EFFECTIVENESS OF VIRTUAL REALITY THERAPY UPON ANGER AMONG ALCOHOLIC CLIENTS

BY

S.MOHANAPRIYA

A DISSERTATION SUBMITTED TO THE TAMILNADU DR.M.G.R MEDICAL UNIVERSITY, CHENNAI, IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE IN NURSING

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DECLARATION

I hereby declare that the present dissertation titled **"Effectiveness of Virtual Reality Therapy upon Anger among Alcoholic Clients at Selected De-addiction Center, Chennai"** is the outcome of the original research work undertaken and carried out by me under the guidance of **Dr. Latha Venkatesan, M.Sc (N), M.Phil. (N), Ph.D. (N) M.B.A,** Principal and Head of Obstetric and Gynecological Nursing, Apollo College of Nursing and **Prof. Vijayalakshmi. K M.Sc (N), M.A. Psychology, Ph.D. (N),** Head of Mental Health Nursing, Apollo College of Nursing, Chennai. I also declare that the material of this has not formed in any way, the basis for the award of any degree or diploma in this university or any other universities.

M.Sc (N) II Year

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SYNOPSIS

A Pre Experimental Study to Assess the Effectiveness of Virtual Reality Therapy upon Anger among Alcoholic Clients at Selected De-Addiction Center, Chennai.

Objectives of the Study

1. To assess the level of anger among alcoholic clients before and after Virtual reality therapy.
2. To evaluate the effectiveness of virtual reality therapy by comparing the level of anger among alcoholic clients before and after virtual reality therapy.
3. To determine the level of satisfaction on virtual reality therapy among alcoholic clients.
4. To find out the association between selected demographic variables and the level of anger among alcoholic clients before and after virtual reality therapy.
5. To find out the association between selected clinical variables and the level of anger among alcoholic clients before and after virtual reality therapy.

The conceptual framework of the study was based on Hildegard E Peplau which was modified for the present study. Null hypothesis were formulated. The level of significance selected was $P<0.05$. The research design used in this study was pre - experimental research design. A one group pre-test, post-test design, which is pre experimental in nature, is adopted for conducting the study. An

extensive review of literature and guidance by experts formed the foundation to the development of research tools such as Demographic variables proforma, Clinical variables Proforma, Clinical anger scale and Rating Scale on the level of satisfaction about Virtual reality therapy. The content validity was established by submitting the tools to experts and reliability was obtained through test-retest and split half technique and found to be highly reliable. The main study was conducted after the pilot study.

The study was carried out upon 30 alcoholic clients, Serene Life De-addiction center Madhurvoyal, Chennai. The level of anger was assessed before and after virtual reality therapy using Clinical anger scale in the group of alcoholic clients. Virtual reality therapy was administered every day morning 5 – 7 minutes for the period of one week for each alcoholic client. After one week, the level of anger was assessed by using Clinical anger scale among the alcoholic clients. Then the level of satisfaction on virtual reality therapy was also assessed by using satisfactory rating scale. The data obtained were analyzed using Descriptive and Inferential statistics.

Major findings of the study

- A Significant percentage of the alcoholic clients were aged upto 30years (46.66%) with mean age of 32.9 years and had a family history of alcohol abuse/ dependence (33.33%), were involved in business (36.66%) and had no children (43.33%), were graduates (33.33%).
- All of the alcoholic clients were from urban background and from nuclear family (100%) and majority of them were Hindus (86.66%) with monthly family income of Rs. 5001- 10,000 (60%). More than half of them were married (56.66%).

- Majority of the alcoholic clients started consuming alcohol at the age of 16-25 years (63.33%) with mean age of 22.5 years, had a previous history of alcoholics de-addiction treatment (66.66%) and made an effort to quit alcohol (76.66%) and the form of alcohol used was beer (73.33%), psychosocial problems of alcoholic clients was conflicts in relationship (66.66%).
- More than half of them had excited feeling at first intake of alcohol (59%) and the precipitating factor of consuming alcohol was family problem (53.33%).
- Half of the alcoholic clients had wish to improve oneself in motivation to seek treatment (50%) and had >5 years duration of alcohol dependence (50%).
- A significant percentage of the alcoholic clients consumed the amount of alcohol was more than 720 ml in a day (43.33%) and the form of alcohol used was brandy (23.33%), rum (1.33%) and frequency of alcohol consumption (30%).
- A significant percentage of the alcoholic clients had moderate level of anger (36.66%) in pretest. However after administration of Virtual reality therapy more than half of them had mild level of anger (56.66%).
- The anger score of alcoholic clients were high in pretest (M = 29.16, SD = 7.8) whereas after virtual reality therapy, it was found to be less (M =17.3, SD=4.50). The difference was statistically proven to be highly significant at $P<0.001$. Thus the null hypothesis Ho1 was rejected. It can be attributed to the effectiveness of virtual reality therapy on reducing anger.
- There was no significant association between the level of anger and the selected demographic and clinical variables among alcoholic clients. Hence

the null hypothesis Ho2 and Ho3 was retained. Lack of association in this study may be due to small sample.

- The researcher found that all of the alcoholic clients were highly satisfied (100%) regarding the intervention of virtual reality therapy. These findings indicated that the administration of virtual reality therapy is well accepted by all the alcoholic clients.

This study demonstrated that virtual reality therapy will help to reduce the level of anger among alcoholic clients.

Recommendations

- The study can be conducted on a larger sample to generalize the results.
- The study can be conducted in the other settings also like psychiatric hospitals and rehabilitation centers.
- Longitudinal study can be conducted for long term effects of virtual reality on anger.
- A comparative study can be conducted to evaluate the effectiveness of virtual reality therapy and with other psychosocial intervention to reduce the level of anger among alcoholic clients.
- The study can be conducted among different groups like adolescents, mentally ill patients, teenagers who abuse other substances, family members of alcoholic clients.
- A follow up study can be conducted to assess the effectiveness of the present intervention in reducing the relapse rates of alcoholic clients.
- A study can be conducted on quality of life among alcoholic clients.

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CHAPTER I

INTRODUCTION

BACKGROUND OF THE STUDY

"An event or entity that is real in effect but in fact."

Micheal 1980

Alcoholism is a social problem which causes burden to the society by creating many problems. Alcoholism is a disorder characterized by the loss of control and habituation to the drug alcohol, causing major problems. Alcohol is a contributing factor in large number of suicides, fights homicides, accidental deaths, injuries, robberies, rapes and assaults. The world's highest alcohol consumption levels are found even in the developed world, including Western and Eastern Europe (Martin & Bahman, 1998).

According to the Hindustan Times (2012) it is estimated that around 1% of the population in India can be classified as being alcohol dependent. This translates into about 5 million people dependent on alcohol. Kerala is the largest consumer of alcohol in India followed by Punjab. Kerala alone accounts for 16% and Punjab accounts for 14% of all the liquor consumed in India. Alcoholism is multifactorial in nature.

The causes of alcoholism are bio-socio-psycho-faceted. Experts in the medical field describe alcohol problems and alcoholism to be bewildering array of causes. Genetic or bio-chemical predisposition to alcoholism is a controversy that has been debated for years. Conflictual emotions, irrational cognitions, social learning processes, family pathology, Socio-cultural influences, self regulation failures and personal choice are also considered as contributory factors.

The damage of long term alcohol consumption on the health of an individual is well documented. According to global status report on alcohol and health of WHO 2011, the harmful use of alcohol results in approximately 2.5 million deaths each year which is greater than the death caused by HIV/ AIDS, violence or tuberculosis. Alcohol ranks eighth among global risk factors for death, third for diseases and disability. It is a casual factor in 60 types of diseases and injuries and component cause in 200 others. WHO (2011), Global Information System on alcohol and health, Geneva.

It is estimated as to cause 50% of cirrhosis of the liver, epilepsy, road traffic accidents. Perhaps less obvious are the everyday incidents involving altered perception, cognition, memory, emotion and psychomotor skills that have a tremendous impact on both those who consume alcohol and those who interact with them (Naranjo & Bremmer, 1993).

A widespread belief has attributed numerous effects to alcohol, including its ability to act as a social "lubricant", a provider of courage, a stress – reducer and a "disinhibitor". The exact mechanism by which alcohol alters behavior are still not well understood and remain a subject of inquiry (Hoaken, Giancola & Pihl, 1998).

Anger is a fundamental emotion that everyone experiences from time to time, from a very early age. A person learns to express anger in different ways and seeks way to reduce anger. As our culture has an uneasy relationship with anger expression, many people are brought up to think that it is inappropriate to express anger directly that it is always dangerous, such people learn to distrust anger to

bottle up and ignore it, to express it only in indirect way or use a weapon (Murickan, 2011).

Anger is a normal emotional response to perceive threat, frustration or discussing event. Commonly occurs in reaction to feeling threatened or losing control. Anger is felt, expressed, suffered and experienced in different way. Some individuals turn their anger inward and become suicidal or depressed. People tend to label anger as justified or unjustified, according to their personal values. It can be rational or planned or can arrive in a blind fury of irrational rage (Hasuice, 2006).

Aggressive behaviours are often the result of angry feeling that are converted into action and expressed. Aggression is a forceful attitude or action that is expressed physically, symbolically or verbally. The expression of anger may be turned outward as overt and passive behaviour such as verbalisation, irritation, swearing, clenched fists, violent acts, damage to property, impatience, jealousy, tense facial expressions and pessimism. When anger expression turns inward it may leads to unhappiness, self destructive and self mutilation (Townsend, 2011).

The possible consequences of anger is more of a problem than the situation that cost them, so they try to suppress anger but inevitably allow it out in covert way. Because of this they may be highly stressed inside, which in time may cause with problems such as MI (Myocardial Infarction), hypertension, cancer and depression. Sometime it may lead to unhealthy coping behaviors such as self harm, alcohol or substance misuse because of this they are very easily get

themselves into conflict situations thus continuing to reinforce the negative interpretations (Willaims, 2009).

A study conducted by Douglas (2009), on anger among recovering alcoholics at Bedford de-addiction centre found that alcoholics responded to fear in life was mainly through anger. Many expressed the relish with which they nourished their anger and said that it was all a part of feeling. The treatment of alcoholics are in many dimensions in that main focus, anger management which speaks due to increasingly violent & abusive crimes occurring within community as well as self reported behavior by the clients (Chermack & Giancola, 1998).

Virtual Reality was invented by Morton H. Eilig in 1956. Virtual Reality was introduced in medicine by Dr.Ralph Larson in the year 1990. Virtual Reality is a technique that allows a person to participate actively in a sense of being present in the virtual environment. The technologies of Virtual Reality have great potentials for the development of novel strategies for motor rehabilitation. VR based therapy the most innovative and promising recent developments in rehabilitation technology.

Kinect Adventure compact disc is one of the virtual environment games which can be administered to the old age population as it helps to reduce stress, depression, anxiety, and improves cognition level. Kinect Adventure is a 2010 sports video game for the Xbox 360, which utilizes the Kinect motion camera and is included as a pack-in game with the device. It was officially unveiled at the 2010 Electronic Entertainment Expo in Los Angeles. The game is a collection of five adventure and sports mini games and was developed by Good Science Studio, a subsidiary of Microsoft Game Studios.

Virtual Reality Therapy is a form of technology which creates computer generated world or immersive environment, which people can interact with in virtual is artificial and Virtual Reality Therapy is what we experience. So the term Virtual Reality Therapy basically means “near reality” (Lamson, 1997)

Virtual Reality Therapy provides immediate access to prevent the craving and relapse experienced by alcoholics. The Virtual Reality Therapy coping modules are designed to change negative beliefs and catastrophic thoughts at a subconscious level and replace them with positive coping strategies and provide drug free option of therapy. Thus positive behavior therapy facilitates sound mental health, leading to better adjustment. Repeated exposure to VRT promotes the extinction of the conditioned response, thus removing the primary motivation to continue using alcohols, and lowering the relapse probability and acts as a relaxation technique and helps to reduce the level of anger.

The virtual reality therapy is one among the relaxation technique which helps the individual to cope with the stressful situations and the ways to resolve them. Thus, the health care professionals including nurses must plan for the strategy such as virtual reality therapy to reduce the level of anger which in turn, helps the individual to cope with the hurdles and gain their targeted goals.

Need for the Study

Alcoholism is a broad term for problems with alcohol and is generally used to mean compulsive and uncontrolled consumption of alcoholic beverages, usually to the detriment of the drinker’s health, personal relationship, and social standing.

The world's highest alcohol consumption levels are found even in the developed world, including Western and Eastern Europe. The damage of long term alcohol consumption on the health of an individual is well documented. According to global status report on alcohol and health of WHO 2011, the harmful use of alcohol results in approximately 2.5 million deaths each year which is greater than the death caused by HIV/ AIDS, violence or tuberculosis. Alcohol ranks eighth among global risk factors for death, third for diseases and disability. It is a casual factor in 60 types of diseases and injuries and component cause in 200 others. WHO (2011), Global Information System on alcohol and health, Geneva.

According to the Hindustan Times (2012) it is estimated that around 1% of the population in India can be classified as being alcohol dependent. This translates into about 5 million people dependent on alcohol. Kerala is the largest consumer of alcohol in India followed by Punjab. Kerala alone accounts for 16% and Punjab accounts for 14% of all the liquor consumed in India. Alcoholism is multifactorial in nature.

According to Integrated Disease Surveillance Project (2012), it is estimated that Andhra Pradesh15.5%, Madhya Pradesh 9.9%, Uttarakhand 10.4%, Maharashtra 8.7%, Mizoram 5.5%, Kerala 16%, Tamil Nadu 9.5% having Alcohol dependent. Prevalence among males 16.8% as compared to that among females 1.3% in Chennai.

High income countries generally have the highest alcohol consumption rate. Every fifth rank of death is due to harmful drinking in independent states according to common wealth foundation. Chopra (2002) conducted a survey in

three regions (central, north and north-east India) and reported the prevalence of current alcohol use of 38% in males and of 10% among females (WHO, 2011).

Studies conducted in Colorado state university found that prevalence of alcohol between 30% and 50%. In southern India the prevalence of current alcohol use varies between 33% and 50%, with high prevalence among lesser educated and the poor (Chakravarthy, 1990).

Alcohol consumption and consequences were compared with high level and low level of anger. Prevalence of anger among alcoholics is 51.8%.All humans are not triggered to impulsive behaviour of anger by the same type of perceived loss and frustration, some respond quietly to same stimuli and loss of control but mostly they differ (Andrew, 2010).

Anger is a common human reaction to stress (or) aversive event which is termed provocations. According to cognitive trend in contemporary psychology, it explains about the impulsive reaction and consists of individual interpretation of anger, affective arousal and the resultant behaviour which is committed in a situation (behavioural response). A considerable body of evidence exists which suggests that, when compared level of anger between normal individuals and alcoholics who consume alcohol, alcoholics may become more angry and aggressive than normal individual (Baum, 1980).

Expression of anger begins from infancy and exits till death. They are some cultural consideration studies found in anger; Korean people express anger by becoming physically ill. Philippine people may react to anger by becoming passive aggressive. Asian people react to anger in two ways some react violently

and some smile when they are angry. The consequences of anger are loss of health, loss of relationship and personal belonging and leads to frustration, depression and conflicts.

Virtual reality has been proposed as a new way of conducting exposure therapy because it can provide a sense of being present in a feared situation. This method appears to have several advantages over standard exposure therapy. First, virtual reality may offer patients a greater sense of control because they can instantly turn the device on and off or change its level of intensity. Second, virtual reality would protect patients from harm or social embarrassment during their practice sessions. Third, it could be implemented regardless of the patient's ability to imagine or to remain with prolonged imaginable exposure.

Virtual reality treatment which refers to immersive, interactive, multisensory, viewer centered, sensored, projector viewed theatre environments which can be explored and interacted with by a person. Thereby the person feels relief from his problems by permanently registering the positive effects in brain. Doctors and therapist often use this process to help the patients face and overcome fears, phobias and any stressful conditions (Brinkman, 2008).

