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"A study to assess the efficacy and satisfaction of a new sliding mid arm circumference scale vs. Shakir's tape among staff nurses working in selected hospital at Meerut."

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ABSTRACT

A range of Mid-Upper Arm Circumference (MUAC) Measuring Tapes are available through UNICEF Supply Division. MUAC tapes are predominately used to measure the upper arm circumference of children but also that of pregnant women, helping identify malnutrition.

There are different types of MUAC tape available. All are graduated in millimeters and some are color coded (red, yellow and green) to indicate the nutritional status of a child or adult.

The color codes and gradations vary depending on the tape type. In May 2009, the Word Health Organization (WHO) and UNICEF issued a joint statement on WHO child growth standards and the identification of severe acute malnutrition in infants and children.

NEED FOR THE STUDY

It is common practice to have the child's Weight-for-Height measurement taken to confirm admission into a therapeutic or supplementary feeding program. Particularly for supplementary feeding programs, this may lead to children being referred from the community or peripheral units but not admitted. In these cases, counseling and compensation (e.g. a "protection ration" or soap) should be offered to care-givers turned away so that the visit to the site is still worthwhile. Using a MUAC cut-off of less than 125 mm for referral and admission in supplementary feeding programs can have implications for the size. Cut-offs for supplementary feeding programs can be adjusted (e.g. reduced to 120mm) based on capacity and resources so that priority is given to identifying children most at risk of death and therefore most in need of treatment.

OBJECTIVES

1. To assess the practice regarding mid arm circumference assessment with a new sliding mid upper arm circumference scale among staff nurses working in selected hospital.
2. To compare the efficacy of a new sliding mid arm circumference scale with Shakir's tape among staff nurses working in selected hospital at Meerut.
3. To compare the satisfaction of a new sliding mid arm circumference scale with Shakir's tape among staff nurses working in selected hospital at Meerut.
4. To correlate the efficacy and practice of a new sliding mid upper arm scale with Shakir's tape among staff nurses working in selected hospital at Meerut.
5. To correlate the efficacy and satisfaction of a new sliding mid upper arm scale with Shakir's tape among staff nurses working in selected hospital at Meerut.
6. To find the association of practice score with selected demographic variables among staff nurses working hospital at Meerut.

METHODOLOGY

A quantitative research approach was used in the study to determine the efficacy and satisfaction of new sliding mid upper arm circumference among staff nurses. The research design selected for the study was Quasi-experimental one group posttest design only.

200 staff nurses were selected in hospital setting by non-probability purposive sampling technique. Modified Dr. Gordon C. Bruner II Product Effectiveness Tool for assessing efficacy and DT scale for assessing satisfaction was used. Data was collected and analyzed using descriptive and inferential statistics.

MAJOR FINDINGS OF STUDY

This study revealed Majority of staff nurses were in the age of 146 (73%) years were in age 20 to 30 years, 35 (18%) were in age of 31 to 40 and above 41 years is 19 (9%). Majority of the gender was female 162(81%) and male were 38 (19%)**.** Majority of the Education were 79 (39%), GNM were 45(19%), post B.Sc. were 40 (20%) and ANM were 20 (18%). Majority of the Religion Hindu 125 (63%), Muslims 40 (20%), whereas 9% were Christians. and remaining 8% follows other religion. Majority of Professional qualification is167 (84%) of staff nurses had less than 10 years of experience whereas 10% had between 11-20 years and remaining 6% had more than 20 years of experience.

Assessment of practice score of staff nurses shows majority of nurses performed good i.e., 105(52.5%) none performed poorly, 11(5.5%) staff nurses gave average performance, while and rest gave excellent performance i.e., 42%.

The efficacy of a new sliding mid arm circumference scale with Shakir's tape among staff nurses shows 3.5% has shown poor efficacy than Shakir's tape, 43.5% shown average efficacies, whereas 24% staff nurses shown good efficacy , and 29% shown excellent efficacy as compared to shakir's tape.

The satisfaction of a new sliding mid arm circumference scale with Shakir's tape among staff nurses: majority of staff nurses were mostly satisfied 44% as compared to Shakir's tape. None has terrible, 2% were unhappy, 5.5% were mostly dissatisfied, 28.5% shown mixed satisfaction, 13.5% were pleased using this new sliding mid upper arm scale and 6.5% were delighted.

