CHAPTER III
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RESEARCH METHODOLOGY

This chapter deals with methodology for assessing the effect of guided imagery on stress level and lifestyle among alcoholics admitted in de-addiction centers. It includes research approach, research design, setting, Population, sample, sampling techniques, procedure for data collection and plan for data analysis.

3.1 RESEARCH APPROACH:

The research approach refers to the way in which the investigator plans and constructs in research process\(^{103}\).

The present study aimed at assessing the effect of guided imagery on stress level and lifestyle among alcoholics admitted in de-addiction centers of Pune city.

In order to achieve the objectives of the study, an exploratory approach was considered appropriate. The exploratory approach in a experimental study in which the researcher investigates a group of people.\(^{104}\).

This study has an evaluative approach. The major purpose of evaluative research is to formulate problems and assess hypothesis of the study.

Evaluative research is oriented that seeks to accurately describe what is, and to evaluate facts related to the problems under study.

In the present study, the investigator has described the association between selected demographic variables, stress level and lifestyle.

3.2 RESEARCH DESIGN:

A researcher overall plan for obtaining answers to the research questions being studied and for handling the difficulties encountered during research process.\(^{105}\).

In this study a quasi-experimental two groups design was carried out to assess the effect of guided imagery on stress level and lifestyle. Study population was divided into experimental group and control group. Pre-test was done on both groups and Post-test on experimental group was done after intervention but on control group post test was done without intervention.
Table 2: Table representations of the design:

<table>
<thead>
<tr>
<th>Sample/Subjects</th>
<th>Variables</th>
<th>Instruments</th>
<th>Scoring</th>
<th>Plan of analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Independent</strong></td>
<td>Section III</td>
<td>Yes/No type</td>
<td>Frequency and percentage</td>
</tr>
<tr>
<td>Patient admitted in Muktangan de-addiction center.</td>
<td>Guided Imagery with progressive muscle relaxation</td>
<td>Intervention is in experimental and in control group only assessed</td>
<td>Frequency and percentage</td>
<td></td>
</tr>
<tr>
<td></td>
<td>*stress</td>
<td>Section I: Demographic variable</td>
<td>Frequency and%</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Dependent</strong></td>
<td>Section II: Stress scale</td>
<td>5points likert scale</td>
<td>Frequency, %, Mean, SD, t-test.</td>
</tr>
<tr>
<td></td>
<td>• Lifestyle</td>
<td>Section IV: Life style scale</td>
<td>Yes/NO type</td>
<td>Same as above</td>
</tr>
</tbody>
</table>


3.3 RESEARCH SETTING:

“Setting” refers to the area where the study is conducted. The setting for this study was the de-addiction centers that are situated in Pune city. Muktangan de-addiction centers that which is alcohol rehabilitation centers was the setting for the study which was selected with simple random sampling method (Lottery method).

Muktangan de-addiction center is situated at Mohanwadi, Yerwada, Pune-16 nearby to Regional mental hospital, Yerwada. It is 15kms away from Dr.D.Y.Patil college of Nursing, Pune-18 and it is 10km from Pune station. Here patients can reach by any means of transport. This Muktangan de-addiction centre caters with approximately 100 beds with both male and female addicted clients. Client has to stayin de-addiction center for 35 days compulsorily and in addition if willing. The client is provide care like group therapy, counseling, visit by psychiatrist, exercise, family counseling and spouse counseling. It also has Day care centre and alcoholic anonymous group who stay in Muktangan de-addiction centre. It also provides with recreational activities, reading newspaper and conduct prayers.

3.4 POPULATION:

“Population refers to the entire aggregation of cases that meet a designated set of criteria.” [105]. “Population is an entire set of individuals who have specific characteristics that the investigators are interested in studying.” [106].

The requirement of defining population for a research project arises from the need to specify the group. The populations in the present study are alcoholics admitted in de-addiction center.

3.5 SAMPLES AND SAMPLING TECHNIQUE:

A sample is used in research when it is not feasible to study the whole population from which it is drawn.

