CHAPTER III

RESEARCH METHODOLOGY

Research methodology explains the activity of research that pursuit, how it progress, estimate process and represents the success. The methodological decision covers the important insinuations for validity and credibility of the study findings. Methodology of the study indicates the general pattern for organizing the procedure for the empirical study together with the method of obtaining valid and reliable data for an investigation.

The methodology of research indicates the valid and reliable data for the problem under investigation. Methodology adopted for this research is to estimate the level of ego integrity of male & female geriatric population living in Indore.

Prior planning is needed for all research and is more important for quantitative studies because typically the study design and methods must be finalized prior the study can progress.

Methodology includes research design, research approach, variables, description of setting, population, sample and sampling techniques, development and description of research tool, pilot study and procedure for data collection and plan for data analysis. (Polit and Hungler, 1999)

And also focus on the certain methodology selected by the investigator to perform the study. The above techniques were used to systemize this study and to collect and scrutinize the data in an organized fashion.

The research design of a study shows the basic structure that investigators adopt to develop evidence that is accurate and explainable. The design includes some vital methodological conclusion that the investigator makes, particularly in quantitative studies.
RESEARCH DESIGN – DESCRIPTIVE RESEARCH DESIGN

Target population
All Geriatric people (60 - 80 years) in M.P

Accessible population
Geriatric populations living in Indore, M.P.

Setting
Indore, MadhyaPradesh

Sampling technique
Simple random sampling

Sample size
300 male & 300 female

Method of data collection
Interview schedule to assess socio-demographic variable
Rating scale to assess level of ego integrity

Variable – I
Level of ego integrity towards male

Variable

Variable – II
Level of ego integrity towards female

Analysis
Descriptive information

Table

Data Interpretation

Research Finding

Writing Research Report

Fig no 2: Representation of research methodology
RESEARCH APPROACH

In the quantitative research design, researcher has to consider many things, including various practical, ethical and theoretical challenges. It is based on EBNP. The investigator is using quantitative research approach when he/she is interested to observe the cause and effect of relationship between characteristics.

In this study Comparative research approach was used.

RESEARCH DESIGN

Research design is a comprehensive plan to obtain the question being evaluated and to manage some of the trouble found during research process. The research design helps the researcher in the selection of the problem, manipulation of the experimental variables, procedure of data collection and the type of statistical analysis to be used to interpret the data.

In the present study non-experimental survey research design was used. Data is gathered through door-to-door survey.

In that demographic information will be gathered from the randomly selected samples with a structured interview schedule. A rating scale to determine the stage of self-integrity in the age group 60 - 80 years within the family will be applied after their consent.
SETTING OF THE STUDY

Setting is the physical location and condition in which data collection takes place. This study was conducted in the selected geographical areas of Indore city, M.P. The investigator found that the setting was appropriate to conduct this study.

POPULATION

A population is the entire set of cases in which a study is interested. It is the full set of individual or of objects having some common characteristics.

In this study the population was all Geriatric people (60 - 80 years). Population is distinguishing as target and accessible population.

TARGET POPULATION

The target population is the aggregate of cases about which the researcher would like to generalize.

The target population for this study was the Geriatric populations living in M.P

ACCESSIBLE POPULATION

The aggregate of cases that conform to eligibility criteria and that are accessible as subjects for the study.

The accessible population for this study was the Geriatric populations living in the selected geographical areas of Indore city, M.P
VARIABLE

Variable is an attribute that takes different values in different, person or thing and also it is an attribute that is taken on different values.

Independent Variable

An independent variable is an activity that is operated by investigator to produce a result on the dependent variable. It is also known as experimental variable.

Male and female geriatric people are the independent variable in this study.

Dependent Variable

The behavior that the investigator needs to predict or describe the changes in the dependent variable i.e. caused by the independent variable

Ego integrity is the dependent variable in this study.

SAMPLE

Sample is a subset of population. An element is the most fundamental unit from which data is collected. In nursing research subjects are usually humans.

In this study the samples are male and female geriatric people who were fulfilling inclusion and exclusion criteria.

