CHAPTER III

METHOD

Method part is more important of any research which guides the researcher to take the right steps in completing the research endeavor. In the last chapter literature survey presented the important research studies in the related topics on Stigma, QOL and Psycho-education. There are no integrated studies on impact of Psycho-education on stigma and QOL in PLWHA. This chapter contains important methodological steps such as: (i) Statement of the Problem (ii) Hypotheses (iii) Design (iv) Participants (v) Instruments (vi) Procedure (vii) Statistical analyses.

(i) STATEMENT OF THE PROBLEM

Greff, Leana and Uys (2009) in their study has quoted that, in the absence of any intervention to address and reduce stigma and discrimination, individuals will continue to report poorer QOL. Brown, Trujillo and Macintyre (2003) suggest that HIV/AIDS stigma can be reduced through intervention strategies including information, counseling, coping skills and acquisition, and contact with affected groups. This reality makes formulating the problem and testing the effectiveness of interventions desirable. Nonetheless, the existing literature didn’t focus on the role Psycho-education in reducing stigma, discrimination and to improve QOL. Therefore, it seemed appropriate to use Psycho-education intervention with the PLWHA. This study explored the impact of Psycho-education on symptoms of stigma and QOL in PLWHA.

Objectives

1. To study the impact of psycho-education on stigma in PLWHA.
2. To study the impact of psycho-education on QOL in PLWHA.
Operational definitions

Bordens and Abbott (2002) state that operational definition is ‘a definition of a variable in terms of the operations used to measure it’.

1. **Stigma** – an individual’s perceived response to interaction with his or her environment as measured by the HIV stigma scale.

2. **QOL** - an individual’s response to interaction with his or her environment as measured by the HAT-QOL scale.

3. **Gender** - a response of men or women as identified on the personal information schedule designed by the researcher.

4. **Education** - a response of illiterate, literate, below high school, and degree as identified by on the personal information schedule designed by the researcher.

5. **Intervention** - The model of group intervention used in this study was modeled on the study of Anderson, who was the first person to employ Psycho-education on schizophrenic patients and their families. Psycho-education main theme is education offered to people who live with a psychological disturbance which helps to reduce ignorance, prejudice, and discrimination which enhance QOL.

Variables

(a) **Independent variables**- two treatment conditions- Before and after Psycho-education intervention.

(b) **Dependent variables**- Stigma and Quality of life.
(ii) HYPOTHESES

Following directional hypotheses were formulated for this study.

Hypothesis 1

Psycho-education group intervention will reduce Stigma in PLWHA.

Hypothesis 1.1

Psycho-education group intervention will reduce more in men PLWHA than in women PLWHA.

Hypothesis 2

Psycho-education group intervention will improve QOL in PLWHA.

Hypothesis 2.2

Psycho-education group intervention will improve QOL more in men PLWHA than in women PLWHA.

(iii) DESIGN

Pre-post test is the classical type of experimental design and has good internal validity and is widely used in behavioral research, primarily for the purpose of comparing groups and/or measuring change resulting from experimental treatments. The advantage here is the randomization, so that any differences that appear in the posttest should be the result of the experimental variable rather than possible difference between the two groups to start with, the external validity or generalizability of the study is limited by the possible effect of pre-testing.

In the present study an experimental pre and post test design, with a treatment and control group, was used. The dependent variables were the Stigma and QOL and
the independent variable were two treatment conditions - before and after psycho-
education intervention. There were two groups of participants, the experimental
group for which the Psycho-education intervention was given and the Control group
for which no Psycho-education was given but kept under observation.

(iv) PARTICIPANTS

Participants were selected from ART centre, K R Hospital Mysore, among
state run hospitals of Mysore division consisting of eight districts, where large
number of PLWHA who get diagnosed and treated. Therefore researcher has selected
K R hospital to conduct the study. Participants were available in large number; to
select the participants purposive sampling was used. Purposive sampling a form of
non probability sampling was done where we sample specific predefined group with a
purpose in mind.