“Sample is a subset of accessible population (which is available to the researcher) which represents the population of interest.” [105].

The present study includes male alcoholics admitted in Muktangan de-addiction centers of Pune city.
The present study has used probability simple random sampling technique for selection of the samples. This entails the section of sample by design, by choice and not by chance.

3.6 SAMPLE SIZE:

Generally speaking large sample are more representative of the population of interest than small sample.

The sample size of the study consists of 200 alcoholics from selected setting in which, 100 for experimental group and 100 for control group those who are admitted in de-addiction centers of Pune city.

The estimated sample size for the parents is determined largely by three factors:

i) The estimated prevalence (P) of variable – Maharashtra contributes 96,752,247 and Pune’s population is 33,37,481. Pune shares 10% of alcoholics from total population of Pune district.[2].

ii) The desired level of confidence – for this study taken as 95%.

iii) Absolute precision / acceptable error (E) 04%.

Sample size determination (n) = \( Z_{1-\alpha/2}^2 \frac{p q}{d^2} \)

\[ n = \frac{(1.96)^2 \times 0.1 \times 0.9}{(0.04)^2} \]

\[ n = 176 \]

Therefore the sample size for alcoholics was taken as 200 who fulfilled the criteria.

The process of sampling makes it possible to accept a generalization to the intended population based on careful observation of variables within a relatively small proportion of population.
Target population
(Alcoholics admitted in de-addiction centre)

Sample size 200 patients selected over two months and post-test continued till six months

Experimental group
N=100 (per week 25 clients)

Control group
N=100

Intervention: Guided imagery

No Intervention or guided Imagery

Follow up till six months.

Research hypothesis

Effect on stress and lifestyle

assessment on stress and lifestyle

Figure 2: Schematic representation of the research samples
3.7 CRITERIA FOR SAMPLE SELECTION

The following criteria are set for the selection of sample

**Inclusion criteria:**
1. Alcoholics admitted in selected de-addiction centers.
2. Male admitted alcoholics.
3. Alcoholics from second week of admission.

**Exclusion criteria:**
1. Those who are not willing to participate.
2. Female admitted alcoholics.
3. Newly admitted alcoholics for a week due to withdrawal symptoms.

3.8 TOOLS AND TECHNIQUES:

The instrument selected in the study should be as far as possible the vehicle that would best obtaining data for drawing conclusion pertinent to the study\[104\].

Investigator has prepared structured self-rating questionnaire related to stress, lifestyle and profile on guided imagery.

3.8(i) Development of the tool

A structured questionnaire was prepared for assessing stress level among alcoholics based on the following:

- Review of research and non-research literature used in the area related to stress.
- Opinions and suggestions will take from experts, which will help in determining the important areas to be included.
- The investigators own exposure to study area helped in development of the tool.

3.8(ii) Description of the tool

The tool consists of four sections

**Section I** includes demographic information which consist 17 items on background data of alcoholics like age, marital status, Period after marriage, spouse alive, Educational status of alcoholic, Educational status of spouse, Occupation, Family income, Source of income, Type of family, size of the family, Dependent members, Number of children,
EFFECT OF GUIDED IMAGERY ON STRESS LEVEL AND LIFESTYLE AMONG ALCOHOLICS ADMITTED IN DE-ADDICTION CENTERS OF PUNE CITY.

Phases of alcoholism Duration of Alcoholism, Number of admission in de-addiction center.

Section II The perceived stress scale (PSS) is a classic stress assessment instrument prepared in 1983 and Ardell wellness stress test is modified to a five point Likert scale that consists six aspects of health areas like physical, financial, spiritual, social, emotional and mental. 05 items in each aspects and each are marked against never-0, almost never-1, sometimes-2, fairly often-3, very often-4. Highest (maximum) score is 120 and lowest (minimum) score is 30. Scoring: 0-40 low stress, 41-80 moderate stress and 81-120 severe stress.

Section III Profile of Guided imagery and observation checklist

Section IV includes close ended (Yes/NO) questionnaires on lifestyle was prepared in areas like physical care, physiological care, emotional care, social care, occupational care, spiritual care and cultural care.

