

A Study to Assess the Effectiveness of Knowledge and Practice of Nurses Regarding the Intervention of Baby Friendly Hospital Initiative in Selected Hospitals in Gwalior, Madhya Pradesh

Mr. John Perianayagam¹, Prof. Dr. Ajeem Khan²

¹Associate Professor, Ph.D. Scholar, Malwanchal University, Indore, Madhya Pradesh, India

²Professor, Cum Vice-Principal, P.K. University, Shivpuri, Madhya Pradesh, India

Guide: Dr. Jitendra Chickolkar, Professor, Malwanchal University, Indore, Madhya Pradesh, India

ABSTRACT

Background of the study:

BFHI promotes optimal infant feeding practices in hospitals throughout the world by providing comprehensive guidelines to make hospitals centers of support for breastfeeding. It also establishes the necessary political and technical support for breastfeeding promotion activities, draws on the experience of breastfeeding mothers for mother-to-mother support groups and the skills of health professionals and research to challenge prevailing medical practice.

The aim of the study was to assess the knowledge and practice of staff nurses regarding implementation of Baby Friendly Hospital Initiative in selected hospitals at Gwalior, M.P.

Objectives of the Study:

- To determine the knowledge of staff nurses regarding BFHI.
- To determine the self-reported practice of nurses in implementing BFHI.
- To find out the correlation between knowledge and practice of staff nurses in implementing BFHI.
- To find out the association between the knowledge score of staff nurses and selected baseline variables.

Methods

A descriptive survey approach was used for the study. The study was carried out in the maternity and NICU units of BIMR hospitals Gwalior, M.P. The sample consisted of 60 maternities and NICU staff nurses, selected by purposive sampling technique. Knowledge level of the participants was assessed through semi structured knowledge questionnaire and practice by self-administered practice checklist.

Results

The collected data was analyzed by using descriptive and inferential statistics. The data showed that the majority i.e thirty-two (53.33%) of the subjects were having good (71%-85%) knowledge level and forty-seven (78.33%) of the subjects were having very good practice (>86%). There was a weak positive correlation ($r=0.222$) between knowledge and practice of staff nurses regarding implementation of BFHI.

Interpretation and conclusion:

The findings of the study have shown that the knowledge level of staff nurses regarding BFHI was good and their practice was very good.

The chi- square value showed that there was no significant association between the knowledge score of the staff nurses and selected variables like age, occupation, area of residence and years of experience whereas education ($\chi^2=12.227$, $p<0.05$) and source of information ($\chi^2=19.133$, $p<0.05$) was associated with knowledge score.

The chi- square values also showed that there was no significant association between the practice of the staff nurses and selected variables like age, education, occupation, area of residence and years of experience whereas source of information ($\chi^2=19.133$, $p<0.05$) was associated with practice.

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Hence it can be concluded that education for staff nurses is a must by any method to improve their knowledge and practice level.

INTRODUCTION

The promotion of breastfeeding has been established as a global public health issue. Despite this global agenda, breastfeeding initiation and duration rates remain low in many countries. The lack of provision of adequate support to the breastfeeding mother is an important contributory factor to shorter duration of breastfeeding. Health professionals and voluntary breastfeeding supporters are in a prime position to work collaboratively to provide comprehensive support to the breastfeeding mother.

Breastfeeding is one of the most effective ways to ensure child health and survival. However, contrary to WHO recommendations, fewer than half of infants under 6 months old are exclusively breastfed.

Breastmilk is the ideal food for infants. It is safe, clean and contains antibodies which help protect against many common childhood illnesses. Breastmilk provides all the energy and nutrients that the infant needs for the first months of life, and it continues to provide up to half or more of a child's nutritional needs during the second half of the first year, and up to one third during the second year of life. World Health Organization (WHO) and UNICEF
19 July 2024.