SAMPLE SIZE

In this study sample size was 300 male and 300 female geriatric populations living in Indore city.

Geriatric people: men & women who are between the age of 60 – 80 years.
SAMPLING TECHNIQUE

Sampling defines the pursuit of selecting the part of the population to represent the whole population.

The sampling technique used in the study was Simple random sampling technique.

A simple random sampling is a subset of individuals (a sample) selected from a bigger set (a population). Each person is selected on random basis and by chance, such that individual sample has the same chance of being chosen at any stage during the above said process.

The lottery method--individual unit of the population is found by a number disc or slip or any other means. They are mixed and then the appropriate number of samples is selected.

The Indore municipal cooperation has divided the Indore city into 69 wards. Those wards, which were deployed for commercial activities, were not included for this study. Left over wards, out of which with the probability sampling the investigator chose 9 wards, (the chosen wards are)

- 7
- 14
- 21
- 28
- 35
- 42
- 49
- 56
- 63
The samples were selected from these wards using simple random sampling.

Each subject will be assigned a unique number. All the individuals bearing the number picked by researcher will be the subjects for study. This will be carried out separately for geriatric men and women.

CRITERIA FOR SAMPLE SELECTION

INCLUSION CRITERIA

- Geriatric people who are willing to participate in the study
- Geriatric people who are present during the time of data collection
- Geriatric people who are 60 years & above
- Geriatric people who can understand Hindi/ English

EXCLUSION CRITERIA

- Geriatric people who are mentally unstable
- Geriatric people who are not willing to participate study
- Geriatric people who are not present the time of data collection
- Geriatric people who can’t understand Hindi/ English
- Geriatric people who are unmarried.
- Wards which had predominantly commercial activity
TOOL PREPARATION

A tool is an instrument or equipment used for collection of data.

The study instrument prepared is based on the study objectives I & II.

- Structured interview schedule
- Rating scale.

Development of tool

The investigator developed the tool after updating her theoretical knowledge. The investigator’s experience, theoretical knowledge and guidance from the experts along with literature review helped in making the tool necessary for the study.

Interview schedule

This method of data collection is like the selection of data through questionnaire method, with few variances, which lies in the fact that schedules (proforma containing a set of questions) are being filled in by the enumerators who are mainly appointed for the target. These enumerators along with schedules go to selected samples; questions are thrown to them from the proforma in the sequence the questions are mentioned.

There are 14 questions in this schedule. This interview is meant for the collection of demographic variables of the study samples.

It includes:

1. Gender
2. Age in years
3. Religion
4. Educational status
5. Marital status

6. Type of family

7. Have you been working presently

8. Source of Income

9. Family structure

10. Presence of chronic illness

11. Extend of mobility

12. Presence of any sensory deprivation

13. Utilization of leisure time

14. Participation in social activity
Rating scale

Rating scale used to assess level of ego integrity life among male and female geriatric population.

A rating scale is made to obtain data regarding a quantitative or a qualitative attribute. In the field of sciences, common examples are the Likert scale and 1-10 rating scales in which a person selects the number, which is considered to show the assumed quality of a product.

Level of ego integrity rating scale instrument has 4 components:

- Quality of life
- Self-confidence,
- Life achievement
- Attitude towards future

It was a 5-point scale in which the investigator asks the question to the subject and she rates it.

1 = always

2 = often

3 = usually

4 = sometime

5 = never
SCORING

The level of ego integrity was graded from unsatisfied to extremely satisfied based on the scores.

<table>
<thead>
<tr>
<th>SL. NO</th>
<th>LEVEL OF EGO INTEGRITY</th>
<th>SCORE RANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Unsatisfied</td>
<td>46-92</td>
</tr>
<tr>
<td>2</td>
<td>Poorly satisfied</td>
<td>93-139</td>
</tr>
<tr>
<td>3</td>
<td>Very satisfied</td>
<td>140-186</td>
</tr>
<tr>
<td>4</td>
<td>Extremely satisfied</td>
<td>187 &amp; above</td>
</tr>
</tbody>
</table>

VALIDITY

Validity refers the degree of which an instrument measures that it is supposed to measure.