Approximately 300 participants were administered with the scales of HIV
Stigma scale and HAT-QOL scale and selected 120 PLWA, who have high score on
stigma scale and low score on QOL scale. The Participants were divided randomly by
using lottery method to assure the sample are equal in distributing in to two groups
i.e. experimental group (which consists of 60 PLWA: 30 men + 30 women) who
receive Psycho-education and control group (which consists of 60 PLWA: 30 men +
30 women) who do not receive Psycho-education but kept in observation. The
independent t test was run to confirm stigma and quality of life are equal in both
experimental and control group and found no significant. Inclusion and exclusion
criteria were used in the selection is given below
**Inclusive criteria**

1. Who have registered for ART and undergoing treatment.

2. The age of the participants must range from 20-40 years.

3. Who have scored high on stigma scale and low in QOL scale.

4. Who have given written informed consent to participate in the study.

**Exclusive criteria**

1. Who have any other disease like Tuberculosis, Sexually transmitted diseases and the like rather than HIV/AIDS was excluded.

2. Who had undergone any other intervention program.

**(v) INSTRUMENTS**

1. HIV Stigma scale (Berger, 2001)

2. HAT-QOL instrument (Holmes, 1999)

3. Personal information schedule

1. **HIV Stigma scale**

   The HIV Stigma scale developed by Berger (1996) was used to assess the participants levels of stigma (Appendix-E). This 40-item four point scale groups stigma into the following four categories, personalized stigma (self-stigma); perceived public attitude (concern with public attitude about people with HIV); disclosure concerns and Negative self-image (internalized negative self-image).

   The scores are scaled in the positive direction (higher the score higher the stigma). Personalized stigma had items that assessed whether PLWHAs had...
experienced rejection, loss of employment, and discrimination and therefore stopped socializing. Negative self-image had items that assessed the fear of being stigmatized, concerns about people’s reactions towards people with HIV, individual beliefs and feeling guilty. Public attitude had items that indicated public reactions towards HIV; for instance, the public view that a HIV person is dirty and disgusting, and other attitudes of discrimination that included normal people treating PLHA like outcasts. Disclosure concerns had items which assessed anxiety and fear of disclosing their HIV status.

Items are scored as follows: strongly disagree = 1, disagree = 2, agree = 3, strongly agree = 4. Two items are reverse-scored: items 8 and 21. After reversing these two items, each scale or subscale’s score is calculated by simply adding up the raw values of the items belonging to that scale or subscale. Sixteen items belong to more than one subscale, reflecting the inter correlations of the factors on which the subscales are based.

The range of possible scores depends on the number of items in the scale for the total. HIV Stigma Scale, scores can range from 40 to 160 [1 x 40 items to 4 x 40 items]. For the personalized stigma subscale, scores can range from 18 to 72. For the disclosure subscale, scores can range from 10 to 40. For the negative self-image subscale, scores can range from 13 to 52. For the public attitudes subscale, scores can range from 20 to 80. The overall scores were categorized into minimal to low stigma (16–40) and moderate to high stigma (41–64).

Coefficient alphas are between .90 and .93 for subscales and .96 for the 40-item. Instrument provided evidence of internal consistency reliability. According to Berger, the HIV Stigma Scale is reliable and valid with a large, diverse sample of
people living with HIV. According to author of this sale psychometric properties of the scale are found to be satisfactory.

Jeyaseelan, et,al. (2013) assessed the reliability and validity of a Tamil translation of the original 40-item scale, and conducted confirmatory and exploratory factor analyses to assess cultural appropriateness and abbreviate the scale. Reliability and validity were high (alpha = 0.91; test–retest reliability ICC = 0.89). This culturally validated, abridged HIV-Stigma scale can be used in busy clinical settings to identify individuals in need of psychosocial support and assess post-intervention changes in stigma in Southern India.

2. HAT-QOL instrument

HIV/AIDS Targeted Quality of Life instrument (HAT-QOL) was developed by Holmes in 1999 (Appendix-F). This quality of life measure is a 34-item instrument that is HIV disease specific. It measures nine dimensions: overall function, life satisfaction, health worries, financial worries, medication worries, HIV mastery, disclosure worries, provider trust, and sexual function. The subscale is scored so that the final score is transformed into a linear 0–100 scale, where 0 is the worst score possible and 100 is the best score possible. Holmes (1999) reported on the development and validation of the scale. Construct validity was determined through various self-reported HIV disease markers and self-reported socio-demographic variables, internal consistency reliability coefficients ranged from 0.83 to 0.88 for all nine dimensions. According to author of this scale psychometric properties of the scale are found to be satisfactory.
3. Personal Information Schedule (PIS)

The researcher of this study develops Personal Information Schedule (PIS) (Appendix-D).