NEED FOR THE STUDY:

A newborn baby has only three demands. They are warmth in the arms of its mother, food from her breasts, and security in the knowledge of her presence. Breastfeeding satisfies all three:

Grantly Dick

Breast milk is best for baby, and the benefits of breastfeeding extend well beyond basic nutrition. In addition to containing all the vitamins and nutrients baby needs in the first six months of life, breast milk is packed with disease-fighting substances that protect baby from illness. Numerous studies from around the world have shown that stomach viruses, lower respiratory illnesses, ear infections, and meningitis occur less often in breastfed babies and are less severe when they do happen. Exclusive breastfeeding for six months seems to offer the most protection. One large study by the National Institute of Environmental Health Sciences showed that children who are breastfed have a 20 percent lower risk of dying between the ages of 28 days and 1 year than children who weren't breastfed, with longer breastfeeding associated with lower risk¹⁰.

The Global Criteria for the Baby-friendly Hospital Initiative serve as the standard for measuring adherence to each of the Ten Steps for Successful

Breastfeeding and the International Code of Marketing of Breast-milk Substitutes. The criteria listed below for each of the Ten Steps and the Code are the minimum global criteria for baby-friendly designation. Additional criteria are provided for "mother-friendly care" and "HIV and infant feeding". It is recommended that the criteria for "mother-friendly care" be implemented gradually, after maternity staff has received necessary training on this topic. Relevant decision-makers in each country should decide whether the criteria on HIV and infant feeding should be required, depending on the prevalence of HIV among women using the maternity facilities.

The BFHI Self-Appraisal Tool, presented in Section 4 of this series, gives maternity facilities a tool for making a preliminary assessment of whether they are fully implementing the Ten Steps, adhering to the International Code of Marketing, and meeting criteria related to mother-friendly care and HIV and infant feeding. The Global Criteria actually describe how "baby-friendliness" will be judged during the external assessment, and thus can be very useful for maternity staff to study as they work to get ready for assessment. The Global Criteria are listed both here and after the respective sections of the Self-Appraisal Tool, for easy reference during self-appraisal.

It is important that the hospital consider adding the collection of statistics on infant feeding and implementation of the Ten Steps into its maternity record-keeping system, if it has not done so already. It is best if this data collection process be integrated into whatever information gathering system is already in place. If the hospital needs guidance on how to gather this data and possible forms to use, responsible staff can refer to the sample data-gathering tools available in Section 4.2: Guidelines and Tools for Monitoring BFHI.

A cross sectional descriptive study was conducted in 8 maternity obstetric unit managers and nursing staffs in 8 non BFHI accredited primary care maternity obstetrics unit in Cape Town. Subjects were 8 maternity obstetrics unit managers and random sample of 45 nursing staffs. Results shows that a total of 56.6% of the staff could define rooming in, 47.2% could define the components of the BFHI and 52.8% could name three baby friendly care practices and routines. 89% of the nursing staff were able to demonstrate correct positioning of the baby for breastfeeding and 91.1% could demonstrate correct attachment of baby to breast. Only 8.9% of nursing

staff knew about breast milk expression technique. The enrolled nursing assistants were significantly less knowledgeable than the other cadres of nurses.

STATEMENT OF THE PROBLEM:

“a study to assess the effectiveness of knowledge and practice of nurses regarding the intervention of baby friendly hospital initiative in selected hospitals in Gwalior, Madhya Pradesh”.

OBJECTIVES:

1. To determine the knowledge of staff nurses regarding BFHI.
2. To determine the self-reported practice of nurses in implementing BFHI.
3. To find out the relationship between knowledge and practice of staff nurses in implementing BFHI.
4. To find out the association between the knowledge score of staff nurses and selected baseline variables.
5. To find out the association between the practice of staff nurses and selected baseline variables.

OPERATIONAL DEFINITIONS:

- **Knowledge:** In this study knowledge refers to the correct response of the staff nurses regarding BFHI.
- **Practice:** Refers to technique and responsibilities that person has to follow during action which is measured by observational checklist.
- **Staff nurses:** In this study staff nurses refers to nurses working in the maternity and neonatal unit of selected hospital, Mangalore.
- **Baby Friendly Hospital Initiative (BFHI):** BFHI refers to the baby friendly hospital initiative

registered hospitals which promotes breast feeding.