Kinect adventures game package is one of the most effective games which include various games like river rush, reflex ridge, 20,000 leaks, space pop. Among them river rush game is most effective for reducing anger in alcoholic clients which the researcher has been administered during study. In River Rush, one or two players stand in a raft and work together to pick up the adventure pins scattered throughout the winding rapids. The raft is controlled by stepping left or

right to steer, and by jumping to jump the raft. Crashing into barrels, wood, markers, or rapid markers, causes the player to lose points.

The ability to imagine one's self in another person's place is very important to social relations and understanding. Virtual reality is a technique allows a person to participate actively in a sense of being present in the virtual environment. It makes physical therapy interactive for psychological and medical condition. It replicates real life situation. It is one of the rehabilitative programme for vertigo, tinnitus, vocal injuries, stress, phobia, headache, dementia, Schizophrenia.

Virtual environment games in Kinect Adventure compact disc game package uses full body motion to allow the player to engage in a variety of minigames, all of which feature jump-in, jump-out multiplayer play. Each minigame lasts about five to seven minutes.

Virtual Reality is a technique that allows a person to participate actively in a sense of being present in the environment. Virtual Reality Therapy provides immediate access to the benefits of depression. The Virtual Reality Therapy coping modules are designed to change negative beliefs and catastrophic thoughts at a subconscious level and replace them with positive coping strategies and provide drug free option of therapy. Thus positive behavior therapy facilitates sound mental health, leading to better adjustment (Parsons, 2008).

Virtual Reality Therapy provides immediate access to prevent the craving and relapse experienced by alcoholics. The Virtual Reality Therapy coping modules are designed to change negative beliefs and catastrophic thoughts at a

subconscious level and replace them with positive coping strategies and provide drug free option of therapy. Thus positive behavior therapy facilitates sound mental health, leading to better adjustment. Repeated exposure to VRT promotes the extinction of the conditioned response, thus removing the primary motivation to continue using alcohols, and lowering the relapse probability and acts as a relaxation technique and helps to reduce the level of anger.

However there is paucity of research on virtual reality therapy upon anger among alcoholic clients. Thus the need was felt and designed by the investigator to assess the effectiveness of virtual reality therapy upon anger among alcoholic clients.

Statement of the problem

A Pre Experimental Study to assess the Effectiveness of Virtual Reality Therapy upon Anger among Alcoholic Clients at Selected De-addiction center, Chennai.

Objectives of the Study

1. To assess the level of anger among alcoholic clients before and after Virtual reality therapy.
2. To evaluate the effectiveness of virtual reality therapy by comparing the level of anger among alcoholic clients before and after virtual reality therapy.
3. To determine the level of satisfaction on virtual reality therapy among alcoholic clients.
4. To find out the association between selected demographic variables and the level of anger among alcoholic clients before and after virtual reality therapy.

5. To find out the association between selected clinical variables and the level of anger among alcoholic clients before and after virtual reality therapy.

Operational Definitions

Effectiveness:

In this study effectiveness refers to significant reduction in the level of anger after providing virtual reality therapy as measured by clinical anger scale developed by William E.Snell.

Virtual reality therapy:

In this study, the participants becomes a part of world or in a therapeutic environment involved to perform a series of action displayed on the screen and there by the person experience the real situation.

The investigator used the " Kinect Adventures" for the administration of virtual reality therapy in which the River Rush (which involves jump-out, jump-in and uses full body motion) was selected as a module as it involves several body movements. The virtual reality therapy per client 5-7 minutes for each day for the period of one week.

Anger

It is a negative emotion that strikes all people in whom the individual becomes irritable, aggressive and annoyed as measured by clinical anger scale developed by William E.Snell.

Alcoholic Clients

In this study it refers to the clients who consume alcohol and become addicted to alcohol and is currently undergoing treatment in selected de-addiction centre.

De-Addiction Centers

In this study, it is a legally registered organization which provides treatment and rehabilitation services to clients who abuse substance and alcohol.

Satisfaction:

It is a feeling of gratification attained by or achieved by clients with virtual reality therapy measured by satisfaction scale developed by researcher.

Assumptions

- Dependence cause progressive neglect of alternative interest because of alcohol use.
- Alcoholics suffer a disturbed and stressful life situation in a relationship to their personality and family atmosphere.
- Anger is a very common negative emotional experience.
- Anger is caused by various factors such as frustration, loss of loved ones, etc.
- Anger is often experienced by alcoholic clients.
- Anger becomes more predominant during abstinence period.
- Anger will affect physiological, psychological and socio-comic status by causing various problems such as violence, aggression, lack of cooperativeness, loss of income etc.

Null Hypotheses

Ho1: There will not be any significant difference in level of anger among alcoholic clients before and after providing virtual reality therapy.

Ho2: There will not be any significant association between selected demographic variables and level of anger among alcoholic clients before and after virtual reality therapy.

Ho3: There will not be any significant association between selected clinical variables and level of anger among alcoholic clients before and after virtual reality therapy.

Delimitations

- Study period was limited to 4 weeks only.
- Study participants were limited to alcoholics of selected de-addiction centers at Chennai.

Conceptual Framework of the Study

A framework is a group of concepts and set of propositions that spell out the relationship between them. Their overall purpose is to make scientific findings meaningful and generalized.

The conceptual framework for a particular study is the abstract, logical structure that enables the researcher to link the findings to nursing body of knowledge.

The conceptual framework deals with the inter-related concepts that are assembled together in some rational schemes by virtue of their relevance to a common theme (Polit and Beck, 2012)

The presented study aims at describing the effectiveness of virtual reality therapy upon anger among alcoholic clients at selected de –addiction centers. The conceptual framework of the study is based on “Peplau’s Interpersonal Model” (1952). According to Hildegard Peplau, "the goals of nursing are currently in transition, its major concern fifty years ago had to do with getting sick people well, today, nursing is more concerned with ways for helping people to stay well". The model views of nursing are in two ways. Firstly, nursing is educative. Secondly, nursing is therapeutic. With these two functions combined, they allow nurses and clients to develop skills for problem solving. This process of education and 13 therapeutic interactions occurs only within the relationship of the nurse and the client. This interpersonal relationship between the nurse investigator and the alcoholic clients has four clearly discernible phases therapeutic interaction occurs only within the relationship of the nurse and the client. This interpersonal

relationship between the nurse investigator and the alcoholic clients has four clearly discernible phases. These phases are orientation, identification, exploitation and resolution. Each of these phases are seen as being interlocking and requiring overlapping roles and functions as the nurse and the alcoholic clients learn to work together to resolve difficulties in relation to health problems.

Orientation

The alcoholic clients and nurse investigator came together as strangers meeting for the first time. During this phase, the development of trust and empowerment of the alcoholic clients were primary considerations. The nurse investigator encouraged the alcoholic clients to participate in identifying the need for virtual reality therapy in anger management and allowed them to be an active participant in virtual reality therapy. By asking for and receiving help, the alcoholic clients felt more at ease expressing their need for anger management knowing that the nurse investigator will take care of those needs. Once orientation has been accomplished, the relationship entered the next phase.

Identification

The alcoholic clients in partnership with the nurse investigator were able to identify the problems of anger that require working on within the relationship. The alcoholic clients selectively responded to a nurse investigator who offered the anger management by providing virtual reality therapy needed by the alcoholic clients. Both the nurse investigator and the alcoholic clients clarified each other's perceptions and expectations, which affected the ability of both to identify problems and the necessary solutions. When clarity of perceptions and expectations was achieved, the alcoholic clients learned to make use of the nurse

investigator-Patient relationship. Once identification has occurred, the relationship enters the next phase.

Exploitation

The alcoholic clients took full advantage of virtual reality therapy. The degree to which the anger management of providing virtual reality therapy was used is based upon the needs and the interest of the alcoholic clients. From this sense of self-determination, alcoholic clients developed an inner strength that allowed them to face new challenges. As the relationship passed through all of the mentioned phases and the needs of the alcoholic clients have been met, the relationship passed to closure or the phase of resolution.

Resolution

It occurred when the needs of anger management by providing virtual reality therapy was met. It implied the gradual freeing from identification with the nurse investigator and the generation and strengthening of ability to stand more or less alone.

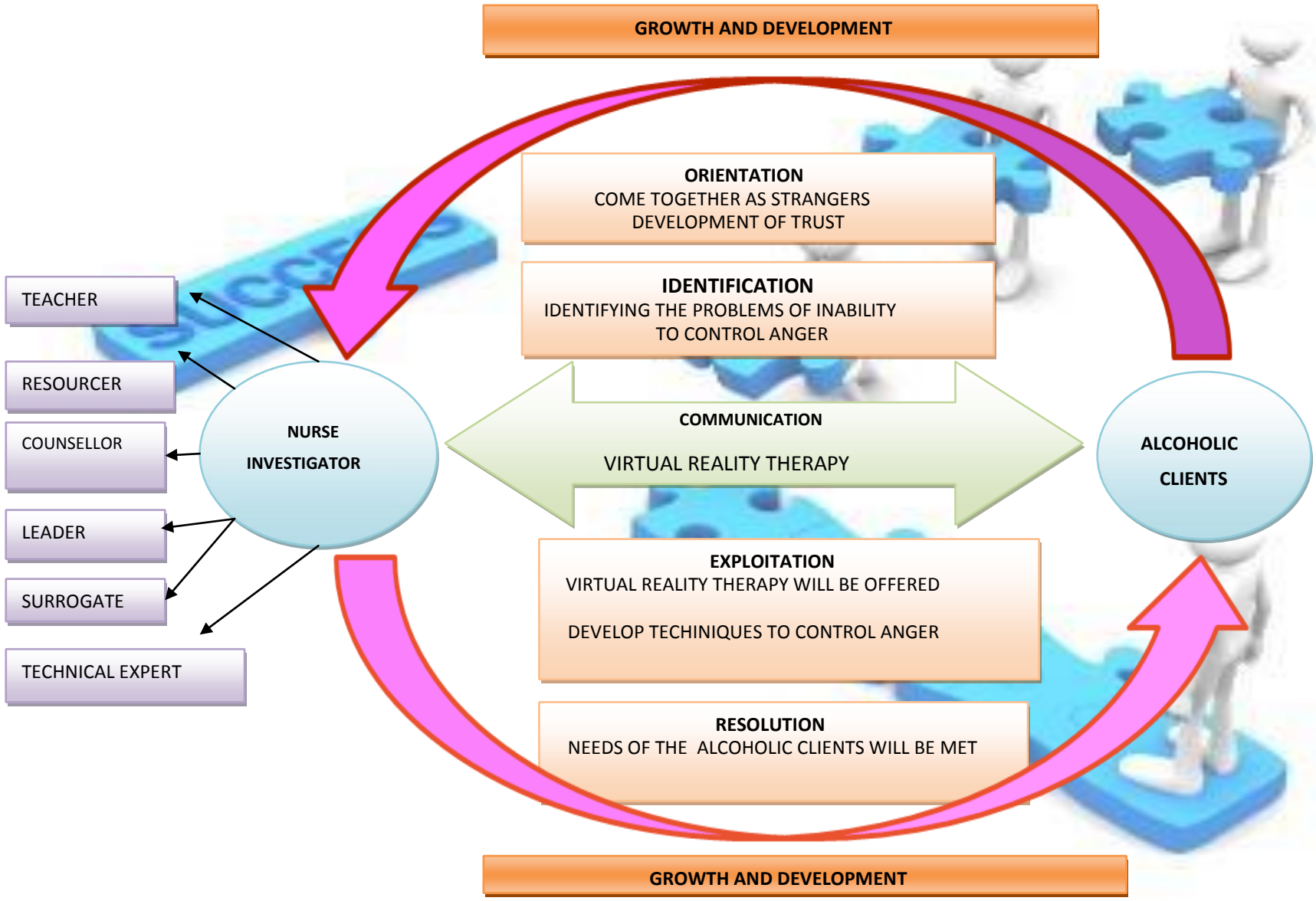

Fig.1 Conceptual Framework based on Peplau's Interpersonal Model

Projected Outcome

This study is useful to enhance the anger management by providing virtual reality among alcoholic clients. In turn, it will help them to control anger and express their views in a clear, affirmative way. It will help in building an effective control of anger which will indirectly influence the prognosis and reduce the relapse rate. There are several other benefits of virtual reality such as it helps in cognition, body mind co-ordination, to develop empathy, it relax the mind and to build healthy relationship.

Summary

This chapter has dealt with the background, need for the study, and statement of the problem, objectives, operational definitions, assumptions, null hypotheses, delimitations and conceptual framework and projected outcome of the study.

Organization of the Report

Further aspects of the study are presented in the following five chapters.

In Chapter – II : Review of literature.

In Chapter – III : Research methodology-which includes research approach, research design, setting, population, sample and sampling techniques, tool description, content validity and reliability of tools, pilot study, data collection procedure and plan for data analysis.

In Chapter – IV : Analysis and interpretation of data.

In Chapter – V : Discussion.

In Chapter – VI : Summary, conclusion, implications and recommendations.

CHAPTER II

REVIEW OF LITERATURE

"Review of literature is a key step in the research process. It is an extensive systematic scrutinisation of potential sources of previous study and work. The typical purposes of it are to generate research questions, to identify what is known and not known about the topic and to describe methods of enquiry used in earlier work including their success and short comings".

Anger is a concept which in recent years has gained immense recognition in our society Buddy (2012).The majority of the articles on anger management in nursing journals and health action explains techniques of anger management and says how to manage, control anger and utilize anger in a constructive way. It also acts as a tool to maintain abstinence in alcoholic clients by managing anger (Murickan, 2008).

This chapter is an attempt to review studies on the related aspects of anger management and alcoholism. The research studies that have explored the above mentioned areas have been organized under the following sections:

- Literature related to overview of alcoholism.
- Literature related to anger in alcoholic clients.
- Literature related to virtual reality therapy
- Literature related to effectiveness of virtual reality therapy among alcoholic clients.

Literature related to overview of alcoholism

According to the U.S. National Institute of Alcohol Abuse and Alcoholism, "Young people at highest risk for early drinking are those with a history of abuse, family violence, depression, and stressful life events. People with a family history of alcoholism are also more likely to begin drinking before the age of 20 and to become alcoholic. Such adolescent drinkers are also more apt to underestimate the effects of drinking and to make judgment errors, such as going on binges or driving after drinking, than young drinkers without a family history of alcoholism (Beecham, 2012)

According to the Global status report upon alcohol and health, the world's highest alcohol consumption levels are found in the developed world, including Western and Eastern Europe. High-income countries generally have the highest alcohol consumption. Every fifth death is due to harmful drinking in the Commonwealth of Independent States. Outside of the Russian Federation and some neighboring countries, rates of disease and disability attributable to alcohol are also quite high, for example, in Mexico and in most South American countries (WHO, 2011).

According to alcohol research department which has conducted a research on Incidence of Alcoholism conducted at Thailand, (2011) alcohol dependence increased considerably and gains much significance than other substance abuse problems. In alcohol dependence, the average life of an addiction has more negative effects on binge drinking and another way that alcohol consumption affects women more than men.

Arria (2004) conducted a study in Scotland among 608 samples of college students regarding alcohol related traffic risk behaviors in alcoholics. The findings of the study indicated the Risky alcohol behavior among college students. "In the preceding year, nearly half of underage students with access to a car drove after consuming alcohol among which one in five drove while intoxicated," which was published in science daily news. Thus the finding generalize that males were more likely to engage in these behaviors than females. The continued growth in the percentages of youths who are reporting dangerous drinking/driving behaviors over the time they are in the university suggests that existing university prevention programs are not very effective."The high percentage of first-year students who engage in risky drinking/driving behaviors parallels previous studies showing that a high proportion of high-school students engage in such risk behaviors.

Parry & Charles (2002) conducted a study to examine the pattern of drinking in India. The results found out that, there are 62.5 million estimated alcohol users in India whose consumption of alcohol per capita was increased by 106.7% over the estimated 15 year period from 1970 to 1996. The study results also showed that alcoholism has nothing to do with age, education, intelligence or socio-economic status.