3.9 CONTENT VALIDITY

To ensure content validity of the tool. The experts were selected on the basis of their clinical expertise, experience and interest in the problem under study. They were requested to give their opinion on the appropriateness and relevance of items in the tool. Tool was submitted to 25 experts along with research proposal. Out of 25 experts 08 are Ph.D. in Nursing (subjects like 03 in Community Nursing, 02 in Medical Surgical Nursing, 02 Pediatrics Nursing, 01 Obstetrics and Gynecological Nursing), 05 M.Sc (N) who are seniors in Nursing (02 Psychiatric Nursing, 02 Community Nursing, 01 Medical Surgical Nursing), 03 Psychiatrist, 02 experts were statistician, 02 experts were sociologist, 01 Clinical Psychologist and 04 were from community medicine.

The experts were selected on the basis of their clinical expertise, experience & interest in the problem under study. They were requested to give their opinion on the appropriateness & relevance of items in the tool.

02 experts suggested to add question in section I & on phases of alcohol, 03 experts suggested to add options like 61-70 & above 75 in section I, 02 experts suggested to change option of monthly income and source of income, 03 experts suggested change in marital age, 03 experts suggested to reduce sample size to 100 and maximum 20
experts suggested to reframe sentences related to grammatical corrections is section II & section IV but no suggestions in section III.

Suggestions were taken into consideration in above mentioned areas as follows:

**Aim:**
Previous: To relieve stress & change lifestyle among alcoholic with the help of guided imagery.

Present: To study the effect guided imaginary.

**Objectives of the study:**
Previous:

1. To assess the stress level and lifestyle among alcoholics admitted in de-addiction centers in experimental group and control group.
2. To assess the effect of guided imagery on stress level and lifestyle among alcoholics admitted in de-addiction centers in experimental group.
3. To assess the posttest stress level and lifestyle among alcoholics admitted in de-addiction centers in control group.
4. To compare pre-test and post-test stress level and lifestyle among alcoholics admitted in de-addiction centers in experimental group and control group.
5. To find association of selected demographic variables with stress level and lifestyle among alcoholics admitted in de-addiction centers in experimental group and control group.

Present:

- To assess the stress level and lifestyle in pre-test and post-test among alcoholics admitted in de-addiction centers in experimental group and control group.
- To assess the effect of guided imagery on stress level and lifestyle among alcoholics admitted in de-addiction centers in experimental group.
- To compare pre-test and post-test stress level and lifestyle among alcoholics admitted in de-addiction centers in experimental group and control group.
- To find association of demographic variables with stress level and lifestyle among alcoholics admitted in de-addiction centers in experimental group and control group.
Assumption

Previous:

1. It is assumed that there is stress among alcoholics due to alcoholism.
2. It is assumed that Guided Imagery will help to reduce the stress.
3. It is assumed that relief from stress will bring positive change in life.
4. It is assumed that alcoholics have knowledge regarding alternative medicines to alcoholism.

Present:

- There is stress among alcoholics.
- Guided Imagery reduces the stress.
- Reliefs from stress bring positive change in life.
- Alcoholics have knowledge regarding alternative medicines.

Section I: Tool

- Addition in Q. 1) option e) 61 to 70 years and 75 years and above.
- Marital status was added as Q. 2 with option a) Married b) unmarried.
- Item 2 becomes Q. 3 if married then period after marriage and deleted option: Unmarried.
- Added option e) post graduate and deleted professionals from Q. 3 and 4 and now becomes Q.4 and Q. 5.
- Added daily wages as option e in Q. 5 previous and now becomes Q. 6.
- Deleted mixed from Q. 7 and now Q. 8 source of income and framed new item number 9: if independent then (a) Pension (b) Children.
- Correlation in words in other items and recognizing all items.

Section II: Reframing sentences with some grammatical corrections.

Section III: Add observational checklist to protocol of guided imagery

Section IV: Reframing sentences with some grammatical corrections.

