition.

Two guest lecturers were presented by Prof. Bandana Bhattacharya and Dr. Neeta Kang on the topics "Meta Analysis" & "Funding of the Research Project" respectively.

Panel discussion was conducted by the faculty, College of Nursing, CMC, Ludhiana on the topic "Problems faced by nurses in clinical research".

On the second day of the conference, 17th oct.2015, General Body Meeting was held. The budget report was submitted by Treasurer Mrs. Sunita Kumari. The elections were held smoothly under excellent guardianship of Dr. Kanwaljit Gill, Returning officer and following members unanimously elected by the house:

1. President Prof. H.C. Rawat.
2. Secretary Dr. Parampal Cheema, Principal SPN CON Mukerian (Hoshiarpur)
3. Jt. Secretary Prof. Pennamma Ranadive (Retd. Principal, CMC College of Nursing)
4. Treasure Mr. Parmod Saharen (PGMIS Rohtak)
5. Editor Miss Surekha Sama. Delhi.

The participants and winners of scientific paper presentation & poster competitions were presented with trophies & participatory certificates during the valedictory function. The Vote of Thanks was proposed by Dr. Reena Jairus, Nursing Supdt., CMC, Ludhiana. Feedback of the conference as given by the participants rated it as the excellent conference. Due to the disturbance & riots in some parts of Punjab many participants could not participate and they sent their apologies for the same.

Prof. (Mrs.) Ponamma R. Singh
Org. Chairperson/Principal

GUIDELINES TO THE AUTHORS

Journal of Nursing Research Society of India

The "Journal of NRSI" is a biannual publication of Nursing Research Society of India.

All Communications with reference to research studies should be addressed to the editor of "Journal of NRSI", on the email "nrsi.journal@gmail.com", nrsiindia@gmail.com

Prerequisites: The preliminary requirements of an article before it is processed for reviews are the following

- The study should be relevant to any one area of Nursing.
- Research report should be ideally of 4000 - 4500 words.
- Preference is given to research report based on patient care studies concentrating on nursing aspects rather than medical aspects of treatment.
- Articles should be based on research studies. The work done during past 5 years will be considered.

Declaration - Each article should be accompanied with a declaration by all the author/ authors that they are :

The authors of the article.

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Has not been published and has not been submitted for publication elsewhere.

Typescript -The research report should be typed in 1.5 line spacing, on A4 size paper, with margins 1.5 inches on the left and right sides and 2 inches on top and bottom. The font size should be 12 in Times New Roman.

Research Article: The researcher is requested to include the following information while submitting the articles.

Title: Title of the article should comprise of 8 -10 words.

Abstract: The first page of the article should comprise of an abstract which should be within word limit of 100 - 150. Below the abstract 3-5 key words should be mentioned.

Background: It should include the need of the study along with the relevant data in geographical order Global, National, and Local with the topics.

Objectives

Hypotheses

Methodology: Research methodology, population, sample, sample size, setting, tool, data collection procedure, ethical issues and schematic diagram.

Findings: According to the objectives of the study, significant tables & figures should be depicted on a separate page. Total number of tables, figures & graphs should not be more than 4.

Discussion: Findings should be supported with other studies.

Conclusion: Should include the final remarks & not the summary.

Case Study: Case Study should be based on clinical setting. It should be organized into three sections; the introduction/ background, body & conclusion. It should describe the process & outcome with management methodology. It should be narrative in nature and can be supported by pictures / charts. The case study should not exceed 2000 words.

Abbreviations & Symbols: Use only standard abbreviations. Please don't use abbreviations in the title.

Spellings: Use American spellings in all cases.

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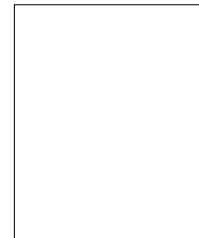
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