Mohan & Chopra (2001) conducted a survey in three regions (central, north and north-east India), which involved 32,000 people and used standardized questionnaires based on DSM III. The objective of the study was to report the prevalence of alcohol use among males and females. The results revealed prevalence of current alcohol use of 20-38% in males and of 10% among females.

Day (2000) conducted a study in University of Newcastle (United Kingdom) presented findings at the American Association for the study of Liver Diseases in an annual meeting at Dallas. In that he reported in one in heavy drinkers develop liver damage, when certain genes trigger a strong immune reaction in response to alcohol which damages the liver.

A descriptive study was conducted related to consequence of alcohol in Norway among 150 samples, under three headings, the consequences of alcohol use can be divided, into three broad categories, Consequences related to alcohol use pattern, Medical and psychiatric consequences of alcohol use, Social, occupational, legal and other consequences of alcohol use. In that result shows medical and psychiatric consequence and social issue gained significance (Naranjo, 1993)

In Southern India, a study was conducted to associate socioeconomic correlates with that of alcohol use. The results found out that the prevalence of current alcohol use varies between 33 and 50%, with a higher prevalence among the lesser educated and the poor Chakravarthy et al.,(1990). In 1980, study examined one year prevalence of alcohol use among 500 samples in Kolkata. Results showed that the one year prevalence of alcohol use to be between 25 and 40% (Singh & Malhotra, 1980)

Literature related to anger in alcoholic clients

Williams (2008) conducted a study with an aim to assess the prevalence of violent behaviour and to identify risk factors associated with violence behaviour among male college students in Ethiopia. It was a cross sectional study among

1294 male college students in Awassa. Adolescent anger expression scale was used to assess the prevalence. Results showed that more than half of the students (54%) reported committing at least one act of physical violence during the current academic year.

Walitzer, at the University at Buffalo's Research Institute on Addictions in New York launched a 5-year study in (2008) that is looking into how the anger emotions of alcoholics might be dealt with in outpatient treatment. The study is funded by a $1.8 million grant from the National Institute of Alcohol Abuse and Alcoholism. It is an ongoing research for better understand and deal with the connection between anger and alcoholism.

Leibsohn conducted a study on “Effects of Trait anger on alcohol consumption and consequences” in alcoholics at Colorado state university, for a sample of sixty, compared for Level of anger, high and low anger among male and female college students. Males consumed alcohol and become intoxicated more frequently than females. High level of anger students more frequently drink alcohol, experienced more frequent and severe physical, emotional and behavioural alcohol related consequences than low level of anger among students. When heavy alcohol consumptions by high level of anger among students were statistically controlled, anger is still contributed variance to alcohol consequences. Results were discussed in terms of understanding, preventing, and treating alcohol problems (2008)

A study was conducted on alcohol and aggression conducted by Gustafson (2006), at the University of Orebro, Sweden, suggests that alcohol weakens brain mechanisms that typically control impulsive behaviors. The findings show that,

alcoholism is a chronic disease that causes the body to become dependent on alcohol. As such, beer and/or liquor can become obsessions that cause an alcoholic to lose control over his drinking.

Kitamurai and Hasuice (2006) examined anger feelings and anger expressions as a mediator of the effects of witnessing family violence on anxiety and depression in Japanese adolescents. The study was done at Kumamoto University and 457 junior school students were participated in the study and the effects of anger were rated by (STAXI hospital anxiety and depression scale). The results indicated that effects of witnessing family violence on dysphoric mood and many be mediated by anger feelings.

Sio (2007), explored the relation of coping strategy with aggression anger and ruminations among 630 Hong Kong Chinese adults at Lingam University, Hong Kong and cross sectional design was adopted anger expression and coping style questionnaires were used. And the results suggest that an active coping and social support were higher for male.

Literature related to virtual reality therapy

Rose (2005), noted that virtual reality applications for cognitive rehabilitation face the challenges as in 90s. In 1962 the US Patent Office awarded a patent to Morton Heilig for what he called a sensorama Simulator (Heilig). This device could provide the illusion of an alternate reality to one to four users by presenting them with visual, olfactory, auditory and tactile stimulation.

Virtual reality can be used as an assessment or intervention instrument for the clinical treatment of psychological disorders. Studies have been conducted which focused on cognitive behavioral therapy for the rehabilitation of anxiety disorders such as fear of heights (acrophobia), fear of flying, fear of open spaces (agoraphobia) and social phobia. Other applications involve the rehabilitation of anxiety disorders such as Post Traumatic Stress Disorders (Da Costa, 2004)

Virtual reality applications have also been developed to clinically rehabilitate a degradation of cognitive functioning, resulting from a range of diseases including Alzheimer's, schizophrenia or conditions such as autism. A functional overlap exists in many of these applications in that they can aim to achieve similar goals such as training with activities of daily life which support more independent living, enhancing cognitive performance and improving social skills. Each of these mini games requires the player to complete simple cognitive tasks, such as reading aloud and performing arithmetic calculations (Parsons, 2002)

Rahman (2011) conducted a study on the Effectiveness of Virtual Reality for Motor Rehabilitation of Neurological Disorder. They discussed the rationale, criteria of application, limits of the available procedures and the effects of VR in the rehabilitation of patients with stroke and those with cerebral palsy (CP). Seventeen published articles from 1/1/2002 to 1/05/2010 were reviewed. The studies completed to date support the application of VR in the treatment of patients after stroke and CP patients. The duration of the rehabilitation effects after discontinuing VR training is crucial.

Miyahira (2012) conducted a study to assess the effectiveness of Virtual reality exposure therapy for PTSD (Post traumatic Stress disorders) in returning war fighters. The current study was a randomized controlled clinical trial designed to assess the effectiveness of a novel intervention to treat combat-related PTSD in returning Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF) war fighters. A cognitive behavior treatment approach augmented with virtual reality exposure therapy (VRE) was developed, and administered for 10 treatment sessions over 5 weeks. Comparisons with a control group receiving minimal attention (MA) for 5 weeks revealed that the VRE group had significant reductions in the avoidance/numbing symptoms on the Clinician Administered PTSD Scale (CAPS). The VRE group also had significant reductions in guilt at post-treatment compared to the control group.

Literature related to virtual reality therapy among alcoholic clients

Scozzari and Gamberini (2013) conducted a study on the effectiveness of virtual reality Cue Exposure Therapy (VR CET) for substance use. Virtual Reality Cue Exposure Treatment for Substance Abuse Cue exposure is a treatment in which a substance (drug, alcohol, nicotine, etc.) addict is repeatedly exposed to substance-related stimuli (cues) associated with his/her addictive behavior. Reaction (subjective, physiological, and behavioral) to these cues is generally considered a conditioned response, influencing the likelihood of substance self administration. Repeated exposure to these cues not followed by substance administration should promote the extinction of the conditioned response, thus removing the primary motivation to continue using drugs, and lowering relapse probability.

Kuntz.et.al.,(2013) explored the application of VR CET to heroin addiction. They designed an immersive VRT bar to present objects related to heroin injection, such as heroin powder, swab, syringe, needle, and used material with and without blood. Results of this pilot study indicated that VR was effective in eliciting physiological activation and subjective craving symptoms in five heroin addicts.

Saladin.et.al.,(2013) developed an immersive virtual "crack house" with crack cocaine related cues, and evaluated its effectiveness in inducing craving in eleven crack cocaine addicts. Both subjective ratings of craving on a 0 to 100 scale and physiological measurements suggested a more intense substance craving after "crack house" VR immersion than after immersion in a neutral VE.

Lee.et.al.,(2012) designed a VE to induce desire for nicotine, based on sixty-four smokers' responses to a nicotine-craving questionnaire. The VE consisted of a virtual bar constituting the craving environment, craving objects (alcoholic drink, pack of cigarettes, lighter, ashtray, glass of beer) and smoking avatars displayed to participants through an HMD. Twenty-two smokers took part to the research. Results indicated that this VRT system achieved better results at eliciting nicotine craving, as measured by a 0 to 100 visual-analog scale, than photographs (classical exposure technique).

Moon (2012) checked whether six sessions of VR CET were able to decrease nicotine craving in eight smokers. The same VE developed for a previous study was employed. Eight late adolescent smokers took part in the research. Besides self-report measures of craving, functional magnetic resonance imaging (fMRI) was employed to assess any modification in craving-related brain

region activation following six sessions of VR CET. After treatment, cerebral responses to smoking cues were modified probably as a consequence of reduction in the urge to smoke, despite a lack of modification in self-reported craving.

Lee (2013) conducted a study to assess the effectiveness of cue exposure therapy to decrease alcohol craving in virtual environment. To prevent the craving and relapse experienced by alcoholics, cue exposure therapy (CET) has been used to extinguish the association between alcohol and alcohol-related cues and contexts. This study applied CET, using a virtual reality (VR) system, to eight members of an Alcoholics Anonymous group for eight sessions. Cues and contexts most likely to elicit an urge to drink were selected through a preliminary survey in order to compose VR-CET scenarios: a glass, a bottle, food, and a bar were judged to be the most tempting for people in alcohol dependence and abstinence. Each session was administered for 30 minutes by a psychiatrist and included an introduction, immersion, and VR navigation, interviews about feelings, and self-report questionnaires about feelings, and self report questionnaires about cravings. A mean score of 15.75 (SD = 10.91) on the Alcohol Urge Questionnaire in the first session decreased to 11.50 (SD = 5.76) in the final session. This study suggests that using virtual reality can enhance the effectiveness of CET.

Cho et.al (2013) assessed ninety-one smokers assigned to a VR CET in which they had to either crush a virtual cigarette or grasp a virtual ball (control condition) in an immersive VE. Four sessions of virtual cigarettes crushing led to a significantly better improvement in addiction, as measured by Fagerström test for nicotine dependence revised, and better abstinence and drop-out rates,

compared to control condition. Virtual reality was found to be significantly more effective (standardized mean difference of 0.53) CET has been widely used to treat alcohol addiction, so, to explore the possible application of VR, four VEs to assess alcohol craving in different situations: with/without alcohol available and with/without social pressure to engage in drinking behavior. Results on ten healthy participants indicated Virtual Reality as a Tool for Cognitive Behavioral Therapy: A Review that VRT was able to induce alcohol craving, and that for this purpose, social pressure was more important than alcohol availability.

Bordnick et.al (2012) designed an immersive VRT system constituted of six environments varying in alcohol cues presence and social interaction, encompassing also olfactory cues. Alcohol-related cues presented in this VRT system proved effective in eliciting significant increases of subjective alcohol craving compared to neutral cues in non-treatment-seeking drinkers (N=40). A study on alcohol addiction treatment assessed the effect of eight VR CET sessions in eight drinkers. Glass, bottle, food, and a bar resulted as the most drinking behavior inducing stimuli. Using these materials, authors created a virtual Japanese-style pub and a virtual western bar to be projected on a wide screen. Results highlighted a reduction in self-reported cue-elicited craving at the post-treatment assessment.

Lee et.al (2012) compared twenty alcohol addicts exposed to ten sessions of VR CET with eighteen addicts undergoing ten sessions of CBT and fifteen healthy participants undergoing VR CET. VR CET was more effective than CBT in decreasing alcohol craving in patients, as assessed with a ten-point visual-analog scale.

Moreover, while patients undergoing CBT showed no electroencephalographic change after treatment, VR CET patients reported an increase in frontal alpha activity, suggesting a decrease in arousal. In addition, the increase in alcohol craving elicited by cues in VR CET was higher in patients with alcohol dependence than in healthy people, thus indicating that this tool is able to discriminate between high and low-risk individual.

Summary

This chapter has dealt with the review of literature related to problem stated. It has also enabled the researcher to design the study, develop the tool and plan the data collection procedure to analyze the data. Thirty studies were reviewed, out of which twelve were retrieved from primary sources and eighteen were retrieved from secondary sources.

CHAPTER III

RESEARCH METHODOLOGY

The methodology of the research study is defined as the way the information is gathered in order to answer the research question or to analyze the research problem. The present study was conducted to assess the effectiveness of virtual reality therapy on anger among alcoholic clients, at selected de-addiction centers in Chennai. This chapter deals in brief on different steps undertaken by the investigator of the study. It involves research approach, the setting, population sample, sampling technique, selection of tool, content validity, reliability, pilot study, data collection procedure and plan for data analysis.

Research Approach

Research approach is the most significant part of any research. The appropriate choice of the research approach depends on the purpose of the research study which is undertaken. To accomplish the objective of the study, an experimental approach was used in this study.

Research Design

The research design is the planned structure and strategy of investigation of answering research question. It is the overall plan or blue print to the researches to select carry out the study (Polit & Beck, 2012).

The research design used in this study was pre - experimental research design

The research design is represented diagrammatically as follows

O1 X O2

01 – Pre test of anger among alcoholic clients.

X – Virtual reality therapy

02 – Post test of anger among alcoholic clients.

Virtual Reality Therapy

In this study, the participants becomes a part of world or in a therapeutic environment involved to perform a series of action displayed on the screen and there by the person experience the real situation.

The investigator used the " Kinect Adventures" for the administration of virtual reality therapy in which the River Rush (which involves jump-out, jump-in and uses full body motion) was selected as a module as it involves several body movements. The virtual reality therapy per client 5-7 minutes for each day for the period of one week.

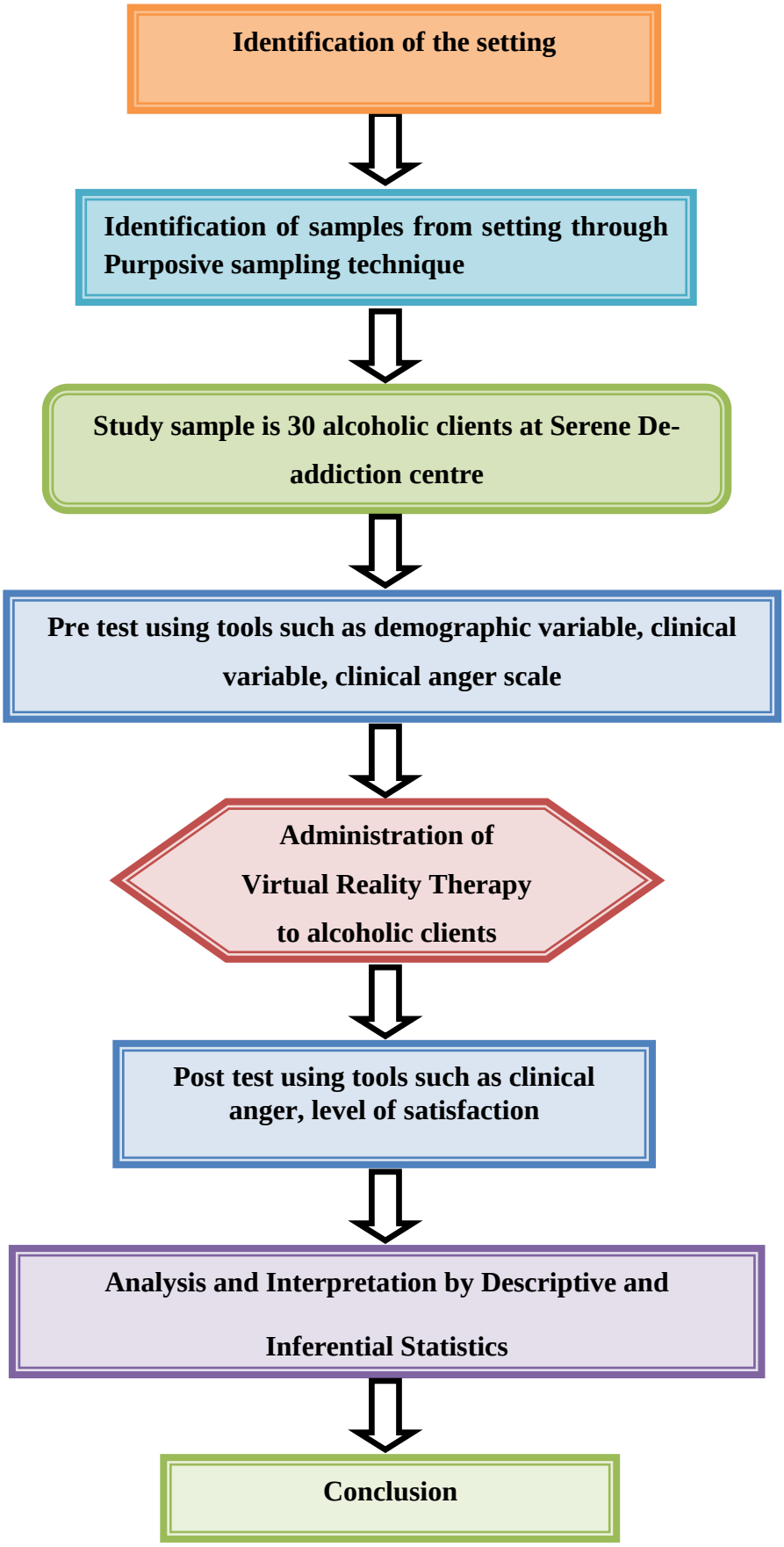

Fig 2.Schematic representation of research design

Variables

An abstract concept when defined in terms that can be measured is called a variable. Variables are characteristics that vary among the subjects being studied.