Validity includes a concept, conclusion or what we can say measurement is well discovered and corresponds perfectly to the actual world.

Validity is vital as it can aid to determine which methods of tests to use, and help to make confirm what researchers are using methods that are not only accurate, based on certain ethics and cost-effective, but also a method that actually weighs the idea or construct in question.

In order to obtain the content validity, the tool was given to 5 Experts who included the expert from Nursing, psychology and from statistics. After receiving opinions from the experts and consultation from the guide some modifications were done in framing the item and it were incorporated into the tool.
RELIABILITY

Reliability of the instrument is a major criterion for evaluating the standard and precision. It is the degree of stability with which it measures the attribute.

Types of Reliability

1. Test-retest reliability
2. Parallel forms reliability
3. Inter-rater reliability
4. Internal consistency reliability
   a. Average inter-item correlation
   b. Split-half reliability

Reliability analysis was done for questionnaire by Test-retest reliability. Pearson’s correlation coefficient formula for estimation of reliability

\[
r = \frac{n(\Sigma xy) - (\Sigma x)(\Sigma y)}{\sqrt{[n\Sigma x^2 - (\Sigma x)^2][n\Sigma y^2 - (\Sigma y)^2]}}
\]

Interpretation of results: the results of the correlation coefficient ranges between −1.00 through 0.0 and +1.00, and the results are interrelated as follows

- +1.00 score indicated perfect reliability
- 0.00 score indicates no reliability
- A score above 0.70 indicates an acceptable level of reliability of a tool

The ‘r’ value were 0.85, which is reliable.
FEASIBILITY

Tool was tested on 60 samples that were eligible for the study and the investigator found that tool was feasible. These samples were excluded for the main study.

PILOT STUDY

A pilot study is a small-scale study planned to test the methods to be used in the parent study. Pilot studies neither are not just studies with a smaller number of subjects nor are they small, exploratory studies.

The pilot study was conducted as per laid down criteria 60 samples were selected from Choti Khajrani, Raya Bazaar, Malviya Nagar using simple random sampling technique.

The findings of the study were analyzed. The pilot study helped the investigator to visualize practical problems that could be encountered while conducting the main study. It also gave an insight into the actual process of data collection and analysis. The samples that were included in the pilot study were excluded in the main study.

METHOD OF DATA COLLECTION

The data gathering process began from the month of July 2013. The investigator visited to the selected wards in advance and obtained necessary permission from the concerned authorities. The investigator introduced her and informed them about the nature of the study so as to ensure better cooperation during the data collection.

The investigator approached the subjects and explained the purposes of the study. Information collected through door-to-door survey, in that socio demographic information collected from the randomly selected subject through interview schedule. A rating scale to identify the level of ego integrity
in the age group 60 – 80 years within the family and applied after their consent.

The Study was conducted among geriatric population living in Indore city. The city has 69 wards. Those wards, which had predominantly commercial activity, will be excluded for the purpose of this study. The remaining wards will be randomly chosen for study.

**DATA ANALYSIS**

Data collected with two instruments will be coded in master data sheet in excel worksheet. Total score of individual sections of ego integrity rating scale will be analysed on the basis of rating scale score.

**Table No. 2 - Plan for data analysis**

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Data analysis</th>
<th>Method</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Descriptive statistics</td>
<td>Mean, Median, Standard deviation.</td>
<td>To assess the level of ego integrity in male and female geriatric population</td>
</tr>
<tr>
<td>2</td>
<td>Inferential statistics</td>
<td>Test of significance Z test</td>
<td>Compare the level of ego integrity towards life among male and female geriatric population</td>
</tr>
<tr>
<td></td>
<td></td>
<td>t-test One way ANOVA</td>
<td>Associate demographic variables with level of ego integrity towards life of female and male geriatric population.</td>
</tr>
</tbody>
</table>

**SUMMARY**

This chapter has covered research approach, research design, setting of the study, population, variables, sample, sampling techniques, tool preparation, reliability, validity, feasibility, pilot study, method of data collection and plan for data analysis.