Assumptions: The study assumes that

- Staff nurses working in maternity and neonatal units have some knowledge regarding Baby Friendly Hospital Initiative.
- Knowledge of staff nurses regarding Baby Friendly Hospital Initiative influences their practice.

HYPOTHESES: Hypotheses will be tested at 0.05 level of significance.

- H₁: There will be significant relationship between the knowledge score and practices of staff nurses regarding BFHI.
- H₂: There will be significant relationship between knowledge score on BFHI and selected baseline variables.
- H₃: There will be significant relationship between practice of BFHI and selected baseline variables.

DELIMITATIONS:

Study is delimited to staff nurses working in maternity and neonatal units of selected hospitals at Gwalior, M.P.

SCOPE OF THE STUDY:

In this study the investigator will assess the knowledge and practice of staff nurses working in maternity hospital and NICU units of hospital regarding the implementation of BFHI. The area of deficit will be found out and necessary actions to improve the knowledge and practice can be carried out in the respective hospitals by the information obtained from the investigator.

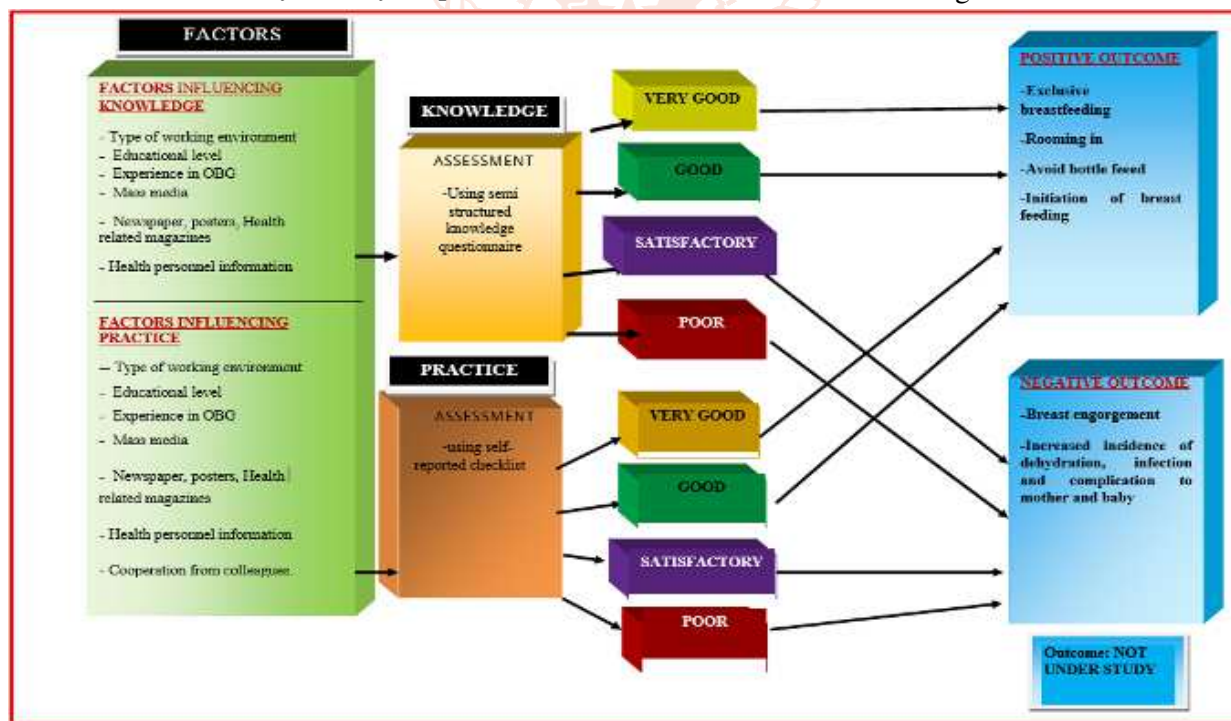


FIGURE 1: CONCEPTUAL FRAME WO1 RK BASED ON KAP MODEL

REVIEW OF LITERATURE:

Literature review refers to the activities involved in identifying and searching for information on a topic and developing a comprehensive picture of the state of knowledge of the topic which is an essential step of research process. It involves the systematic identification, location, scrutiny and survey of written material that contains information as a research problem.