Dependent variable

It is the variable hypothesized to be dependent on or to be caused by another variable.

In this study dependent variable is anger.

Independent variable

It is variable hypothesized to outcome variable of interest. In this study, the independent variable is virtual reality therapy.

In this study, the participants becomes a part of world or in a therapeutic environment involved to perform a series of action displayed on the screen and there by the person experience the real situation.

Attribute variables

It is some variable which has influence on research but not manipulated by researchers. Demographic variables such age, sex, religion, type of residence, education, occupation, income, marital status, number of children, type of family, family history of alcohol abuse, area of residence.

Research Setting

The study was conducted at Serene Life de-addiction center, Chennai at a distance of 6 kilometers from Vanagram. It is a 40 bedded de-addiction cum rehabilitation centre. It offers tailor made programmes for men who suffer from

addiction and are struggling to recover. It continues to grow with various new innovations and scaled up interventions in the area of alcohol and drug abuse. It provides in-patient treatment with boarding and lodging facilities. The treatment and rehabilitation services include medical management (detoxification) and psychological therapy. The primary treatment is followed by after care, follow-up and vocational rehabilitation services.

Target Population

Population is the entire aggregation of cases which meet designated set of criteria (Polit &Beck, 2012). Target population is the group of population, that the researcher is aimed to study and to whom the study findings will be generalised. In this study target population comprises of alcoholic clients.

Accessible Population

Accessible population is the list of population, the researcher finds in the research area. Accessible population in this study was alcoholic clients admitted in Serene Line de-addiction center.

Sample

Sample consists of the subset of units that comprises the population (Polit & Beck, 2012). A sample of 30 alcoholic clients who met the inclusion criteria.

Sample size

Sample size for present study is 30. This sample size was decided based on the feasibility and the availability of the sample.

Sampling Technique

Sampling is the process of selecting a portion of population to represent the entire population (Polit & Beck 2012). In this study, the researcher selected participants based on personal judgment. Thus researcher used purposive sampling technique based on the inclusion criteria of the study.

Sampling Criteria

Inclusion criteria

- Clients who were admitted in alcoholic de-addiction centers.
- Clients who can speak English or Tamil.
- Clients available at the time of data collection.
- Clients aged between 20-60 years.

Exclusion criteria

- Clients with acute or severe psychotic symptoms, severe withdrawal symptoms and unable to co-operate.
- Clients who are not willing to participate.
- Clients with major physical complication like cirrhosis of liver, disabilities, myocardial infarction, hypertension, cancer etc.
- Clients with associated symptoms like tremors and sleep, memory disturbance.

Selection and Development of Study Instruments

As the study aimed to evaluate the effectiveness of Virtual Reality Therapy upon anger, the data collection instruments were developed and chosen through an extensive review of literature in consultation with experts and with the opinion of faculty members. The instruments used in this study were demographic variables proforma of alcoholic clients, clinical variables proforma of alcoholic clients, clinical anger scale and rating scale on the level of satisfaction upon Virtual Reality Therapy among alcoholic clients.

Demographic variables Proforma of alcoholic clients

Demographic variables Proforma of alcoholic clients consists of age, educational status, occupation, marital status, monthly family income, number of children, religion, type of family, family history of alcohol abuse, area of residence.

Clinical variables Proforma of alcoholic clients:

This was used to assess the clinical variable Performa of alcoholic clients such as age at which the alcoholic consumption was started, precipitating factor, duration, feelings when first consumed alcohol, frequency, type, amount of alcohol, associated symptoms, associated complications, psychosocial problems arisen due to alcohol consumption, efforts to quit or cut down alcohol in the past, history of abstinence, reason for abstinence, previous history of alcoholics de-addiction treatment, motivation to seek treatment.

Clinical anger scale

This scale was developed by Dr .William E.Snell, Jr (1995). This is standardized tool consisting of twenty items self report test on anger. It has been shown to be valid with both normal and psychiatric populations. This scale may be used to estimate or assess level of anger. The individual is asked to place himself in the particular situation each item describes, think how descriptive is it of him and mark the degree of response on a four point Likert scale. The scale is a four point Likert rating scale to measure the level of anger. It consists of cluster of 20 statements. Scoring was based on the responses of the clients. Scores of the individual items are summed and total scores are obtained. Score is calculated as A=0, B=1, C=2, D=3, (Semo.edu, 1995)

The obtainable score ranges from 0-60. Obtained scores are interpreted as follows:

0 – 15 – Minimal anger

16 – 30 – Mild anger

31 – 45 – Moderate anger

46 – 60 – Severe anger

Rating scale on the level of satisfaction on virtual reality therapy among alcoholic clients

This is developed by the investigator based on the objectives of the study. Rating scale consists of 12 items regarding virtual reality therapy. Responses extend from highly satisfied (score-4), satisfied (score-3), dissatisfied (score-2) and highly dissatisfied (score-1).The obtained score is converted into percentage and interpreted as follows,

Score	Percentage	Level of satisfaction
37-48	76-100%	Highly satisfied
25-36	51-75%	Satisfied
13-24	25-50%	Dissatisfied
1-12	< 25%	Highly dissatisfied

Psychometric Properties of the Instruments

Validity

The content validity refers to the degree to which the item on an instrument adequately represents the universe of the content (Polit & Beck, 2012). Clinical anger scales are standardized instrument and permission was obtained from the author to use it. The other Proforma and scales were certified and validated by six experts.

Reliability

Reliability refers to the accuracy and consistency of measuring tool (Polit & Beck 2012).Clinical anger scale is a standardized tool developed by Dr William.E.Snell. Reliability was done by crohnbach alpha formula and yielded reliability coefficients of 0.94, which indicates that the tool is highly reliable.

Pilot study

A Pilot study is a miniature of some part of actual study, in which the instrument is administrated to the subject drawn from the population. It is small scale version done in preparation for the major study (Polit & Beck, 2012). The purpose was to find out the feasibility and practicability of the study design. A pilot study was conducted on six alcoholic clients in Ashram Foundation de-

addiction center, Vanagaram, Chennai. Formal permission was obtained from the authorities prior to pilot study. Six subjects were chosen by purposive sampling technique. The therapy was administered every day morning 5-7 minutes for 5 consecutive days for each alcoholic client. The clients were assisted by the researcher during the sessions. The level of anger was assessed for the group. Then the level of satisfaction on virtual reality therapy was assessed using the rating scale for the group.

Intervention Protocol

Virtual reality is a technique that allows a person to participate actively in a sense of being present in the virtual environment. Virtual reality was invented by Morton H. Eilig in 1956. Prof. V.S.Ramachandran from the University of California is noted for his use of virtual reality and the neuro imaging – mirror neurons. Virtual reality has been proposed as a new way of conducting exposure therapy because it can provide a sense of being present in a feared situation.

The field of virtual reality is growing rapidly due to recent advances in artificial intelligence and computer graphics. It has been proved to be useful for many conditions including Vertigo, Tinnitus, Vocal injuries, Stress, Headache, Dementia, Schizophrenia, Sinusitis, Voice care, Stuttering. Cognitive restructuring procedures are carried which help patients to face challenges and correct negative thinking patterns about certain circumstances that trigger dysfunctional emotional responses.

The virtual reality therapy is an artificial environment created by software and projected by capturing the user by sensor. The user will be projected in the

screen as a disease free user. The person suspend the belief of presence of disease and accepts the real environment, it does not perceive other stimuli as effective as it otherwise good.

The investigator used the " Kinect Adventures" for the administration of virtual reality therapy in which the "River Rush" was the selected module as it involves several body movements and enhances the proper functioning of higher mental functions such as attention and concentration. This in turn helps to improve the confidence and self esteem and thereby reduces the level of anger among alcoholic clients.

In "River Rush", one or two players stand in a raft and work together to pick up the adventure pins scattered throughout the winding rapids. The raft is controlled by stepping left or right to steer, and by jumping to jump the raft. There are many secrets places that you can get to by taking ramps. There are considerably more adventure points there than on the river. Crashing into barrels, wood, markers, or rapid markers, causes the player to lose points.

Ethical consideration

- The study was conducted after the approval of ethical committee, Apollo Hospitals, Chennai.
- The study was conducted after obtaining permission from the principal Apollo College of nursing, Head of the Mental Health Nursing department.
- Permission was also obtained from the concerned authority of the Serene Life to conduct study, in Serene Life De-addiction center, Vanagaram, Chennai.

- Participants were explained regarding the study and written consent was obtained after providing assurance and confidence.
- Confidentiality of the data was maintained throughout the study.

Data collection procedure

Data collection is the gathering of information needed for the researcher to address the research problem. The researcher was trained for one week in giving virtual reality therapy and certified before data collection.

Data collection was done by the researcher for period of four weeks in the month of June and July 2014. Researcher identified the clients who meet the inclusion criteria and selected 30 clients in the setting for the study through purposive sampling technique.

Rapport was established by a brief introduction about the research purpose. After initial introduction the researcher obtained consent from the clients to participate in the study. An assurance was given regarding confidentiality before the data collection procedure. The data was collected by using the predetermined and pretested tools such as demographic variable Performa, clinical variable Performa, and clinical anger scale by interview method using structured questionnaire.

After pre-test, virtual reality therapy was administered for all the clients individually for the duration of 5 – 7 minutes for each day for the period of one week. The clients were assisted by the researcher during the sessions. After one week, Post test was conducted. Then the level of satisfaction regarding virtual reality therapy was assessed by using the satisfaction rating scale.

Plan for data analysis

Data analysis is the systematic organization and synthesis of research data and testing of null hypothesis by using the obtained data (Polit & Beck, 2012). Data was analyzed using appropriate descriptive statistics and inferential statistics. Descriptive statistics such as mean, median, frequency, standard deviation and the percentage was used to describe the demographic variables, clinical variables and the level of anger in the group of alcoholic clients. Inferential statistics like paired `t' test were used to assess the effectiveness of virtual reality therapy on level of anger by comparing the pre and post test mean score level of anger. Chi square test was used to assess the association between the level of anger and the selected demographic and clinical variables of alcoholic clients.

Summary

This chapter has dealt with research approach, research design, setting, population and sample, sampling technique, sampling criteria, selection and development of study instruments, reliability, pilot study, data collection procedure and plan for data analysis. The following chapter will deal with analysis and interpretation of using descriptive and inferential statistics.

CHAPTER - IV

ANALYSIS AND INTERPRETATION

Data analysis is conducted to reduce, organize and give meaning to the data. The results obtained from data analysis require interpretation to be meaningful. Interpretation of data involves examining the results from data analysis forming conclusions, considering the implications for nursing, exploring the significance of the findings and suggesting further studies (Polit & Beck, 2012).

This chapter deals with analysis and interpretation of data including both descriptive and inferential statistics. The data was analysed according to the objectives and hypothesis of the study. Analysis of the data was compiled after all the data was transferred to the master coding sheet. The data were analyzed, tabulated and interpreted using appropriate descriptive and inferential statistics.

Organization of the Findings

The findings of the study was organized and presented under the following headings.

- Frequency and Percentage Distribution of Demographic Variables among Alcoholic Clients.
- Frequency and Percentage Distribution of Clinical Variables among Alcoholic Clients.
- Frequency and Percentage Distribution of Level of Anger Before and After Virtual Reality Therapy among Alcoholic Clients.

- Frequency and Percentage Distribution of Level of Satisfaction on Virtual Reality Therapy among Alcoholic Clients.
- Comparison of Mean and Standard Deviation of Level of Anger Before and After Virtual Reality Therapy among Alcoholic Clients.
- Association between the Selected Demographic Variables and the Level of Anger Before and After Virtual Reality Therapy among Alcoholic Clients.
- Association between the Selected Clinical Variables and the Level of Anger Before and After Virtual Reality Therapy among Alcoholic Clients.

Table : 1

Frequency and Percentage Distribution of Demographic Variables of Alcoholic Clients.

N = 30

Demographic variables	n	P
Age (in years)		
Upto 30yrs	14	46.66
31- 40 yrs	9	30
41 – 50 yrs	4	13.33
51- 60yrs	3	10
Educational status		
Illiterate	-	-
Primary education	2	6.66
Secondary education	9	30
Higher Secondary education	9	30
Graduate and above	10	33.33
Marital status		
Un married	11	36.66
Married	17	56.66
Separated/ divorce	2	6.66
Widow / widower	-	-
Monthly family income		
5001-10000	18	60
>10000	12	40
Religion		
Hindu	26	86.66
Muslim	-	-
Christian	4	13.33
Type of family		
Nuclear	30	100

Joint	-	-
Extended	-	-
Family history of alcohol abuse		
Yes	10	33.33
No	20	66.66
Area of residence		
Urban	30	100
Rural	-	-

Table 1 indicates that significant percentage of the alcoholic clients were aged upto 30years (46.66%) with mean age of 32.9 years and had a family history of alcohol abuse/ dependence (33.33%), were graduates (33.33%). All of the alcoholic clients were from urban background and from nuclear family (100%) and majority of them were Hindus (86.66%) with monthly family income of Rs.5001- 10,000 (60%).