By using Karl Pearson's formula for correlation the finding of present study reveals correlation between efficacy and practice of a new sliding mid upper arm scale with Shakir's is 0.0703. It reveals weak positive correlation.

By using Karl Pearson's formula for correlation the finding of present study reveals correlation between efficacy and satisfaction of a new sliding mid upper arm scale with Shakir's is 0.4147. It reveals weak positive correlation.

The chi-square statistic of age is 13.3802. The p-value is .037381. The result is significant at $p < .05$. The chi-square statistic of gender is 3.7319. The p-value is .291911. The result is not significant at $p < .05$. The chi- square value of education is 8.32.The P-Value is .502247. The result is not significant at $p < .05$. The chi- square value of religion is 15.06. The P-Value is .089112. The result is not significant at $p < .05$. the chi- square value of professional qualification is 29.66. The P-Value is .000045. The result is significant at $p < .05$.

CONCLUSION

The findings of the study have shown practice, satisfaction and efficacy regarding new sliding mid upper arm vs. Shakir's tape. It considerably improved the practice of assessing mid upper arm circumference.

KEYWORDS: Practice, Satisfaction, Efficacy, new sliding mid upper arm Scale, Shakir's tape, mid upper arm Circumference.

STATEMENT OF PROBLEM

"A study to assess The Efficacy And Satisfaction Of A New Sliding Mid Arm Circumference Scale vs. Shakir's Tape Among Staff Nurses Working In Selected hospital At Meerut."

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6. To find the association of practice score with selected demographic variables among staff nurses working hospital at Meerut.

ASSUMPTIONS

There will be significant association of efficacy Scores of staff nurses with their selected demographic variables.

There will be significant association of satisfaction Scores of staff nurses with their selected demographic variables.

HYPOTHESIS

- H1- There will be positive correlation between efficacy and practice score of a new sliding mid arm circumference scale with Shakir's tape among staff nurses.
- H2- There will be positive correlation between satisfaction and practice score of a new sliding mid arm circumference scale with Shakir's tape among staff nurses.
- H3-There will be significant association with practice score of staff nurses with their selected demographic variables.

OPERATIONAL DEFINITION

ASSESS- in the present study assess means **to"** evaluate or estimate the functioning of Sliding mid arm circumference scale

EFFICACY- "in the current study it means the perfectness and suitability in using the sliding mid arm circumference scale

SATISFACTION-"in the present study satisfaction means the level of fullness felt by the sample while using the sliding mid arm scale.

MID ARM CIRCUMFERENCE SCALE-"It is a particular tape used to measure the mid arm circumference of children

SHAKIR'S TAPE-"A range of mid-upper arm circumference (MUAC) measuring tapes are available through UNICEF. MUAC tapes are predominately used to measure the upper arm circumference of children helping identify malnutrition."

It is a color coded tape to measure mid arm circumference and assesses the malnutrition

STAFF NURSE- In the current study staff nurses belongs to those professionals having registered as a nurse midwife having a GNM/ B.Sc (N) degree/ANM.

DELIMITATIONS OF THE STUDY

The study is delimited to:

1. Staff Nurses working in hospital.
2. Staff nurses who have used Shakir's tape.

ETHICAL CONSIDERATION:

- The ethical clearance is obtained from the expert of research committee of Panna Dhai Maa Subharti Nursing College.
- Written permission will be obtained from concerned authorities from Various Hospital Meerut.
- Written permission will be obtained from sample who participated in the study before collection of the data.

CONCEPTUAL FRAME WORK

A conceptual framework broadly presents an understanding of the phenomenon of interest and reflects the assumptions and philosophic views of the model designer.

A conceptual frame work is a theoretical approach to the study of problems that are scientifically based and emphases the selection arrangement and classification of its concepts.

Theories are consisting of several interrelated concepts which help to describe a phenomenon in a systematic way. Application of theories in the nursing process will enable the nurse to assess the health condition of the patient and to identify the needs of the patient. Materials & Methods: The nurse can able to plan the care according to the need of the patient and can evaluate the care by application of the theories. J.W. Kenny's Open System Model is very useful to evaluate the effectiveness of the care given to the patient.

As per this theory all living things are open and they are in continuous exchange of matter, energy and information which results in varying degree of interaction with the environment from which the system received input and gives back output as matter, energy and information. The Demonstration of practice regarding mid arm circumference assessment with new sliding mid upper arm is the throughput and its Evaluation of practice, efficacy and satisfaction are the output in this theory.