(vi) PROCEDURE

Ethical considerations

1. Approval from Institutional Human Ethical Committee (IHEC), University of Mysore was taken.

2. Approval from KSAPS (Karnataka state AIDS prevention society, Bangalore) was also taken.

3. Written informed consent was obtained from each subject participating in the study (Appendix-A).

4. Confidentiality was assured and maintained regarding their HIV/AIDS.

5. The subjects were explained about the nature of study and informed that participation in the study is voluntary and they have the right to opt out at any time.

6. Participants of control group were also provided with Psycho-education after obtaining post test scores which was not a part of main study, done with the ethical point of view.

The Pilot study

Pilot study is a small scale preliminary study conducted in order to evaluate feasibility, time, cost and adverse events in an attempt to predict an appropriate sample size and improve upon the study design prior to performance of a full-scale research.
In the current study the purposes of the pilot study were:

1. To check the clarity of the items enlisted in the questionnaires.
2. To get an approximation of time required to complete the questionnaires.
3. To ensure feasibility of the tools selected for the study.
4. To get a fair idea of the people with HIV/AIDS infection, reactions toward research study and questionnaires.

The Participants for pilot-testing was a convenient sample consisting of the clients who were attending support group meetings. The investigator introduced himself to each person of that support group and explained the study briefly. Then asked them, if he/she would agree to volunteer as a participant for the pilot-test? Each of those who agreed signed the consent letter and participated in the pilot-test.

A minimum of 10 people with HIV/AIDS were selected in for each questionnaires. The HIV Stigma scale and HAT-QOL tools were administered by the investigator personally and taken feedback information.

**Outcome of the pilot study**

Pilot study resulted in clarity of the items enlisted in the questionnaires, it gave an approximation of time required to complete the questionnaires. It gave clinical picture of PLWHA reactions toward research study and questionnaires.
Experimental group and control pretest-posttest design is employed in this study which requires the utilization of a control group and random assignment of subjects to groups.

Administration of Stigma scale and QOL scale (pretest) to a group of 300 PLWHA, keeping in view the objectives and design of this experiment the procedure followed in three phases.
Phase I: Screening phase (Pre test and equating the groups)

Phase II: Experimental treatment

Phase III: Post test

Experimental group was divided into four subgroups; each subgroup consists of 15 subjects. Each subgroup was given seven sessions for 60-min about duration of a week. Total intervention concluded in three months approximately from January 2011 to March 2011. Control group was kept under observation. Researcher used to meet them every week and have casual talk. Just to make sure that they should not commit to other intervention. The Psycho-education group intervention was done in seven sessions for experimental group. The intervention sessions abstract are as follows.

Phase 1: Equating the groups and Pretest administration

The scale was administered to a group approximately 300 PLWHA among them 120 PLWHA were selected who have high score on stigma scale and low score in QOL scale. The selected participants were asked for their willingness to undergo intervention. The Participants were divided randomly by using lottery method to assure the sample are equal in distributing in to two groups i.e. experimental group (which consists of 60 PLWHA: 30 men + 30 women) who receive Psycho-education and control group (which consists of 60 PLWHA: 30 men + 30 women) who do not receive Psycho-education but kept in observation. Then Participants were divided randomly by using lottery method to assure the sample is equal in distributing in to two groups i.e. experimental group and control group. Selected participants were asked for written informed consent to participate in the study. Experimental group further divided into four groups; each group consists of 15 participants. Each sub
group was given seven sessions for 60-min about duration of a week. The independent t test was run to confirm stigma and quality of life are equal in both experimental and control group and found no significant.

<table>
<thead>
<tr>
<th>DETAILS OF SESSIONS</th>
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<tbody>
<tr>
<td>Four groups</td>
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<tr>
<td>Each group consist of 15 members</td>
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<tr>
<td>Seven sessions</td>
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<td>Each session 60min duration</td>
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<td>Session interval one week</td>
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<td>Total duration seven hours</td>
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**Phase 2: Psycho-education Intervention**

Psycho-education refers to the education offered to people who live with a psychological disturbance. Psycho-education is not a treatment; it is designed to be part of an overall treatment plan. Psycho-education has been around for a long time. It has remained consistently popular as a tool for families and caregivers to be able to make sense of what is happening to a person who is experiencing a mental disturbance. Specially designed group intervention, based on Psycho education model of Anderson, focusing on the needs and problems of the people with HIV/AIDS infection, was given to experimental group.

The popularization and development of the term psycho-education into its current form is widely attributed to the American researcher Anderson in 1980 in the context of the treatment of schizophrenia. Her research concentrated on educating relatives concerning the symptoms and the process of the schizophrenia. Also, his
research focused on the stabilization of social authority and on the improvement in handling of the family members among themselves. Finally, Anderson’s research included more effective stress management techniques.