Figure: 3 shows that significant percentage of alcoholic clients were involved in business (36.66%)

Figure: 4 depicts that more than half of them were married (56.66%)

Figure: 5 shows that significant percentage of alcoholic clients had no children (43.33%)

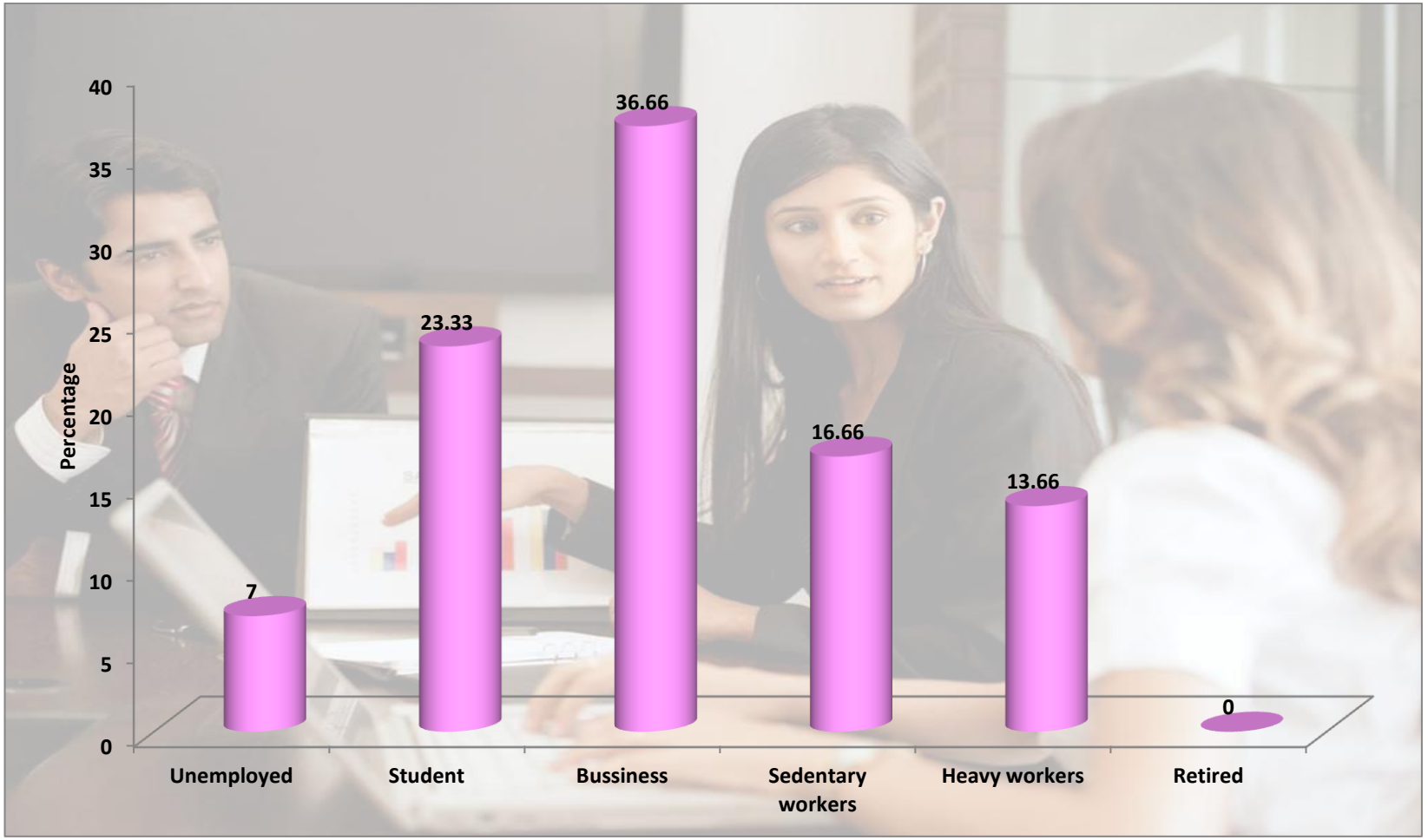

Figure 3: Percentage Distribution of Occupational Status of Alcoholic Clients

Figure 4: Percentage Distribution of Marital Status of Alcoholic Clients

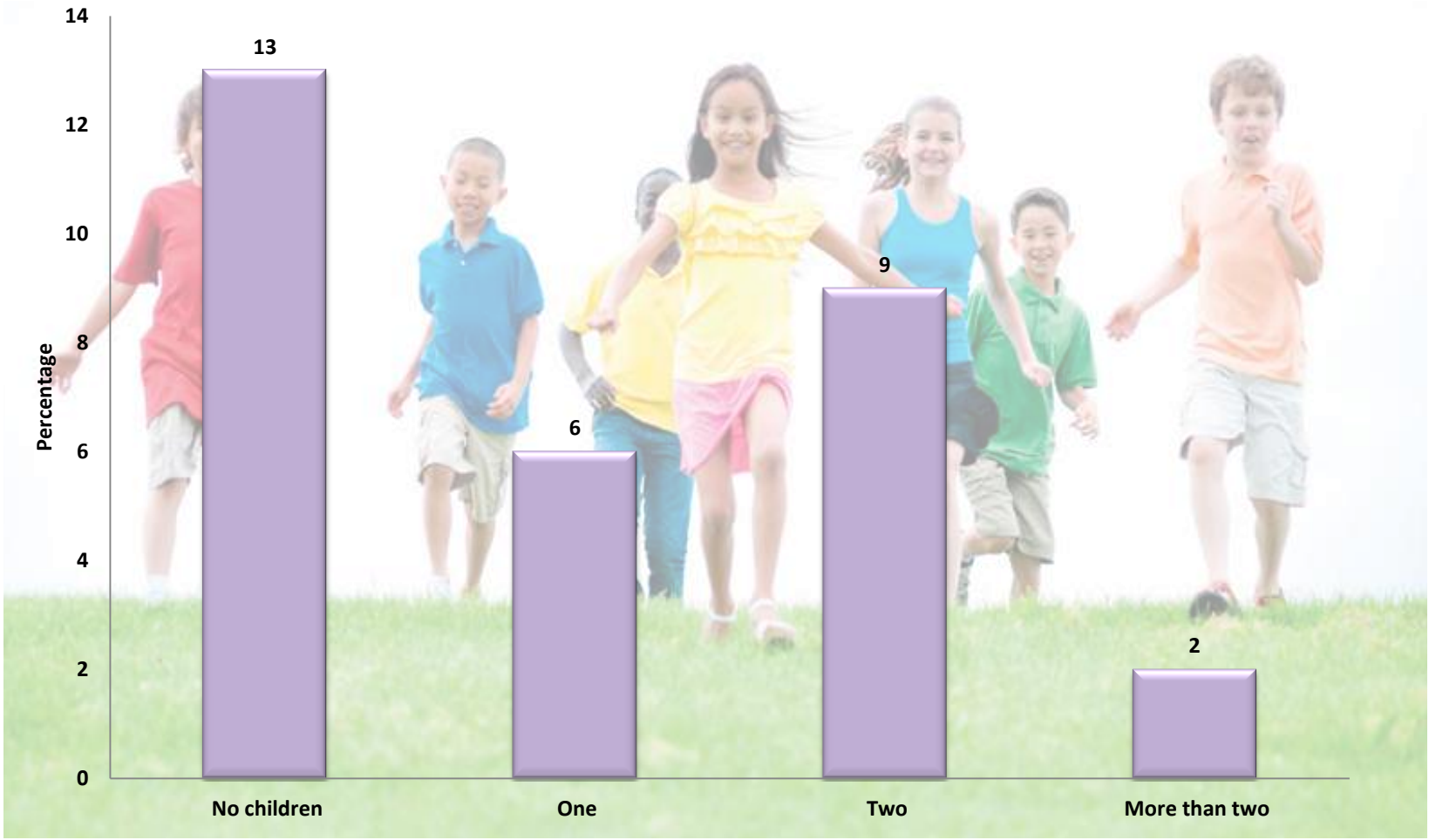

Figure 5: Percentage Distribution of Alcoholic clients according to Number of Children

Table: 2

Frequency and Percentage Distribution of Clinical Variables of Alcoholic Clients

N = 30

Clinical variables	n	p
Age at which the alcohol consumption was started		
Up to 15yrs	2	6.66
16-25yrs	19	63 .33
26-35yrs	7	23.33
>36yrs	2	6.66
Duration of alcohol dependence		
Up to1 year	6	20
2- 5 years	9	30
>5year	15	50
Precipitating factor for alcohol consumption		
Peer pressure	14	46.66
Family problems	16	53.33
Financial problems	-	-
Physical problems	-	-
If others, specify	-	-
Frequency of alcohol consumption		
Everyday	9	30
Several times a week	9	30
Once a week	9	30
Once a month	3	10

Form of alcohol used		
Fermented beverages	22	73.33
Spirits	7	23.33
If, others	1	3.33
Amount of alcohol consumed in a day		
One quarter (180ml)	12	40
One bottle (720 ml)	5	16.66
More than one bottle (>720 ml)	13	43.33
History of abstinence and efforts to cut down alcohol in the past		
Yes	23	76.66
No	7	23.33
Previous history of alcoholic de-addiction treatment		
Yes	20	66.66
No	10	33.33

Table 2 shows that majority of the alcoholic clients started consuming alcohol at the age of 16-25 years (63.33%) with mean age of 22.5 years, had a previous history of alcoholic de-addiction treatment (66.66%) and made an effort to quit alcohol (76.66%) and the form of alcohol used was beer (73.33%), more than half of them had the precipitating factor of consuming alcohol was family problem (53.33%).Half of them had >5 years duration of alcohol dependence (50%), significant percentage of the alcoholic clients consumed the amount of alcohol was more than 720 ml in a day (43.33%) and the form of alcohol used was brandy (23.33%), rum (1.33%).

Figure: 5 shows more than half of them had excited feeling at the first intake of alcohol (59%)

Figure: 6 shows frequency of alcohol consumption among alcoholic clients (30%)

Figure: 7 shows majority of psychosocial problems of alcoholic clients was conflicts in relationship (66.66%).

Figure: 8 show that half of the alcoholic clients had wish to improve oneself in motivation to seek treatment (50%).

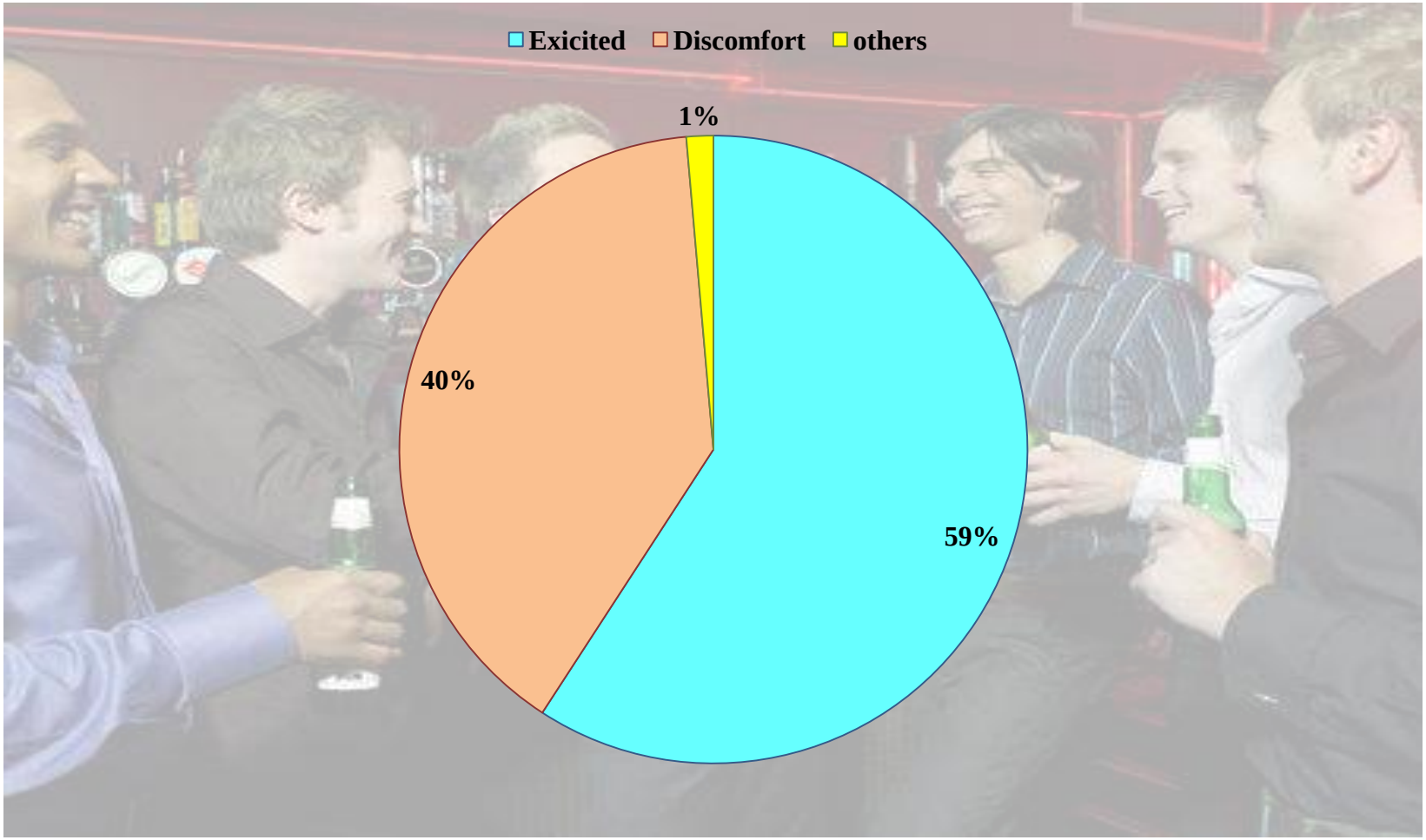

Figure 6: Percentage Distribution of Feelings of Alcoholic Clients at First Intake of Alcohol

Figure 7: Frequency of Alcohol Consumption among Alcoholic clients

Figure 8: Percentage Distribution of Psychosocial Problems of alcoholic clients

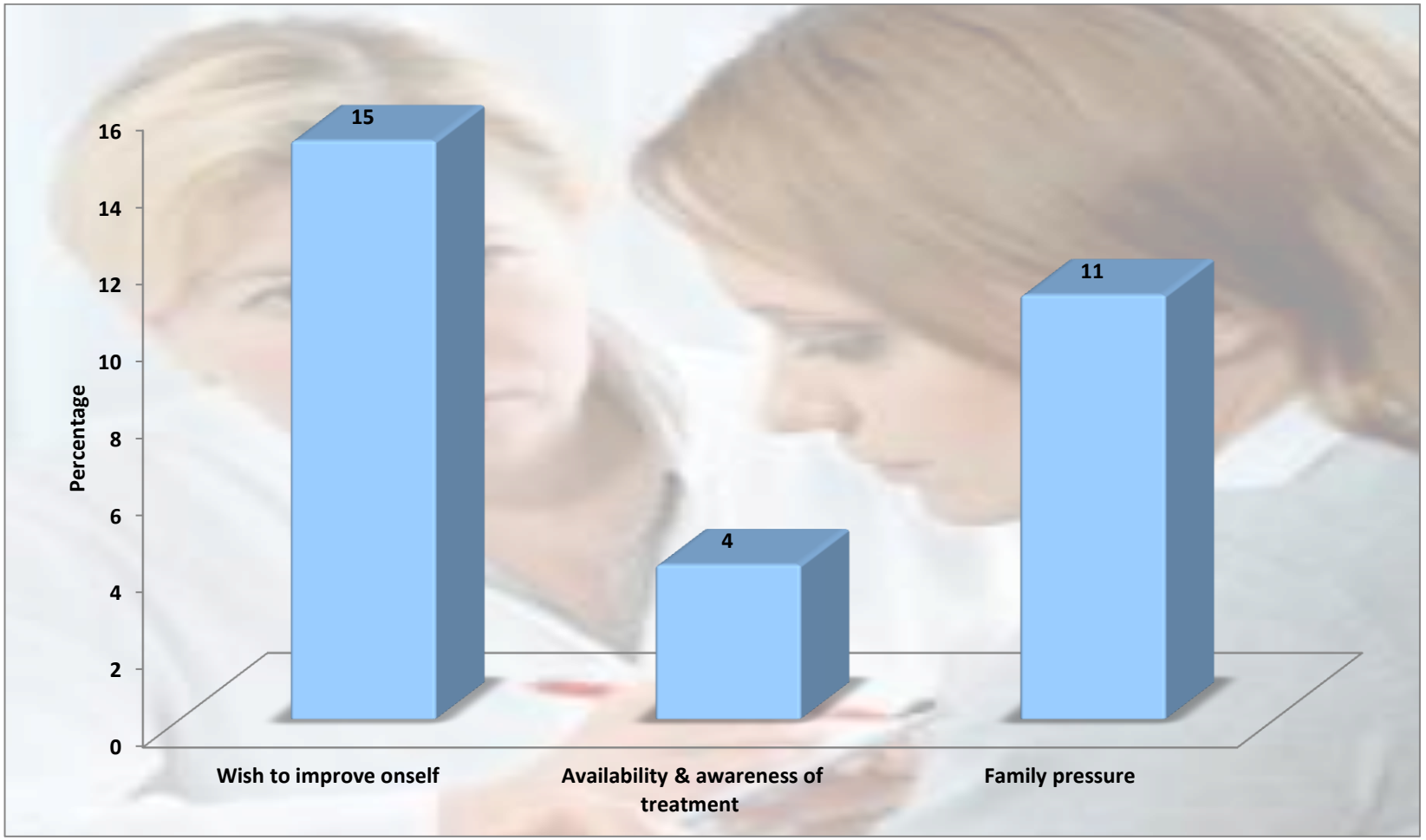

Figure 9: Percentage Distribution of Alcoholic Clients has Motivation to Seek Treatment

Table: 3

Frequency and Percentage Distribution of Level of Anger among Alcoholic Clients Before and After Virtual Reality Therapy.