Results: In this study the feedback is when there is no improvement in the practice, efficacy and satisfaction regarding mid upper arm circumference practice can be continue for longer period to assess the effectiveness.

Input: demographical variables are used input. It included age, gender, education, religion and professional qualification

Throughput: It has two phases. In first phase demonstration of practice regarding mid arm circumference assessment with new sliding mid upper arm circumference was given. In second post -test regarding practice, efficacy and satisfaction. was collected.

Output: output had three categories:

1. Practice: It interpreted poor performance, average performance, good performance and excellent performance.
2. Efficacy: It interpreted poor efficacy, average efficacy, moderate efficacy and high efficacy.
3. Satisfaction: It interpreted delighted, pleased mostly satisfied, mixed, mostly dissatisfied, unhappy and terrible.

Feedback: if there is poor practice performance, then the process will be repeated which is not included in the study.

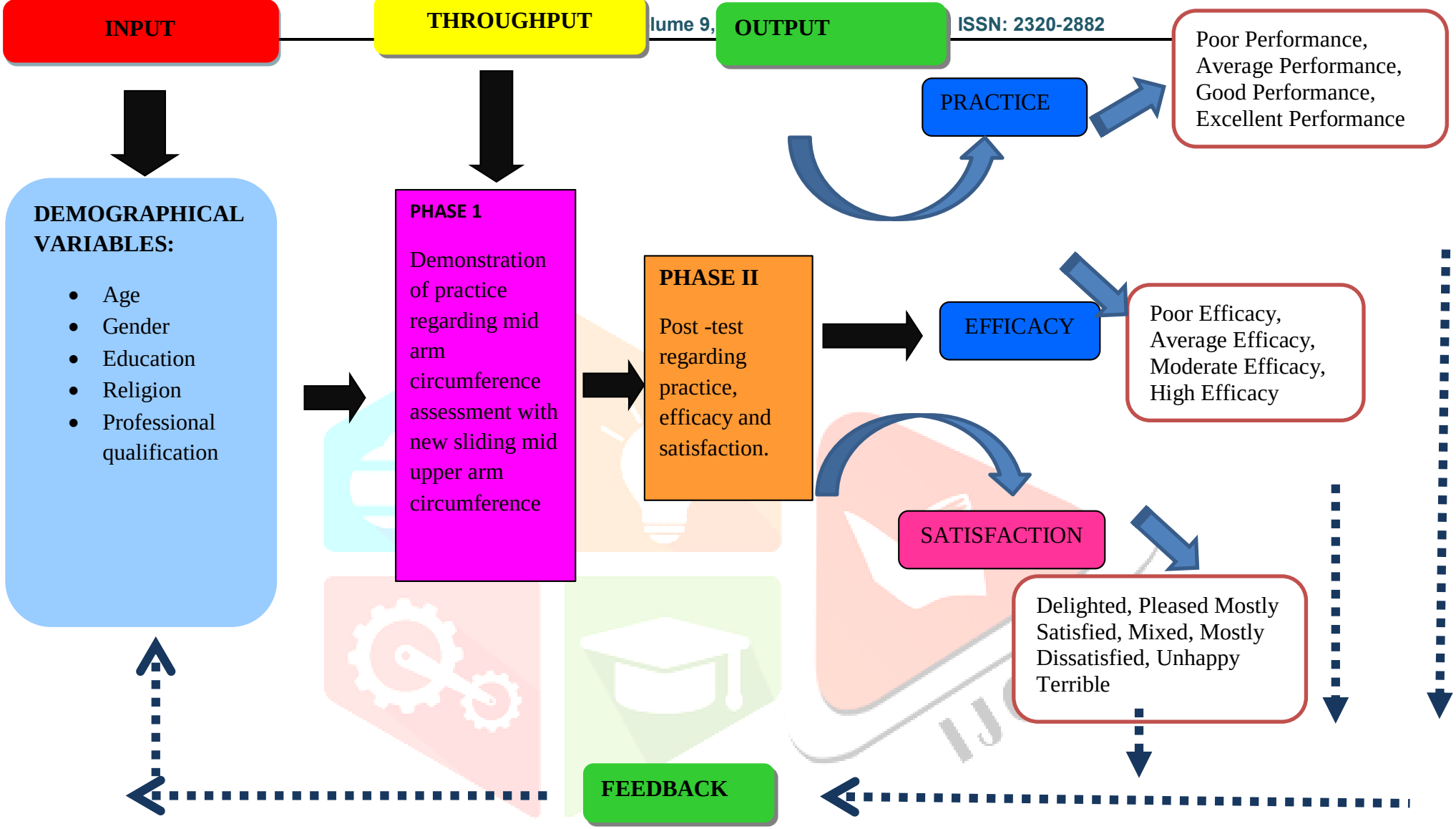

FIG 3- Based on open system JW KENNY'S open system model

RESEARCH METHODOLOGY

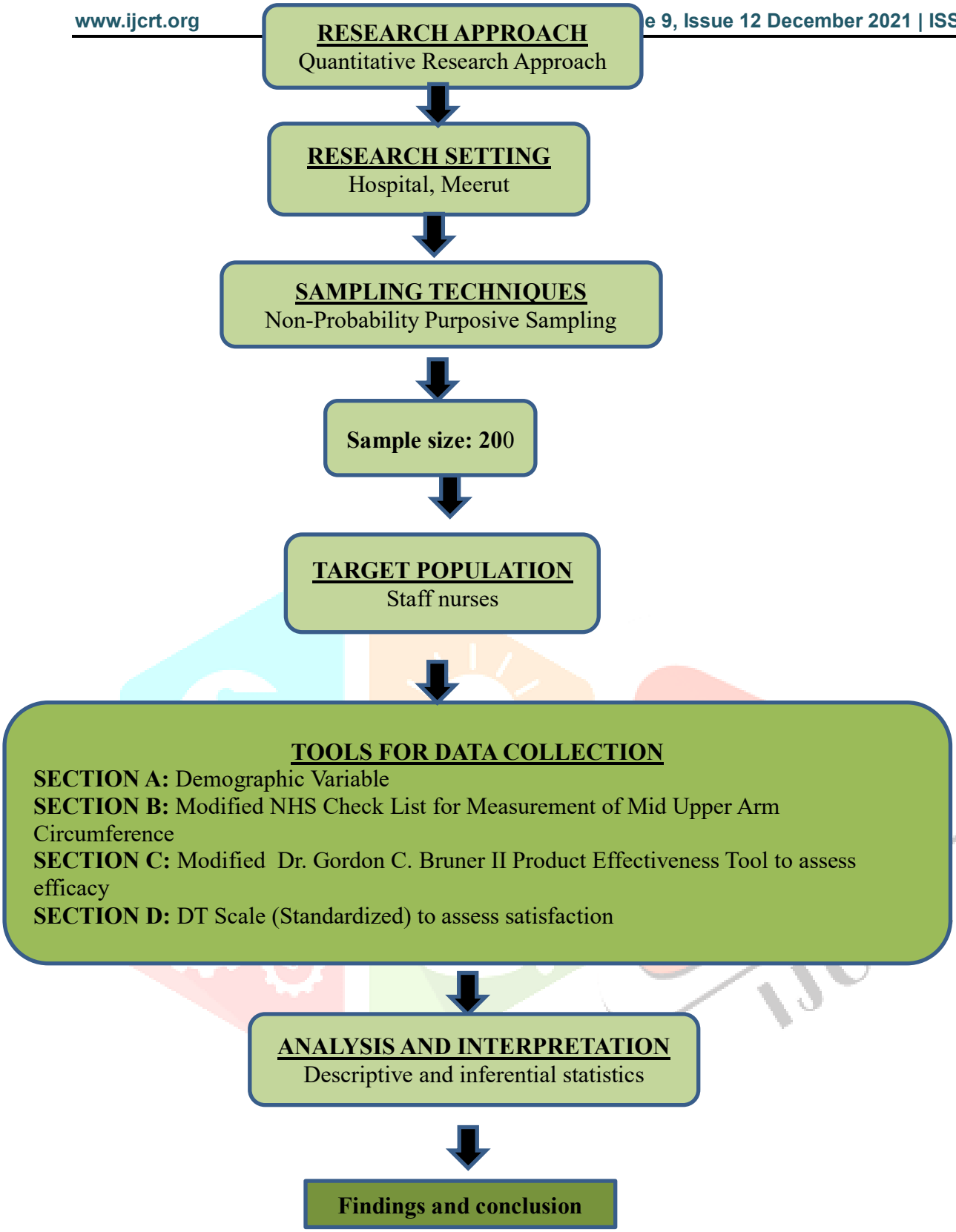

Fig - 4 Schematic presentation of the research design

SYMBOLIC REPRESENTATION OF THE RESEARCH DESIGN

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Group	Day-1st	Day-7th
	Treatment	Post-test
One group post-test	• Training regarding use of new sliding mid upper arm circumference. • Administration for practice checklist of measurement of mid upper arm circumference	• Asses the practice regarding measurement of mid upper arm circumference • Assess satisfaction and efficacy practice regarding measurement of mid upper arm circumference

Table 1: Schematic representation of research design

VARIABLES

A variable is the name implies is something that varies. Quantitative researchers seek to understand how or why things vary, and to learn how differences in one variable relate to differences in another.