**The Psycho-education intervention consists of four elements**

1. Briefing the patients about their illness
2. Problem solving training
3. Communication training
4. Self-assertiveness training

Generally, prior research of psycho-education involved families who lived with their ill relatives and who were assessed as having a high degree of expressed emotion (Hogarty, Anderson and Reiss, (1987). Most of the research has therefore required the participation of ill relatives, either in the family treatment or in treatment of the mental illness. In designing the current study, a decision was made not to use families but patients themselves, so that the effect and the result can be more directly observed and realized.

The Psycho-education was done in seven sessions for experimental group. The intervention sessions abstract are as follows.
Session 1

Goal: Personal, Topic introduction and Rapport building

Activities done: Plan for sessions, Presented “out of box thinking”, Oath taking on Confidentiality and Filling of Consent forms from participants.

The session was started by introducing me and giving a high level overview of the topic and goal setting for our next sessions. It was important for me as researcher to know each and every one by name and their background at an acquaintance level. It was also key to make them comfortable with me and the other participants as this group was to be together for at least next six planned sessions. So, I divided the participants in pairs. Asked them to introduce themselves and have a small talk for few minutes. Later, each one had to introduce the other mate to the session.

With the introduction, the participants were made to take an oath, that they shall not reveal any information about their peers and their information and further not discuss anything outside the session, which will hurt the sentiments or anyway cause problems to the participants or themselves. Additionally I also took the oath along and promised confidentiality about information collected.

As part of rapport building and an ice breaker activity, presented them with a simple puzzle on “out of the box thinking” to showcase different perceptions. The example was about joining all the given dots without tracing the path twice.

Rationale: The rationale behind taking this example was chosen for this session, to give the participants a subtle message that, we have to think differently and not get fazed by everyday problems. Every problem has a solution; we have to think towards it with a right frame of mind. Things that seem impossible at the beginning, can be solved with a little logic and confidence or hope.
Observation: Participants liked the way introduction was differently done. They also appreciated the simple puzzle example, which showcased the way we/people think and view problems always with obstacles though solution seemed simple. The objective of session one was achieved with introduction and an overall plan of intervention explained. Finally the consent was taken by participants to be a part of intervention program on their complete will. Additionally there was a promise that the identity and information shared would be kept confidential and anonymous.

Session 2

Goal: To remove ignorance on HIV and build awareness

Activities done: Brainstorming on HIV and exchange of thoughts on HIV/AIDS.

Before briefing the group about HIV causes, symptom and treatment, researcher tried to collect information about HIV through brain storming. Made the participants to write down answers for the following questions.

- What is HIV?
- How it is transmitted?
- What are the symptoms?
- Do’s and Don’ts?

Participants took their time to finish it. They were then instructed by researcher to call out their response on the given questions. Few of them really had better information on HIV and most of them had misconception on HIV. After everybody finished, researcher tried to break down incorrect assumptions about the HIV, gave them lecture and showed power point presentation on HIV to build awareness and remove ignorance about HIV. The participants were given an assignment to come prepared and share their experience in the next session, because
of ignorance from self and their family members in the past. The participants were asked to revise on the available HIV education (Appendix -J) from the handouts provided to them.

**Rationale:** Brainstorming is an informal approach to problem solving. It provides a free and open environment that encourages group to participate and come up with thoughts and ideas whether it is right or wrong.

**Observation:** Participants were actively involved in brainstorming. They felt it was really helpful information about Do’s and Don’t’s being PLWHA. Awareness was built by giving right information on HIV. At the end of the session the group was opening up more and being responsive and attentive. The objective of session two was achieved by giving clarity on HIV and removing ignorance and misconception on HIV. Additionally the participants were made to take an oath to keep identity and information confidential and anonymous.

**Session 3**

**Goal:** To identify and reduce negative emotions in PLWHA.

**Activities done:** Follow up from Session 2, Presented motivational quotes and inspiring stories of great personalities.

It was observed that the assignment was not taken very seriously. Also only few participants volunteered to share the assignment and accordingly their experience. Also, negative emotions were identified by observing their behaviors and attitudes from the above experience and also in the session. While interacting with them for reasons, they expressed feelings such as destiny and fate. I tried to reduce negative emotions by sharing motivational quotes from Swami Vivekananda, Ramakrishna...
Paramahamsa, Mahatma Gandhi and others. I also shared few inspiring stories of great personalities, who underwent incurable diseases. This was done to fill hope and inspiration to participants who are living with all distress and disharmony in their personal life. They were told story about Veenadhari who took transformation leadership to change the mindset of common people about HIV being an HIV affected individual.