N = 30

Level of anger	Before therapy		After therapy	
	n	**p**	**n**	**p**
Minimal	-	-	13	43.33
Mild	17	56.66	17	56.66
Moderate	11	36.66	-	-
Severe	2	6.66	-	-

Table 3 and Figure 10 shows that significant percentage of them had moderate level of anger (36.66%) in pretest. However after administration of virtual reality therapy more than half of them had mild level of anger (56.66%) among alcoholic clients.

Figure 10 Percentage Distribution of Level of Anger in Alcoholic clients before and after Virtual Reality Therapy

Table: 4

Frequency and Percentage of Level of Satisfaction on Virtual Reality Therapy among alcoholic clients.

N = 30

Level of Satisfaction	Highly Satisfied		Satisfied		Dissatisfied		Highly Dissatisfied	
	n	p	n	p	n	p	n	p
Overall Satisfaction	30	100	-	-	-	-	-	-
Related to researcher	30	100	-	-	-	-	-	-
Related to virtual reality therapy	30	100	-	-	-	-	-	-

Table 4 indicates that all of the alcoholic clients were highly satisfied (100%) with all the aspects of virtual reality therapy.

Table: 5

Comparison of Mean and Standard Deviation of Level of Anger among Alcoholic Clients Before and After Virtual Reality Therapy.

N=30

Group	Mean	SD	t - value
Before therapy	29.16	7.8	12.16* **
After therapy	17.3	4.50	

*****P<0.001**

Table 5 and Figure 11 shows that the anger score among alcoholic clients was high in pretest (M = 29.16, SD = 7.8) whereas after virtual reality therapy, it was found to be less (M =17.3, SD=4.50). The difference was statistically proven to be highly significant at P<0.001. Thus the null hypothesis Ho1 “There will not be any significant difference in level of anger among alcoholic clients before and after providing virtual reality therapy” was rejected. It can be attributed to the effectiveness of virtual reality therapy on reducing anger.

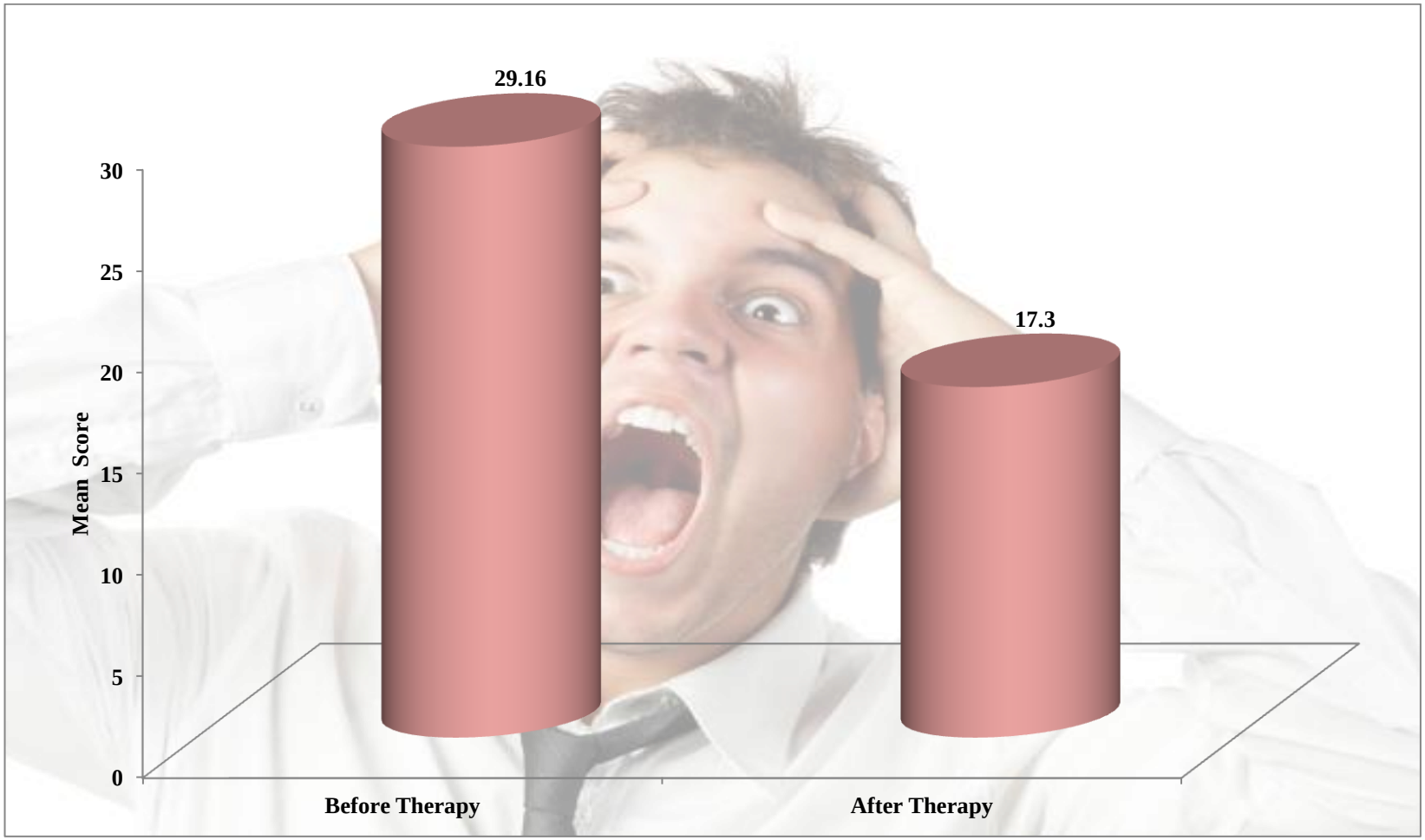

Figure 11: The Mean scores of Anger among Alcoholic Clients Before and After Virtual Reality Therapy

Table : 6

Association between the Selected Demographic variables and the Level of Anger among alcoholic clients before and after virtual reality therapy.

(N=30)

Demographic Variables	**Level of Anger in Alcoholic Clients**					
	Before therapy			**After therapy**		
	Upto mean	**Above mean**	χ^2	**Upto mean**	**Above mean**	χ^2
Age (in years)						
Up to 40	14	9	0.67	16	7	0.008
Above 40	3	4	NS	5	2	NS
Educational status						
Graduate	7	3	1.088	7	3	0.001
Others	10	10	NS	14	6	NS
Occupation						
Unemployed	2	1	0.133	1	2	2.133
Others	15	12	NS	20	7	NS
Marital status						
Married	11	8	0.036	11	8	3.01
Unmarried	6	5	NS	10	1	NS
Monthly income						
>10,000	8	10	2.735	12	6	0.236

<10,000	9	3	NS	9	9	NS
Religion						
Hindu	15	11	0.081	19	7	0.878
Others	2	2	NS	2	2	NS
No. of children						
No children	7	6	0.081	11	2	2.331
Children	10	7	NS	10	7	NS
Family history of alcohol abuse						
Yes	10	10	1.088	15	5	0.712
No	7	3	NS	6	4	NS

df=1, NS - not significant

Note: The demographic variables were merged for the sake of chi square analysis.

Table 6 depicts that there was no significant association between the demographic variables and level of anger among alcoholic clients. Hence the null hypothesis Ho2 **"**There will not be any significant association between selected demographic variables and level of anger among alcoholic clients before and after virtual reality therapy" was retained.

Table: 7 Association between the Selected Clinical Variables and the Level of Anger Before and after virtual reality therapy among alcoholic clients.

N=30

Demographic Variables	Level of Anger					
	Before therapy			After therapy		
	Upto mean	Above mean	χ^2	Upto mean	Above mean	χ^2
Age at onset of alcohol intake						
Up to20 years	8	5	0.221	10	3	0.522
Above 20years	9	8	NS	11	6	NS
Duration of alcohol dependence						
Up to 5years	12	7	0.892	14	5	0.332
Above 5years	5	6	NS	7	4	NS
Frequency of alcohol consumption						
Everyday	3	6	2.848	5	4	1.275
Others	14	7	NS	16	5	NS
Amount of alcohol consumed in a day						
180 ml	7	5	0.020	8	4	0.104
181-720 ml	10	8	NS	13	5	NS

History of abstinence & efforts to cut down alcohol in the past						
Yes	13	10	0.001	14	9	3.04
No	4	3	NS	7	0	NS
Previous history of alcoholics de-addiction						
Yes	9	11	3.331	12	8	2.84
No	8	2	NS	9	1	NS

df=1, NS - not significant

Note: The clinical variables were merged for the sake of chi square analysis.

Table 7 indicates that there was no significant association between the clinical variables and the level of anger among alcoholic clients. Hence the null hypothesis Ho3 "There will not be any significant association between selected clinical variables and level of anger among alcoholic clients before and after virtual reality therapy" was retained.

Summary

This chapter has dealt with analysis and interpretation of data obtained by the researcher. The analysis showed that among the alcoholic clients, the level of anger has reduced after administration of virtual reality therapy, when compared with before administration of the therapy. This implied that virtual reality therapy has the effect on anger.

CHAPTER V

DISCUSSION

Data relevant to the research findings were presented in Chapter IV. Discussion of these results and their implications are presented in two sections: an investigation of data regarding the research hypothesis is followed by a presentation of the implications for further research.

Statement of the Problem

A Pre Experimental Study to Assess the Effectiveness of Virtual Reality Therapy upon Anger among Alcoholic Clients at selected De-addiction centre, Chennai.

Objectives of the Study

1. To assess the level of anger among alcoholic clients before and after virtual reality therapy.
2. To evaluate the effectiveness of virtual reality therapy by comparing the level of anger among alcoholic clients before and after virtual reality therapy.
3. To determine the level of satisfaction on virtual reality therapy among alcoholic clients.
4. To find out the association between selected demographic variables and the level of anger among alcoholic clients before and after virtual reality therapy.
5. To find out the association between selected clinical variables and the level of anger among alcoholic clients before and after virtual reality therapy.

A total of 30 alcoholic clients were chosen to participate in the study from selected de-addiction centre at Chennai. The level of anger was assessed before and after virtual reality therapy of alcoholic clients.

The discussion is presented as follows:

- Demographic variables of the alcoholic clients.
- Clinical variables of the alcoholic clients.
- Level of anger among alcoholic clients.
- Effectiveness of virtual reality therapy among alcoholic clients.
- Level of satisfaction on virtual reality therapy among alcoholic clients.
- Association between the selected demographic variables and the level of anger among alcoholic clients.
- Association between the selected clinical variables and the level of anger among alcoholic clients.

Demographic variables of the alcoholic clients

The study finding shows that significant percentage of the alcoholic clients were aged below 30years (46.66%) with mean age of 32.9 years and had a history of alcohol abuse/ dependence (33.33%), were involved in business(36.66%) and had no children (43.33%), graduates (33.33%). All of the alcoholic clients were from urban background and from nuclear family (100%) and majority of them were Hindus (86.66%) with family income of Rs.5001-10,000 (60%). More than half of them were married (56.55%).

It was found that alcoholism was more common in the age group of below 30 years (46.66%). It reflects the fact, that people started drinking alcoholic at

very young age and become addicted. Alcoholism may be associated with age, social environment, stress and ethnic group influence in significant increase of alcohol intake. Currently social environment, stress and ethnic group influence in significant increase of alcohol intake. Currently social drinking is encouraged widely in the society. People involved in business are frequently exposed to parties, conferences thereby starts drinking. Also the WHO estimates that about 140 million people throughout the world suffer from alcohol dependence were mostly people who are involved in business. The results emphasize the need of nurses to impart education to people regarding itself about the ill effects of alcoholism. The decline in alcohol use can occur when parents start talking to their kids about risk of alcohol use and the kids were exposed to anti-alcohol messages in the media and emphasis on self-control. Concerning educational status, it implies the fact that since educated people are more aware of the treatment facilities of alcohol de-addiction, they are motivated and tends to come for treatment, than their counterparts.

Regarding occupational status, significant of them are involved in small scale business (36.66%). Factors such as physical pain, stress and fatigue associated with the work, may influence alcoholism. Thus the Psychiatric nurses can educate them about the stress management and relaxation measures in the work place to relieve from work pressures. Employee education programmes should highlight the impact of alcohol and other drug use, on health and safety. Educational campaigns should also serve to inform employees about workplace alcohol/drug policies and procedures.

With regard to monthly family income for majority of them was Rs.5001-10,000 (60%). Less income of alcoholic clients may be due to inability of the alcoholism to fixed a good job or influencing of alcoholism at work, because of alcoholism which leads to lesser income.

While looking into the marital status, the study findings reveal that more than half of them were married (56.66%).It is true that even though many alcoholics are unmarried, married alcoholics are likely to seek for the help due to family conflicts, increased demands in the family which is further confounded by other factors such as physical complications, depression, lack of productivity, loss of job and income etc. Health care professionals including nurses must educate and support for the family who have family problems because of alcoholism, strategies to prevent and cope with the problems of alcoholics. The family members should be helped to understand that they are responsible for an alcoholic's drinking problem and should be helped to find a recovery to the problem.

Regarding type of family all of them belong to nuclear family (100%). Predominance of nuclear families in this study reflects the fact that joint family system is gradually declining in our country, particularly when there is a history of alcoholism or mental illness in any one of the family members. It also highlights the importance for the Psychiatric nurses to concentrate more on counseling sessions for the entire family in joint sessions and stress the importance of family support in rehabilitation.

Previous family history of alcohol abuse / dependence (33.33%) reflects the role of genetics in the pattern of alcohol use. Parental alcoholism may affect the fetus even before the child is born. Families of alcoholics need treatment just as much as alcoholics. Alcohol affects each member of the family, from the unborn child to the alcoholic's spouse. The result also underscores the role of childhood environment whereby children adopt characteristics of important caregivers and role models as they grow up. Therefore parents should also be educated about effects of alcohol on their children.

Regarding religion, the study findings reveal that Hindus (86.66%) are more than other religions which may be due to the predominance of Hindus in our country. Moreover drinking alcohol is permitted as a cultural practice during Hindu festivals, marriages and family celebrations. Many religious rituals and ceremonies encourage the alcohol usage in Hindu religion.

Clinical variables of the alcoholic clients

The study findings shows that majority of the alcoholic clients started consuming alcohol at the age of 16-25 years (63.33%) with mean age of 22.5 years, had a previous history of alcoholics de-addiction treatment (66.66%) and made an effort to quit alcohol (76.66%) and the form of alcohol used was beer (73.33%), psychosocial problems of alcoholic clients was conflicts in relationship (66.66%). More than half of them had excited feeling at first intake of alcohol (59%) and the precipitating factor of consuming alcohol was family problem (53.33%).

Half of the alcoholic clients had wish to improve oneself in motivation to seek treatment (50%) and had > 5years duration of alcohol dependence (50%). Significant percentage of the alcoholic clients consumed the amount of alcohol was more than 720 ml in a day (43.33%) and the form of alcohol used was brandy (23.33%), rum (1.33%) and frequency of alcohol consumption among alcoholic clients (30%).

It may be due to various factors like peer pressure, curiosity, risk taking and novelty seeking traits associated with adolescence and young adulthood. Also adolescence and young adulthood is a period during which increased socialization takes place within the circle other than family and school. It highlights the need for nurses to educate the adolescent population on assertive techniques, which would help them to resist peer pressures.