This chapter presents review of literature related to present study. The role of literature review is to formulate and clarify the research problems to ascertain what is already known in relation to a problem of interest, for developing a broad conceptual context and facilitate communication of scientific knowledge for interpreting the result of the study. The relevant review of literature regarding Baby Friendly Hospital Initiative has been organized and presented below as

1. Reviews related to breastfeeding
2. Reviews related to Baby Friendly Hospital Initiative

1. Reviews related to breastfeeding:

Nandini, S. (2013), has conducted a descriptive study to assess the knowledge, attitude, practice and problems of postnatal mothers regarding breastfeeding. Random sampling method was used to select 100 postnatal mothers who have normal deliveries in the selected hospitals of Madurai. The instrument used for data collection was structural interview technique. Overall knowledge regarding breast feeding in the study population was 97.4. All the study population used to breastfeed their babies and were aware more of the benefits of breastfeeding. Breastfeeding >12 months was associated with reduced risk of breast and ovarian carcinoma by 26% and 37%, respectively. No conclusive evidence of an association between breastfeeding and bone mineral density was found. Breastfeeding was associated with 32% lower risk of type 2 diabetes.

A survey was conducted in Utah hospital (2014) on 1,000 nurses to collect baseline data on hospital policies using a 64-item multiple-choice questionnaire. Although nutritionists and dieticians have been shown to have more positive attitudes towards and knowledge about breastfeeding than nurses, of the 390 nurses who responded, only 2.1% identified dieticians as a professional expected to offer practical breastfeeding advice or techniques. The authors concluded that the participation of dieticians was minimal in assisting mothers in initiation and continuation of breastfeeding. Breastfeeding >12 months was associated with reduced risk of breast and ovarian carcinoma by 26% and 37%, respectively. No

conclusive evidence of an association between breastfeeding and bone mineral density was found. Breastfeeding was associated with 32% lower risk of type 2 diabetes.

An intervention study was planned to determine whether breastfeeding education for nurses in a neonatal intensive care unit (NICU) changed their knowledge and attitudes about breastfeeding. Nurses in the NICU completed questionnaires two weeks before and after they attended the 8 hours of educational sessions on breastfeeding. There was a significant increase ($P < 0.001$) in the breastfeeding knowledge of NICU nurses. Researchers concluded that breastfeeding education is very important for nurses in order to –support high-risk mother infant dyads¹⁶.

2. Reviews related to Baby Friendly Hospital Initiative:

A survey was conducted to assess the health workers knowledge, attitudes and practices with respect to breastfeeding in Kenya (1982). The survey showed that the health workers were generally unable to promote breastfeeding among their clients due to lack of knowledge and motivation. Later a breastfeeding promotion campaign ensued in which training of health workers was a major component. Subjects were the hospital policy makers and maternity staff nurses. Two questionnaires were designed. 58 hospitals were interviewed throughout the country. The results showed that there were considerable increases in the knowledge of health workers compared to previous one. Early breastfeeding and rooming in has replaced the earlier practice of keeping mothers and babies apart most of their hospital stay¹⁸. Consistent but limited quality quasi-experimental studies suggest that BFHI is associated with improved in-hospital and post-discharge BF outcomes. Because studies were collected in 12 different countries, these findings strengthen the external validity of the high-quality RCTs reported previously.

A national survey was done in America (1995) to assess the physicians breast feeding knowledge, attitudes and training knowledge. A random sample of 3115 residents and 1920 practicing physicians in pediatrics, obstetrics/ gynecology, and family medicine were selected for the study. Overall response rate was 68%. All groups demonstrated significant deficits in knowledge of breastfeeding benefits and clinical management; practicing physicians performed slightly better performance but still more than 30% chose incorrect advice for mothers. Only 55% of senior residents recalled even one instance of precepting related to breastfeeding and less than 20% had demonstrated breastfeeding

techniques at least five times during residency. Regarding preparation for breastfeeding counseling more than 50% of all practicing physicians rated their residency training as inadequate¹⁹.