**Rationale:** Motivational quotes and inspiring stories of great personalities were used in this session because they are of the transformational leaders and celebrities who can inspire the common man to follow their lifestyle and directive.

**Observation:** Few participants showcased their frustrations about their situations being affected by HIV. Though motivational quotes and inspiring stories were shared, they felt it was far from common people’s reach (like them) to achieve. The objective of session three was partially achieved with inspirational stories and motivational quotes. But as a researcher, I felt working with negative emotions needs a long term intervention to remove the same completely. But this session was a reasonable attempt to reduce it to some extent. For people who shared frustration, the session was extended to hear their pain points and other experiences. As a regular practice the participants were made to take an oath to keep identity and information confidential and anonymous before breaking the session.
Session 4

Goal: To educate on danger of stigma

Activities done: Presented role-plays and open discussion.

In a group some participants were trained with skit and few of them were trained with role play. The topic selected was on fear of disclosing HIV and the negative impact of not disclosing HIV. The skit comprised of highlights on ‘Danger of stigma and discrimination’, How to ignore stigma creators, Avoiding situations and the like. Two skits were played by a group within experimental group before others. One skit was on stigma and its danger which enlightened them to understand ill effect of stigma. Another role play was on discrimination, how discrimination happens in different settings and how to overcome through a role play. After the presentation was finished the researcher did a retrospection of the skit and role play with all the participants asking various questions like: ‘kindly share your thoughts about the skit and role play?’ ‘Does anyone have any personal experiences with stigma and discrimination that they would like to share?’ ‘Is there any difference of opinion on stigma and discrimination, prior to this presentation and after?’ etc., the direction of the discussion was to educate about the danger of stigma.

Rationale: Role play and skits is an educational technique where the participants themselves involve. This helps them and audience to observe and understand how difficult situations are dealt by PLWHA in the society.

Observation: Participants were actively involved in skit and role play and they got a chance to realize what the negative side of being stigmatized is. Most of them shared their personal experience of stigma and discrimination. The objective of session four was achieved with role play and skit. This was an interactive and participative
session. This I believe will help them to face the challenges from stigma. As a regular practice the participants were made to take an oath to keep identity and information confidential and anonymous.

**Session 5**

**Goal: To educate on rights and laws on HIV**

**Activities done:** Discussed the role of KSAPS and NACO in legal literacy.

The participants were provided education on relevant rights and laws on HIV stigma and discrimination. Shared NACO/KSAPS role in legal literacy and made the participants familiar with legal information and facilities available. At first they were asked whether they are aware of any legal information on HIV stigma and discrimination. Later they were provided information on sources of law and law related to discrimination as a fundamental law. Information on consent and confidentiality were also given. Talk on KSAPS plan of legal service centre’s on all ART centre’s i.e., 41 centre’s in 30 districts information was also given. At the end of the session, as best practice, the retrospection was done with discussions and questions. ‘‘Prior to this talk what were some of your thoughts about rights and laws for HIV?’’; ‘‘Where did you get information about laws related to HIV?’’, etc., Toll free number of HIV legal service centre was provided to ask further queries and doubts on rights and laws of HIV. The participants were asked to revise on the available legal rights and laws (Appendix- J) from the handouts provided to them.

**Rationale:** PLWHA are unable to defend their rights and demand justice as they are unaware of legal rights and laws. So legal literacy enables them to access justice and seek legal redress to their problems.
**Observation:** Most of the participants were unaware of rights and laws on HIV, and they felt it was useful information. The objective of session four was achieved successfully by educating them about rights and laws for HIV. They appreciated the way information was given and they expressed the need of the legal information which they need. The participants were made to take an oath to keep identity and information confidential and anonymous as a regular practice.

**Session 6**

**Goal:** To develop assertive skills.

**Activities done:** Previous session follow up, Assertive skill training.

Self assertiveness training was provided. First they were told the difference between an assertive person and non assertive person. Some tips to build, boost, and develop self-confidence and assertiveness were given. Assertive Techniques (a) Broken Record - Be persistent and keep saying what you want over and over again without getting angry, irritated, or loud. Stick to your point.  (b) Free Information - Learn to listen to the other person and follow-up on free information people offer about themselves. This free information gives you something to talk about.  (c) Self-Disclosure - Assertively disclose information about yourself - how you think, feel, and react to the other person's information. This gives the other person information about you.  (d) Fogging - An assertive coping skill in dealing with criticism. Do not deny any criticism and do not counter-attack with criticism of your own. With the above an attempt to make the group open minded, self confident was done.