Regarding duration of alcohol intake significant of them are for duration more than 5 years (50%), may be probably because of lack of awareness among clients and about the importance of seeking treatment. Thus the psychiatric and community health nurses must provide referral services and motivate the alcoholics for seeking treatment. They also can conduct screening programme in the community to identify the alcoholics, provide referral services and counseling accordingly.

Enjoyment, pleasure as the precipitating factor for alcohol indicates the fact that the pattern of drinking in India is undergoing a change from being an occasional and ritualistic use to a social event. Today the most common purpose of consuming alcohol is to drink to be accepted in the peer group. Thus the Psychiatric nurses should make alcoholic clients to be aware about the gap that

exists between social drinking and problem drinking. Drinking alcohol everyday (30%), reflects the culture of heavy daily drinking among lower and lower-middle sections of the society in Chennai, where working class men assemble around liquor shops every evening and enjoy drinking and socializing. Brandy (23.33%), Beer (73.33%) was used predominantly. A point of interest was that frequent beer drinkers were a majority in this population. This may be related to the price of beer, compared with spirits for equivalent amounts of absolute alcohol. Amount of alcohol consumed signifies the importance given to drinking over other interests. When the Psychiatric nurse discusses the dangers of alcoholism over the beneficial effects, it may change the attitude of an alcoholic towards drinking.

Drug cessation programmes should target high risk population like school children, college students, army men, labourers and business people. Regarding conflicts in relationships, nurses should take one step ahead to reach the family members especially the wives of alcoholics. Domestic violence and its prevention strategies can be taught. Moreover conflict management strategies, a component of conflict resolution can be taught to alcoholic clients.

Level of anger among alcoholic clients

The study finding shows that significant percentage of them had moderate level of anger (36.66%) in pretest. However after administration of virtual reality therapy more than half of them had mild level of anger (56.66%) among alcoholic clients.

It indicates that alcoholic's loss control over emotion and they show increased amount of violent behavior than normal people. Anger is a common

human reaction to stress (or) aversive event which is termed provocations. According to cognitive trend in contemporary psychology, it explains about the impulsive reaction and consists of individual interpretation of anger, affective arousal and the resultant behavior which is committed in a situation. A considerable body of evidence exist which suggest that, when compared level of anger between normal individuals and alcoholics who consume alcohol, alcoholics may become more angry and aggressive than normal individual. Virtual reality therapy helps to have control over anger and utilize in constructive way. This can be attributed to the effectiveness of VRT.

Effectiveness of virtual reality therapy among alcoholic clients

The score of anger among alcoholic clients was high in pretest (M = 29.16, SD = 7.8) whereas after virtual reality therapy, it was found to be less (M =17.3, SD=4.50). The difference was statistically proven to be highly significant at $P<0.001$. Thus the null hypothesis Ho1 **"**There will not be any significant difference in level of anger among alcoholic clients" was rejected. It can be attributed to the effectiveness of virtual reality therapy on reducing anger.

These findings are consistent with study conducted to assess the effectiveness of cue exposure therapy to decrease alcohol craving in virtual environment. To prevent the craving and relapse experienced by alcoholics, cue exposure therapy (CET) has been used to extinguish the association between alcohol and alcohol-related cues and contexts. This study applied CET, using a virtual reality (VR) system, to eight members of an Alcoholics Anonymous group for eight sessions. Each session was administered for 30 minutes by a psychiatrist and included an introduction, immersion, and VR navigation, interviews about

feelings, and self-report questionnaires about feelings, and self report questionnaires about cravings. A mean score of 15.75 (SD = 10.91) on the Alcohol Urge Questionnaire in the first session decreased to 11.50 (SD = 5.76) in the final session (Lee, 2013)

The virtual reality therapy is a newer method in reducing anger in the field of therapeutic modalities which has a direct positive effect on the whole brain through the stimulation of physical presence in the real or imaginary world. Exercise in reality affects many regions in the nervous system and sets on the pleasure chemicals such as serotonin and dopamine that makes the person feel calm, happy and free. It also improves self esteem, cognitive skills and decision making and increases creative thoughts.

To sum up, it can be concluded that virtual reality therapy is one of the important psychosocial intervention in the field of medicine. It also helps the people to develop a positive attitude and dignity towards them and their fellow beings life and thus it in turn mould them in such a manner to develop their own philosophy towards a successful life.

Level of satisfaction on virtual reality therapy among alcoholic clients

Satisfaction arises from a person, when a therapy is balanced between the study participants choice and professional responsibility and high level of effectiveness can be obtained when the participants are satisfied with various components of any intervention such as method of administration, approach of the researcher, easiness, feasibility etc.

The researcher found that all of the alcoholic were highly satisfied (100%) regarding the intervention of virtual reality therapy. These findings indicated that

the administration of virtual reality therapy is well accepted by all the alcoholic clients. All the participants felt more energetic and enthusiastic while they participated in the procedure.

Many of the alcoholic clients reported high level of satisfaction. So the nurses can be instrumental in administering virtual reality therapy to the alcoholic clients without any restriction to reduce the level of anger in alcoholic clients, with that the quality of life can be improved.

Association between the selected demographic variables and the level of anger among alcoholic clients

The findings of the chi square test indicated that there was no significant association between demographic variables like age, educational status, occupational status, marital status, monthly family income, religion, type of family, family history of alcohol above and level of anger ($P>0.05$). In this regard, the null hypothesis Ho2 "There will not be any significant association between selected demographic variables and the level of anger among alcoholic clients before and after virtual reality therapy" was retained.

It indicates the reality that anger can be reduced by the usage of effective psychosocial interventions. The virtual reality therapy being one of the important psychosocial interventions that helps the alcoholic clients to reduce the level of anger. This highlights the importance of reducing anger, particularly in alcoholic clients. Hence, the nursing educators must plan for the effective psychosocial interventions such as virtual reality therapy which can be incorporated with day to day activities.

Association between the selected clinical variables and the level of anger among alcoholic clients

The findings of the chi square test indicated that there was no significant association between the selected clinical variables and the level of anger (P>0.05). In this regard, the null hypothesis Ho3 "There will not be any significant association between selected clinical variables and level of anger among alcoholic clients before and after virtual reality therapy" was retained. It indicates the reality that anger can be reduced by the usage of effective psychosocial interventions. The virtual reality therapy being one of the important psychosocial interventions that helps the alcoholic clients to reduce the level of anger.

It could be inferred that irrespective of the clinical variables and alcoholic clients experience the level of anger was found to be mild to severe level. Thus VRT can be administered to all the alcoholic clients, irrespective of various demographic and clinical variables.

Summary

This chapter dealt with the objectives of the study, major findings of the demographic and clinical variable of alcoholic clients with anger among alcoholic clients before and after administration virtual reality therapy, Mean and Standard Deviation of level of anger before and after virtual reality therapy, association between the selected demographic and clinical variable and level of anger of the alcoholic clients and the level of satisfaction on virtual reality therapy.

CHAPTER VI

SUMMARY, CONCLUSION, IMPLICATIONS, RECOMMENDATION AND LIMITATIONS

Summary

The aim of the study was to assess the effectiveness of virtual reality therapy upon anger among alcoholic clients.

Objectives of the Study

1. To assess the level of anger among alcoholic clients before and after virtual reality therapy.
2. To evaluate the effectiveness of virtual reality therapy by comparing the level of anger among alcoholic clients before and after virtual reality therapy.
3. To determine the level of satisfaction on virtual reality therapy among alcoholic clients.
4. To find out the association between selected demographic variables and the level of anger among alcoholic clients before and after virtual reality therapy.
5. To find out the association between selected clinical variables and the level of anger among alcoholic clients before and after virtual reality therapy.

Null hypotheses

$H_0$1 There will not be any significant difference in level of anger among alcoholic clients before and after providing virtual reality therapy.

$H_0$2 There will not be any significant association between selected demographic variables and level of anger among alcoholic clients before and after the virtual reality therapy.

$H_0$3 There will not be any significant association between selected clinical variables and level of anger among alcoholic clients before and after the virtual reality therapy.

The conceptual framework of the study was developed on the basis of Peplau's interpersonal theory (1952) given by Dr. Hildegard Peplau. An extensive review of literature and the guidance by experts found the foundation to the development of the tool.

The study utilized the pre – experimental research design and the study was conducted in Serene De-addiction center, Madhurvoyal, Chennai. Thirty alcoholic clients were selected through purposive sampling technique. The level of anger were assessed for the group before and after therapy. Virtual reality therapy was given for all the clients individually for the duration of 5-7 minutes for each day for the period of one week and post test was conducted after one week.

The investigator used the demographic variable proforma, clinical variable proforma, Clinical anger scale to assess the level of anger and rating scale for the level of satisfaction on virtual reality therapy. The data collection tools were validated and reliability was established. After the pilot study, the data for the main study was collected. The collected data was tabulated and analyzed using descriptive and inferential statistics.

Major findings of the study

Demographic variables of the alcoholic clients

The study finding shows that significant percentage of the alcoholic clients were aged upto 30years (46.66%) with mean age of 32.9 years and had a history of alcohol abuse/ dependence (33.33%), were involved in business(36.66%) and had no children (43.33%), graduates (33.33%). All of the alcoholic clients were from urban background and from nuclear family (100%) and majority of them were Hindus (86.66%) with family income of Rs.5001- 10,000 (60%). More than half of them were married (56.55%).

Clinical variables of the alcoholic clients

The study findings shows that majority of the alcoholic clients started consuming alcohol at the age of 16-25 years (63.33%) with mean age of 22.5 years, had a previous history of alcoholics de-addiction treatment (66.66%) and made an effort to quit alcohol (76.66%) and the form of alcohol used was beer (73.33%), psychosocial problems of alcoholic clients was conflicts in relationship (66.66%). More than half of them had excited feeling at first intake of alcohol (59%) and the precipitating factor of consuming alcohol was family problem (53.33%).

Half of the alcoholic clients had wish to improve oneself in motivation to seek treatment (50%) and had > 5years duration of alcohol dependence (50%). Significant percentage of the alcoholic clients consumed the amount of alcohol was more than 720 ml in a day (43.33%) and the form of alcohol used was brandy (23.33%), rum (1.33%) and frequency of alcohol consumption among alcoholic clients (30%).

Level of anger among alcoholic clients

The study finding shows that significant percentage of them had moderate level of anger (36.66%) in pretest. However after administration of virtual reality therapy more than half of them had mild level of anger (56.66%) among alcoholic clients.

Effectiveness of virtual reality therapy among alcoholic clients

The anger score among alcoholic clients was high in pretest (M = 29.16, SD = 7.8) whereas after virtual reality therapy, it was found to be less (M =17.3, SD=4.50). The difference was statistically proven to be highly significant at $P<0.001$. Thus the null hypothesis Ho1 "There will not be any significant difference in level of anger among alcoholic clients before and after providing virtual reality therapy" was rejected. It can be attributed to the effectiveness of virtual reality therapy on reducing anger.

Level of satisfaction on virtual reality therapy among alcoholic clients

The researcher found that all of the alcoholic were highly satisfied (100%) regarding the intervention of virtual reality therapy. These findings indicated that the administration of virtual reality therapy is well accepted by all the alcoholic clients. All the participants felt more energetic and enthusiastic while they participated in the procedure.

Association between the selected demographic variables and the level of anger among alcoholic clients

The study findings shows that there was no significant association between demographic variables like age, educational status, occupational status, marital

status, monthly family income, religion, type of family, family history of alcohol and level of anger (P>0.05). In this regard, the null hypothesis Ho2 “There will not be any significant association between selected demographic variables and the level of anger before and after virtual reality therapy of alcoholic clients” was retained.

It indicates the reality that anger can be reduced by the usage of effective psychosocial interventions. The virtual reality therapy being one of the important psychosocial interventions that helps the alcoholic clients to reduce the level of anger.

Association between the selected clinical variables and the level of anger among alcoholic clients

It was found that there was no significant association between the selected clinical variables and the level of anger of alcoholic clients. In this regard, the null hypothesis Ho3 “There will not be any significant association between selected clinical variables and the level of anger among alcoholic clients before and after virtual reality therapy” was retained. It indicates the reality that anger can be reduced by the usage of effective psychosocial interventions

It could be inferred that irrespective of the clinical variables and level of anger was moderate. Thus VRT can be administered to all the alcoholic clients, irrespective of various demographic and clinical variables.

Conclusion

The study revealed that the virtual reality therapy was effective in reducing the level of anger of the alcoholic clients. This study provides an excellent

framework to look at how alcoholics understand and manage emotions. Virtual reality therapy which can be effectively utilized to help alcoholic clients to achieve a greater degree of skills to control anger.

Implications

The implication for nursing practice, nursing education, nursing administration and nursing research are presented based on the findings.

Nursing practice

Emotional balance through an anger control is considered healthy behavior which results in personal empowerment. Anger management of providing virtual reality therapy among nurse practitioners is an valuable component for successful professional practice. As nurses move away from traditional subservient roles and perceived stereotypes it is increasingly being recognized and accountable, that a nurse needs to control anger and utilize in a constructive way. It may also aid the confidence of the profession as it develops. Nurses can also use the exercises from the current study to help clients to reduce anger, empowered ways to react and be proactive.

Nursing theory

The conceptual model exclusively for the use of anger management of providing virtual reality therapy is to be developed by nursing theorist. The path analysis used to identify the determinant of level of anger in alcoholic clients is presented in the present study in the form of conceptual model which can be used to educate and guide the nurses in caring for alcoholic clients.

Nursing education

In the advancement on technological world, a newer trend in the field of nursing education and innovation is must to enhance the nursing care. The nursing students should be taught the importance of reducing the level of anger and enhance the quality of life of the alcoholic clients. Student nurses should incorporate the importance of the virtual reality therapy upon anger among alcoholic clients. Nurses health education programme can be conducted regarding the importance of reducing the level of anger among alcoholic clients.

Nursing administration

In the ever growing field of medicine innovation practices is important in the health care administration. Administrators have the responsibility to provide the continuing nursing education opportunities to understand the psychosocial interventions including the virtual reality therapy. This enables the nurses to update their knowledge and help them to render cost effective care to the public. The nurse administrator must periodically organize formal training programme to the nurses to assess the level of anger among alcoholic clients in order to reduce their anger by providing virtual reality therapy.

Nurse researcher

The professionals and the students can conduct further studies on reducing the level of anger through various intervention to promote psychological well being in the de-addiction centers. There is in need of extensive research in this area. Nurse researcher should challenge to perform scientific work and take part in assessment, application, evaluation of alcoholic clients with anger. Researcher must focus on mental health on various aspects and develop appropriate tools for screening and assessment of level of anger and to reduce the level of anger among

the alcoholic clients. It opens the large avenue for the researcher. Since virtual reality therapy can be implemented to alcoholic clients and its effectiveness can be tested through researcher.

Recommendations

- The study can be conducted on a larger sample to generalize the results.
- The study can be conducted in the other settings also like psychiatric hospitals and rehabilitation centers.
- Longitudinal study can be conducted for long term effects of virtual reality on anger.
- A comparative study can be conducted to evaluate the effectiveness of virtual reality therapy and with other psychosocial intervention to reduce the level of anger among alcoholic clients.
- The study can be conducted among different groups like adolescents, mentally ill patients, teenagers who abuse other substances, family members of alcoholic clients.
- A follow up study can be conducted to assess the effectiveness of the present intervention in reducing the relapse rates of alcoholic clients.
- A study can be conducted on quality of life among alcoholic clients.

Limitations

- True experimental study was not conducted due to practical difficulties.
- Investigator could not find much published study in on virtual reality therapy related to anger among alcoholic clients.
- Random sampling was not possible due to practical difficulties.