A prospective Italian study found that lack of exposure to steps 6 (in-hospital supplementation), 7 (rooming-in) or 8 (BF on demand) increased the odds of practising predominant breastfeeding (vs. EBF) in the maternity ward and that in-hospital predominant breastfeeding (vs. EBF) was associated with shorter FBF duration (Giovannini *et al.*, 2005). A German study found that women delivering in hospitals with a high (vs. low) breastfeeding promotion *Ten Steps* index were more likely to breastfeed at 4 months pp (Dulon *et al.*, 2003). A mailed questionnaire study conducted in Colorado, USA, found that five out of nine breastfeeding practices examined (breastfeeding within 1 h pp, no infant feeding supplements, rooming-in, no pacifier and pp phone contact) were associated with an increased likelihood of breastfeeding at 8 weeks (Murray *et al.*, 2007).

RESEARCH METHODOLOGY:

Research methodology is the systematic way of doing research to solve a problem. The research methodology organizes all the components of the study in a way that is most likely to lead to valid answers to the sub-problem that has been posed. It also indicates the general pattern for organizing the procedures for the development of the tool, pilot study and procedure for data collection and plan for data analysis.

This chapter deals with the research methodology adopted by the investigator to assess the knowledge and practice of staff nurses regarding the Baby Friendly Hospital Initiative in selected hospitals at Gwalior. The methodology of the study includes research approach, research design, variables, setting of the study, population, subjects and sampling techniques, sampling criteria, development and description of the tool, content validity of the tool, and reliability of the tool, pilot study, data collection procedure, plan for data analysis.

Research Approach:

A descriptive survey approach is used to assess the knowledge and practice of staff nurses regarding the Baby Friendly Hospital Initiative.

A descriptive survey approach is a non-experimental research to observe, describe and document aspects of a situation. It deals with the collection of factual information. The main purpose of descriptive research is to describe objectively the nature of situation under study. Descriptive studies are often used by the researcher to determine the extent or direction of attitudes or behaviors.

Research Design:

Research Design is the overall plan for addressing a research question, including specification for enhancing the specification of the study.

The schematic representation of the descriptive research design is depicted in figure 2.

Variables under study:

A variable is defined as an attribute of a person or object that varies and takes on different values.

The variables in the present study are age, educational qualification, occupational status, area of residence, year of experience, and source of knowledge regarding the BFHI.

Setting of the study:

The setting is where the population or the portion of it that is being studied is located and where the study is carried out.

The present study was conducted in the maternity wards (antenatal, intranatal and postnatal) and NICU units of selected hospitals of Gwalior like BIMR hospital which is a 350 bedded hospital were recognized as Baby Friendly Hospitals.

The BIMR Hospital is a multi-super specialty hospital. Our hospital is NABH Accredited. The hospital is first hospital of Gwalior Chambal division who has accreditation from NABH and NABL. It is spread on 7.9 Acres of land, with a capacity of 350 beds. The outpatient services are spread on three floors with 45 consultation rooms. All ambulatory services have been designed with intent to create dedicated aides for specialties, whether it is the proximity of diagnostic services or blood bank to the emergency.

Population:

Population is the entire aggregation of cases that meets a designed set of criteria.

In this study population consisted of staff nurses working in maternity and NICU units with minimum of one year experience in that area.

Sample:

A sample is a small portion of the population selected for observation and analysis.

In the present study, 20 staff nurses working in maternity and NICU units of selected hospitals and who fulfilled the inclusion criteria were selected by purposive sampling.

Sampling criteria:

Inclusion criteria for sampling

- Registered nurses on completion of GNM/BSc/PB. B.Sc./ graduation in Nursing.
- Nurses who are working in maternity and neonatal units.

Exclusion criteria for sampling

- Student nurses who are doing internship and not registered.

Data collection instruments

Data collection tools are the procedures or instruments used by the researcher to observe or measure the key variables in the research problem.