**Rationale:** Assertiveness is a skill which is a part of social and communication skills. PLWHA should be assertive to stand up for their personal rights - expressing thoughts, feelings and beliefs in direct, honest and appropriate ways.
Observation: Participants were in need of the assertive training importantly. The internal and external stigma made them develop a closed mindset over time. Researcher observed that among the participants in intervention those who have acquired HIV from many years were assertive compare to the recently detected PLWHA, which was obvious in their behaviors. The objective of session six was achieved successfully by encouraging them to be themselves and boosted them to be assertive. The participants were made to take an oath to keep identity and information confidential and anonymous.

Session 7

Goal: To develop healthy lifestyle among PLWHA.

Activities done: Provide meal plan, Exercises, Meditation and Positive thinking.

Session was started with questions to participants, to understand their current food habits, and health consciousness. It was overwhelming to know, many were aware of right food habits and health habits. But it was evident that there was lack of application/practice. So, suggestions were given to improve quality of life by giving talk on practicing healthy habits like exercise, meditation, walking, and positive thinking. Role of diet and nutrition in the management of PLWHA were provided like meal plan, what to eat and what to avoid. Uses of pranayama and meditation and yoga were also explained. Some of the exercise postures were shown through slides to practice. All this was done to boost participants to manage with their symptoms and live with hope. The participants were asked to revise on the available HIV food habits (Appendix- J). From the handouts provided to them. Finally summary on overall sessions based on observations was provided and collected feedback.
Rationale: To be physically and psychologically fit it is necessary to follow healthy lifestyle like exercises, meditation, meal plan and the like.

Observation: Almost everyone knew about the meal plan as they were undergoing ART treatment. Doctors had provided them with the meal plan and list of nutritional food which they were familiar with. So everyone shared what they actually practice. Exercises and meditation was something new that they were not aware and said that they will practice in upcoming days. The objective of session seven was achieved successfully by educating them about healthy habits. Took feedback by asking all the participants about their experience in all seven sessions, what are the key takeaways from the intervention? Participants were quite positive in their feedback and said they need some long term intervention like this which makes them to lead their life positively. Additionally the participants were made to take an oath to keep identity and information confidential and anonymous.

Phase 3: Post test and follow up

After the very next day of last session of intervention, Stigma scale and QOL scale was administered once again for both the groups. The same intervention was given to the control group also from ethical point of view for few weeks.
(vii) STATISTICAL ANALYSES

In order to test the directional hypotheses formulated, a computer based SPSS package was used to analyze the data. The following statistical tools were used.

(a) Independent sample ‘t’ test

The Independent sample ‘t’ test was used to determine the significant difference between experimental and control groups, the data are subjected to independent samples ‘t’ test in the pre-test situation. This was done to assure the randomization by using lottery method to assure the sample is equal in distributing in to two groups. Inferential statistical analyses were done to determine any possible effect of the independent variables on the dependent variables.

(b) Analysis of variance- General Linear Model- repeated measures of ANOVA

Repeated measures ANOVAs are used to examine mean differences in related variables. Typically the independent variable is either time (e.g., Stigma is measured in the same group of people at two different points in time) or condition (e.g., each subject receives every condition). In SPSS, we will use the General Linear Model to calculate repeated measures ANOVAs. In this research, the effect of Psycho-education was recorded among the same group of individuals before and after is checked. Here it is utilized for this study to analyze both the subjects within group effects and between group effects. Because it helps to understand same subjects with every condition of the research, GLM repeated measures of ANOVA was used to variables of various domains of stigma and QOL.
(c) Cohen’s d

Cohen’s $d$ is used to measure the strength of a phenomenon which is called as effect size or a sample-based estimate of that quantity. An effect size calculated from data is a descriptive statistic that conveys the estimated magnitude of a relationship without making any statement about whether the apparent relationship in the data reflects a true relationship in the population.

Cohen’s $d$ is used in this study as it indicate amount of difference between two groups based on Stigma and QOL estimating sample size effect. A lower Cohen's $d$ indicates the necessity of larger sample sizes, and vice versa.