- According to Polit and Beck (2015)

A variable is a symbol to which numerators or values are assigned.

Independent variable:

The independent variable is a condition or characteristics that the researcher manipulates or controls in an attempt to ascertain their relationship to observed phenomenon.

In this study, independent variable is measurement of mid upper arm circumference.

Dependent variables:

The dependent variable is the condition or characteristics that appears or disappear as a result of independent variable.

In this study the dependent variable is satisfaction and efficacy.

SETTING OF THE STUDY

Setting is a physical location and condition in which data collection take place in the study. The researcher should carefully select an appropriate setting because it can influence the way people behave and how they respond.

- According to Polite & Beck (2008)

The present study is conducted in pediatric units of hospitals in Meerut

POPULATION

"Population is the aggregation of all the units in which a researcher is interested".

- According to Polite & Beck

The population included in the study was registered staff nurses.

SAMPLE

Sample is a subject of population selected to participate in a research study. It is a position of the population which represents the entire population.

-According to Polit and Hungler

The samples are staff nurses working in pediatric department.

SAMPLING TECHNIQUE

Sampling is a process of selecting a group of people, events or behavior with which to conduct study.

-Burns and Grove (2003)

Non-Probability Purposive sampling technique was used to collect the samples which fulfilled the inclusion criteria.

SAMPLE SIZE

Sample size is a subset of a population selected for measurement, observation or questioning, to provide statistical information about the population.

- **Acc. To Oxford Dictionary**

Sample size included in the study was 200 registered staff nurses who were working in paediatric unit.

CRITERIA FOR SAMPLE SELECTION

Sampling is a, "process of selecting a group of people, events or behavior with which to conduct a study."

- Burns and Grove (2003)

Non-probability purposive sampling technique was used to collect the samples that were fulfilled the inclusion criteria.

INCLUSION CRITERIA

The study includes:

- Staff Nurses working in hospital.
- Those are willing to participate**.**
- Nurses who are working in pediatric unit.

EXCLUSION CRITERIA

The study excludes:

- Who were absent during the time of data collection?
- The staff nurses who have not used Shakir's tape.

DELIMITATION

- The study is limited to in selected hospitals of Meerut.
- The staff nurses who have used Shakir's tape.

DATA COLLECTION TOOL AND TECHNIQUE:

The instruments selected in a research must be the vehicle that obtains best data for drawing conclusion of the study**.**

The tool for assessing the efficacy and satisfaction of a new sliding mid arm circumference scale vs. Shakir's tape were

Tool 1: Demographic Variable

Tool 2: Modified NHS Check List for Measurement of Mid Upper Arm Circumference.

Tool 3: Modified Dr. Gordon C. Bruner II Product Effectiveness Tool to assess efficacy.

Tool 4: DT Scale (Standardized) to assess satisfaction.

Tool 1: It includes question related to staff nurses' age, gender, education, religion and professional experience.

Technique: Interview

Tool 2: Modified NHS Check List for Measurement of Mid Upper Arm Circumference includes mainly 12 points.

Technique: Observation

Tool 3: Modified Dr. Gordon C. Bruner II Product Effectiveness Tool to assess efficacy.

Technique: checklist

Tool 4: DT Scale (Standardized) to assess satisfaction.

Technique: 7 point scale.

CONTENT VALIDITY OF TOOLS

For the content validity of tools, criteria, demographic of tool as prepared which consist of items. The content validity of f tools both demographic data and biophysical parameters were established in consultation with 8 experts. Content validity certificates along with remark were obtained for the view of experts, suggestion from the experts was incorporated and tools and guidelines were modified accordingly.

There was 100% agreement on both demographic data and biophysical parameters.

RELIABILITY OF TOOL

In this research has modified standardized tools which have constant reliability**.**

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