3.10 RELIABILITY The reliability of a measuring instrument is a major criterion for assessing its quality and adequacy. [106]
After obtaining formal administrative permission from Muktangan Deaddiction Center, the tool was administered to 20 participants with consent on 24-09-2012 following split-half method of reliability. The purpose was to determine the internal consistency of the tool, clarity of items, difficulty in understanding items, to ensure the reliability and feasibility of the tool. Analysis of both tool reliability was done on 1/10/2012 to 2/10/2012 using split-half method were the whole data was divided into two equal halves x and y using spearman-Brown prophecy formula \( r^1 = \frac{2r}{1+r} \) value was calculated and r value was calculated using co-efficient of correlation formula \( r = \frac{\text{Cov}(x,y)}{\sigma_x \cdot \sigma_y} \) result was found to be 0.96 and 0.97 for life style scale. Hence the questionnaire was found to be reliable 80% as value is more than 0.8.

3.11 PILOT STUDY:
A pilot study is a small-scale version or trial run of the major study. The function of the study is to obtain information for improving the project or for assessing its feasibility\(^{[106]}\).

A pilot study was conducted from 05/10/12 to 23/3/13 in Muktangan de-addiction center, Pune with prior permission from de-addiction center and with consent from client. To assesses the feasibility of the study and to decide on plan of statistical analysis.

Sample size: 20 samples out of which 10 samples were for experimental group and 10 were for control group. Samples were selected by probability simple random sampling technique. Using self structured questionnaire on stress and life style data was collected in pretest and posttest in both groups. Posttest was done seven different times. First one on seventh day after intervention, then next posttests on second week, third week, fourth week, second month, fourth month and sixth month from the time of guided imagery intervention. Whole intervention is for 30 minutes and data collection for another 10 minutes. Findings after analysis indicated that tool was effective for assessment of stress and life style. Analysis was done to get the idea about consequences of the study. An analysis was based on first three objectives of the study. Association with demographic variable was not feasible to calculate with ten samples in each group.
3.12 PROCEDURE FOR DATA COLLECTION:

Data was collected among alcoholics from de-addiction center of Pune city from 1st April 2013 to 31st October 2013. Researcher approached samples, maintain rapport and consent was taken prior to study.

Table 3: Table representation of days of data collection:

<table>
<thead>
<tr>
<th></th>
<th>Pre-Intervention or baseline data: Day 1</th>
<th>1st day Demographic data (section I), Stress scale (section II), lifestyle (section IV) was collected from subjects.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Pre-Intervention or baseline data: Day 1</td>
<td>1st day Demographic data (section I), Stress scale (section II), lifestyle (section IV) was collected from subjects.</td>
</tr>
<tr>
<td>2</td>
<td>Intervention Day: Day 1,2,3,4,5,6,7</td>
<td>The subjects were grouped into two groups using simple random sampling. Total sample size 200. Group I: control for four weeks. 25 in each week, sample size 100 (25*4) Group II: Experimental for four weeks. 25 subject per week, sample size 100. Guided Imagery intervention was given for seven days.</td>
</tr>
<tr>
<td>3</td>
<td>Post intervention data from 7th day</td>
<td>on 7th day, 2nd week, 3rd week, 4th week, 8th week, 16th week and 24th week collected data for section II and Section III in both experimental and control groups.</td>
</tr>
</tbody>
</table>
3.13 PLAN FOR DATA ANALYSIS:

The analysis was made on the basis of objectives. The data analysis was planned to include descriptive and inferential statistics. Descriptive statistics such as frequency and percentage, S.D. are used for demographic variables, stress level and lifestyle assessment. Inferential Statistics such as t-test and chi-square is used to see the correlation between selected demographic variables with stress level and lifestyle among alcoholics admitted in de-addiction center. These all findings are documented in tabulation, graphs and diagrams.

3.14 SUMMARY:

The chapter on research methodology deals with research approach, research design, research setting, population, sample and sampling technique, sample size, tools and techniques, validity, reliability, pilot study, procedure for data collection and plan for data analysis to help to organize and interpret data in chapter IV.