In this study the data collection instruments are:

- Baseline proforma;
- Semi structured knowledge questionnaire on BFHI;
- Self-administered practice checklist on BFHI;

Baseline proforma was used to collect the baseline data. Semi structured knowledge questionnaire was used to assess the knowledge level and Self-administered practice checklist used to assess the practice.

Selection and Development of the tool:

Tools are procedures or instruments used by the researchers to collect data.

The tools were prepared on the basis of objectives of the study. The following steps were adopted prior to the development of the tool:

- Review of literature on relevant topics.
- Discussion with experts.
- Personal experience of the investigator.
- Direct contact with staff nurses during clinical posting.

Preparation of the blue print:

The investigator developed a blueprint based on the obtained information from the review of literature and after discussion with the guide and experts.

Semi structured knowledge questionnaire consisted of total 26 items. In which ten were of knowledge domain, eight were comprehensive and eight were application domain. The total 26 items again divided into two areas. Area 1 (breastfeeding), area 2 (BFHI). Self-administered practice checklist consists of total 15 items, in which eight were regarding concept of breastfeeding and seven were regarding BFHI.

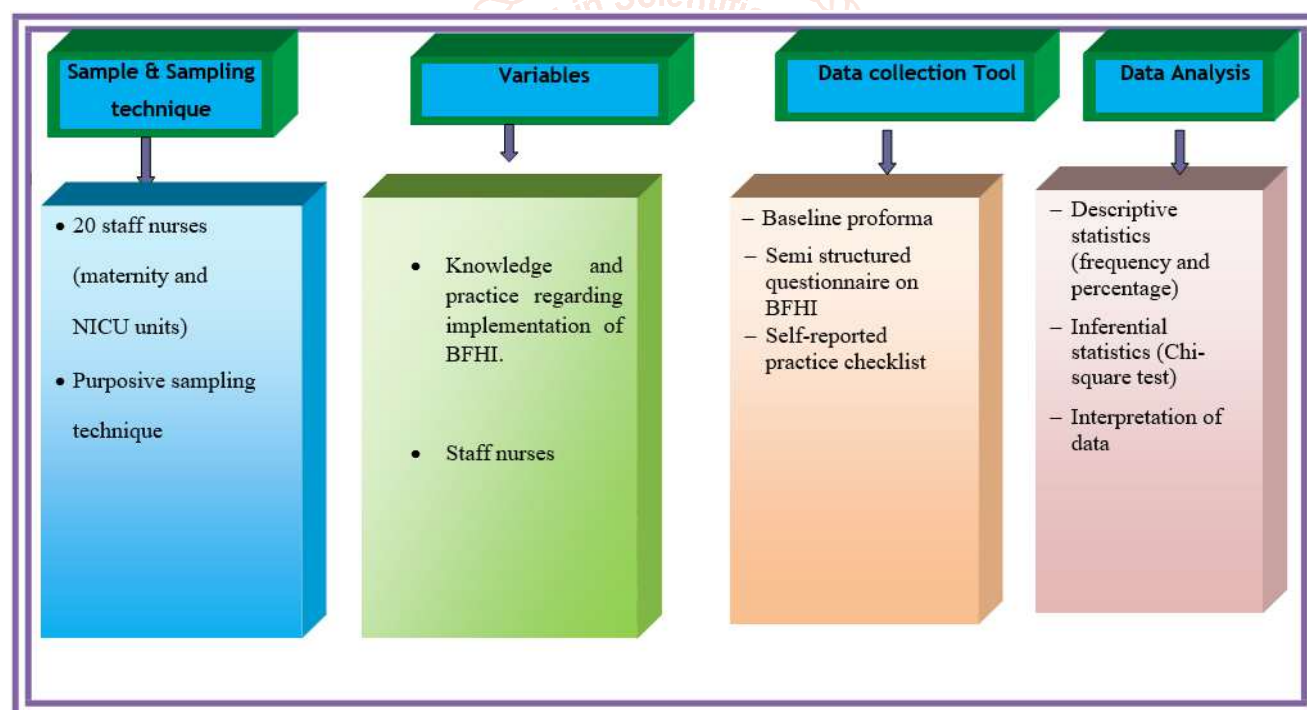


Figure 2 Schematic representation of the study design

Content validity of the tool:

Content validity refers to the degree to which an instrument measures what it is supposed to measure. Content validity is the extent to which a measuring instrument provides adequate coverage of the topic under study.

The prepared tool was submitted to 12 experts along with the objectives, operational definitions, hypotheses and blue print for content validation. The experts were from the field of obstetrics and gynecology -11 and Pediatric nursing -1. There was

100% agreement on all items; suggestions were given to modify few items (to specify age, occupation to be modified as area of work etc). The agreement percentage of each item was considered and accordingly, the suggestions given were accepted and modification was made in those items. After the modification the final draft of baseline proforma consisted of 6 items and semi structured knowledge questionnaire to assess the knowledge consisted of 26 items and self-administered practice checklist consisted of 15 items.

Pilot study:

Pilot study is a small scale version or trial run of the major study. Its function is to obtain information for improving the project or assessing the feasibility. The principal focus is on the assessment of the adequacy of measurement.

The pilot study was conducted in BIMR hospital. Formal permission was obtained from the authorities. The sample size of the pilot study was six. The investigator explained the purpose of the study to the staff nurses to obtain their cooperation. Confidentiality was assured and informed consent was taken from each staff. Once the staff nurses were ready to participate in the study, the baseline proforma and semi structured knowledge questionnaire and self-administered practice checklist was administered to six subjects that fulfilled sampling criteria. The time taken for the completion of the questionnaire was 15-20 minutes. Analysis was done by using the descriptive and inferential statistics.

Data collection process:

The data collection was scheduled from 19th November to December 15th of 2023. Formal written permission was obtained from concerned authorities of the selected hospital before data collection. The investigator visited the hospital every day as per the convenience of the respondents. The investigator collected the data from the staffs working in the selected hospitals of Gwalior (B.I.M.R. hospital). After selecting the sample who met the inclusion criteria of the study, the purpose of the study was explained to the subjects and confidentiality of the data collected was assured. An informed consent was obtained from the participants. Semi structured knowledge questionnaire and self-administered practice checklist was administered to the participants. The average time taken by the participants to complete the tool was 15-20 minutes. The selected subjects were 60 and all the subjects were very co-operative and the investigator expressed her gratitude for their co-operation. The collected data was compiled for analysis.

Result:

Analysis is the process of organizing and synthesizing the data in such a way that research question can be answered and hypotheses tested. The analysis of the data involves the translation of the information collected during the course of the research project into interpretable, convenient and descriptive terms and to draw inferences from these using statistical methods.

This chapter deals with the analysis and interpretation of the data collected from 60 subjects to assess the knowledge and practice of staff nurses regarding Baby Friendly Hospital Initiative. The collected data is

tabulated, analyzed and interpreted using descriptive and inferential statistics on the basis of objectives and hypotheses formulated for the purposes of the study.

Analysis was done using the SPSS version 13. Objectives of the study were to:

- Determine the knowledge of staff nurses regarding BFHI.
- Determine the self-reported practice of staff nurses in implementing BFHI.
- Find out the correlation between knowledge and practice of staff nurses in implementing BFHI.
- Find out the association between the knowledge score of staff nurses and selected baseline variables.
- Find out the association between the practice score of staff nurses and selected baseline variables.

SECTION:

Section I: Knowledge of staff nurses regarding implementation of BFHI

Section II: Practice level of staff nurses regarding implementation of BFHI

Section III: Correlation between the level of knowledge and practice regarding BFHI among staff nurses

Section IV. Association between knowledge score and baseline variables.

Section V. Association between practice and baseline variables.

SUMMARY

The BFHI which is a global effort for improving the role of maternity services so as to enable the mothers to breastfeed their babies for the best start in life. It aims at improving the care of pregnant women, mothers and newborns at health facilities that provide maternity services for protecting, promoting and supporting breastfeeding.

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