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APPENDIX I

LETTER PERMITTING TO CONDUCT THE STUDY

SERENE LIFE HOSPITAL
Clean it, Pure it & Revive it
An Exclusive Residential Hospital for
• Alcohol / Drug De-addiction • Rehabilitation • Mental Illness & Psychiatric Management

January 14, 2015

To,
The Principal
Apollo college of Nursing
Vanagaram
Chennai-95

Respected Madam,

A propos your letter requesting permission for **Ms.S.Mohana Priya** to conduct her research study as part of her curriculum requirement, we are glad to allow her to conduct main study on the title

"A Pre experimental study to assess the effectiveness of virtual reality therapy upon anger among alcoholic clients at selected de-addiction center, Chennai"

Regards

FOR SERENE LIFE HOSPITAL

ADMIN MANAGER

S.No.86/2A, 14/4C, 1st Floor, Kanniamman Nagar Main Road, Vanagaram, Chennai - 600 095. Ph : +91 44 6455 4145 / 6455 4146
An ISO 9001 - 2008 Certified www.serenelifehospital.org admin@serenelifehospital.org Authorized by IMH

APPENDIX II

ETHICAL COMMITTEE PERMISSION TO CONDUCT THE STUDY

Ethics Committee

Apollo HOSPITALS
TOUCHING LIVES

09 April, 2014

To,
Ms. Mohana Priya,
2nd Year M.SC (Nursing),
Department of Pediatric Nursing,
Apollo College of Nursing, Chennai.

Ref: A pre experimental study to assess the effectiveness of virtual reality therapy upon anger among alcoholic clients at selected de addiction center, Chennai

Sub: Approval of the above referenced project and its related documents.

Dear Ms. Mohana Priya,

Ethics Committee-Apollo Hospitals has received the following document submitted by you related to the conduct of the above-referenced study.

- Project Proposal
- Informed Consent Form

The Ethics Committee-Apollo Hospitals reviewed and discussed the Project proposal documents submitted by you related to the conduct of the above referenced Project at its meeting held on 08 April, 2014.
The following Ethics Committee Members were present at the meeting held on 08 April, 2014

Name	Gender	Designation	Affiliation	Position in the committee
Dr. P. Nalini Rao	F	Independent Consultant, Social Research and development	Madras School of Social Work, Chennai	Chairperson (Social Scientist)
Dr. Rema Menon	F	Blood Bank Officer	Apollo Hospitals, Chennai	Member Secretary (Clinician)
Dr.Muralidaran	M	Professor & Head, Department of Pharmacology	BaidMetha College of Pharmacy, Chennai	EC-Member (Pharmacologist)
Mrs. Mathanghi	F	Executive- project	Apollo Pharmacy, Chennai	EC-Member (Layperson)
Mr. Philip.T.Paul	M	Lawyer	Madras High Court, Chennai	EC-Member (Lawyer)

Apollo Hospitals Enterprise Limited
21, Greams Lane, Off Greams Road, Chennai - 600 006
Tel : 91 - 44 - 2829 1618, 2829 3333, 91 - 44 - 2829 5465 Extn : 5045 / 6641
Fax : 91 - 44 - 2829 1618 / 4449 E - Mail : ecapollochennai@gmail.com

Dr. K. Sathyamurthi	M	Asst. Professor	School of Social work, Chennai	EC-Member (Social Scientist)
Dr. VijayaKumar Chockan	M	Medical Superintendant	Apollo Speciality Hospitals, Chennai	EC-Member (Clinician)
Dr. K. C. Krishnakumar	M	Medical Superintendant	Apollo First Med Hospitals, Chennai	EC-Member (Clinician)

After due ethical and scientific consideration, the Ethics Committee has approved the above presentation submitted by you.

The EC review and approval of the report is only to meet the academic requirement and will not amount to any approval of the conclusions / recommendations as conclusive, deserving adoption and implementation, in any form, in any healthcare institution.

The Ethics Committee is constituted and works as per ICH-GCP, ICMR and revised Schedule Y guidelines.

With Regards,

Date: 09/04/14

Rema Menon

Dr. Rema Menon,
Ethics Committee-Member Secretary,
Apollo Hospitals, Chennai,
Tamil Nadu, India.

Dr. REMA MENON
MEMBER SECRETARY
ETHICS COMMITTEE
APOLLO HOSPITALS
CHENNAI-600 006, TAMILNADU

Apollo Hospitals Enterprise Limited
21, Greams Lane, Off Greams Road, Chennai - 600 006
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Fax : 91 - 44 - 2829 1618 / 4449 E - Mail : ecapollochennai@gmail.com

APPENDIX III

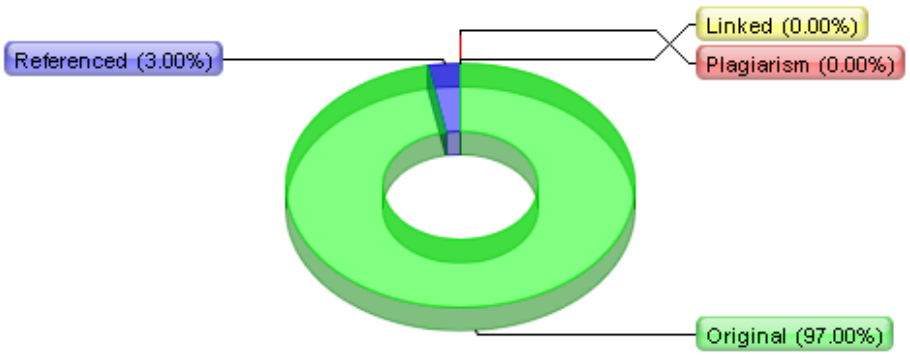
PLAGIARISM ORIGINALITY REPORT

	Plagiarism Detector - Originality Report
	Plagiarism Detector Project: [http://plagiarism-detector.com] Application core version:850

Originality report details:	
Generation Time and Date:	14/01/2015
Document Name:	MOHANAPRIYA.S THESIS-1.docx
Document Location:	D:\my research\MOHANAPRIYA THESIS-1.docx
Document Words Count:	17,900
Check time [hs:ms:ss]:	00:00:45

Important Hint: to understand what exactly is meant by any report value - you can click . It will navigate you to the most detailed explanation at our web site.

Plagiarism Detection Chart:



Referenced 3% / Linked 0%

Original - 97% / 0% - Plagiarism

APPENDIX IV

LETTER SEEKING PERMISSION TO USE STUDY TOOL

Gmail by Google

mohanapriya subramaniyan <shripriyaa25@gmail.com>

permission to use tool

1 message

mohanapriya subramaniyan <shripriyaa25@gmail.com> Mon, May 5, 2014 at 4:00 PM
To: wesnell@semo.edu

Respected sir\ madam,

Greetings ! I am S.Mohanapriya from Apollo college of nursing,chennai doing M.Sc Nursing II year, as a part of curriculum requriement the following research title has been selected for study.

"Pre experimental study to assess the effectiveness of virtual reality therapy upon anger among alocholic clients at selected deaddiction center, Chennai."

I have keen intrest to use your Clinical anger scale for my research study, so i kindly request you to permit to use your scale.

Thanking you,

your's faithfully,
S.Mohanapriya
M.Sc II year
Apollo college of Nursing, chennai
India.

APPENDIX V

REQUEST FOR CONTENT VALIDITY

LETTER SEEKING PERMISSION FOR CONTENT VALIDITY

From

Ms. Mohana Priya. S

M.Sc (N) II year,

Apollo College of Nursing, Chennai-95.

To

Through Proper Channel

Dr. Latha Venkatesan,

Principal,

Apollo College of Nursing.

Sub: Request for opinion and suggestion of expert for establishing content validity of respected tool.

Respected madam,

Greetings! As a part of the Curriculum Requirement the following research title is selected for the study.

"A Pre Experimental study to assess the Effectiveness of Virtual reality therapy upon anger among alcoholic clients at selected de-addiction center , Chennai."

I will be highly privileged to have your valuable suggestions with regard to the establishment of content validity of Research tool. So I request you to validate my Research tool and give suggestion about the tool.

Thanking you,

Yours Sincerely,

(Ms. S.Mohana Priya)

Place:

Date:

APPENDIX VI

CONTENT VALIDITY CERTIFICATE

I hereby certify that I have validated the Research tool and interventional programme of Ms. S,Mohana Priya, M.Sc. (N) II year student who is undertaking research study.

A Pre Experimental Study to Assess the Effectiveness of Virtual Reality Therapy upon Anger among Alcoholic clients at selected De-addiction center, Chennai

Signature of Expert

Name and Designation

APPENDIX VII

LIST OF EXPERTS FOR CONTENT VALIDITY

1. **Dr. Latha Venkatesan, M.Sc., M.Phil., (N), Ph.D.,(N)., M.B.A**

   Principal,

   Apollo College of Nursing,

   Chennai – 95.

2. **Dr. M.Kumaresan M.S.,D.L.O.,F.I.C.S.,F.R.S.H.,**

   E.N.T Consultant,

   Siva E.N.T Consultant,

   159, Liyod's Road,

   Chennai-600 014

3. **Prof. Mrs. Lizy Sonia. A. M.Sc (N), Ph.D.,**

   Vice Principal,

   Apollo College of Nursing,

   Chennai – 95.

4. **Prof. Mrs. Vijayalakshmi. K. M.Sc (N), Ph.D.,**

   HOD of Mental health Nursing,

   Apollo College of Nursing,

   Chennai – 95.

5. **Mrs. Jaslina Gnanarani M.Sc (N), Ph.D.,**

   Reader, Medical Surgical Nursing,

   Apollo College of Nursing,

   Chennai – 95.

6. **Mrs. Anuradha.C, M.Sc (N), M.Sc Psychology.,**

   Reader , Mental health Nursing,

   Apollo College of Nursing,

   Chennai – 95.

7. **Mrs. Stella Mary. I. M.Sc (N)**

   Reader , Mental health Nursing,

   Apollo College of Nursing,

   Chennai – 95.

APPENDIX VIII

RESEARCH PARTICIPANT CONSENT FORM

Dear participant,

I am a M.Sc., Nursing student of Apollo college of Nursing, Chennai. As part of my study, a research on **Effectiveness of Virtual reality therapy upon Anger among alcoholic clients.** The findings of the study will be helpful in reducing the anger level in alcoholic clients.

I hereby seek your consent and co-operation to participate in the study. Please be frank and honest in your responses. The information collected will be kept confidential and anonymity will be maintained.

Signature of the Researcher

I …… Hereby consent to participate and undergo the study.

Place : Date :

Signature of the Participant

ஆராச்சியில் பங்கு பெறுபவருக்கான ஒப்புதல் படிவம்

அன்பார்ந்த பங்கு பெறுவோரே,

நான் அப்போலோ செவிலியர் கல்லூரியில் முதுகலை செவிலியர் பயிற்று பெரும் மாணவி. என்னுடைய பயிற்சியின் ஒரு பகுதியாக மெய்நிகர் உண்மை பயிற்சி மூலமாக கோபத்தை கட்டுப்படுத்தும் பயிற்சி பற்றி அறிய ஆராய்ச்சி செய்கிறேன். இந்த ஆராய்ச்சியில் நீங்கள் பங்கு பெற, உங்களுடைய ஒப்புதல் மற்றும் ஒத்துழைப்பையும், வேண்டுகிறேன். உங்களுடைய குறிப்புகள் இரகசியமாக வைக்கப்படும், மற்றும் உங்களுடைய பெயர் வேறு எங்கும் வெளியிடப்படமாட்டாது.

ஆராச்சியாளரின் கையொப்பம்

..... என்கிற நான் இந்த ஆராய்ச்சியில் பங்கு பெற ஒப்புதல் அளிக்கிறேன்.

APPENDIX IX

CERTIFICATE FOR VIRTUAL REALITY THERAPY

Medical Advance Research Foundation
(Public Charitable Trust)
Recipient : Science Popularisation Award, Government of Tamil Nadu 2001 - 2002

Managing Trustee :
Dr. M. KUMARESAN, M.S. (E.N.T.) D.L.O.
MEMBER, POLITZER SOCIETY, USA
President, Madras - India Regional Chapter of the Acoustical Society of America
Secretary, Acoustical Foundation Education and Charitable Trust
Director, International Research Institute for the Deaf.
RECIPIENT OF NATIONAL AND STATE GOVERNMENT AWARDS
Managing Director, Bharath Institute of Para-Medical Sciences
Chairman, Bharath Community College.

Office :
SIVA E.N.T. HOSPITAL
No.159, Avvai Shanmugam Salai,
Royapettah, Chennai - 600 014.
Tamil Nadu, India.
Phone : 2811 6807
E-mail : kumaresan@doctor.com
Cell : 98410 55774
Research :
Virtual Reality Medicine

Date : 02/05/2014

Certificate Of Virtual Reality Therapy Completion

This is to Certify Miss.S.Mohana Priya Msc.Nursing II year has Successfully Completed the Training for Virtual Reality Therapy Aim, Target People, Methodology, outcome Conducted from 30/04/2014 to 02/05/2014

M. KUMARESAN, M.S., D.L.O.
Managing Director
SIVA E N T. HOSPITAL (PVT) LTD
94 LLOYDS ROAD
MADRAS 600 014
PHONE: 826045

APPENDIX X

CERTIFICATE FOR ENGLISH EDITING

TO WHOM SO EVER IT MAY CONCERN

This is to certify that the dissertation "A Pre-experimental study to assess the Effectiveness of Virtual Reality Therapy upon Anger among Alcoholic clients at selected De-addiction centers ,Chennai" by Ms.S.MohanaPriya,M.Sc(N) II year student, Apollo College Of Nursing was edited for edited for English appropriateness.

D. Amirtha Joycelin

D. AMIRTHA JOYCELIN
PG ASSISTANT (ENGLISH)
GHSS KALKULAM

Signature

CERTIFICATE FOR TAMIL EDITING

TO WHOM EVER IT MAY CONCERN

This is to certify that the dissertation "A Pre - Experimental Study to Assess the Effectiveness of Virtual Reality Therapy upon Anger among Alcoholic clients at Selected De-Addiction Centers, Chennai." by Ms.S.Mohana Priya II M.sc. (N) student, Apollo College of Nursing, was edited for Tamil language appropriateness.

Signature

P. AMUTHA M.A., B.Ed., M.Phil.,
P.G. Assistant (Tamil)
Govt. Higher Secondary School
M.G.R. Nagar, Chennai - 78.

APPENDIX XI

DEMOGRAPHIC VARIABLES PROFORMA OF ALCOHOLIC CLIENTS

Purposes:

This Proforma is used to measure the demographic variables such as age, gender, educational status, occupation, marital status, monthly family income, religion, and type of family, number of children and area of residence.

Instructions:

Please answer the following questions. This information will be filled by the researcher. Please be frank and free in answering these questions. The collected information will be kept confidential and anonymity maintained.

Sample number:

1. Age in years

1.1 < 30 ☐

1.2 31-40 ☐

1.3 41-50 ☐

1.4 51-60 ☐

2. Educational status

2.1 Illiterate ☐

2.2 Primary education ☐

2.3 Secondary education ☐

2.4 Higher secondary education ☐

2.5 Graduate and above.

3. Occupation

3.1 Unemployed ☐

3.2 Student ☐

3.3 Business ☐

3.4 Sedentary workers ☐

3.5 Heavy worker ☐

3.6 Retired ☐

4. Marital status

4.1 Unmarried ☐

4.2 Married ☐

4.3 Separated ☐

4.4 Divorced ☐

4.5 Widow/Widower ☐

5. Monthly family income

5.1 < 2500 ☐

5.2 2501 to 5000 ☐

5.3 5001 to 10,000 ☐

5.4 > 10,000 ☐

6. Religion

6.1 Hindu ☐

6.2 Muslim ☐

6.3 Christian ☐

6.4 If any others, specify ☐

7. Type of family

7.1 Nuclear ☐

7.2 Joint ☐

7.3 Extended ☐

8. Number of children

8.1 No child ☐

8.2 One ☐

8.3 Two ☐

8.4 More than two ☐

9. Family history of alcohol abuse or dependence.

9.1 Yes ☐

9.2 No ☐

10. Area of residence

10.1 Urban ☐

10.2 Rural ☐

சமூக மற்றும் குடும்ப விவரங்களின் மாறுபட்டக் குறிப்புகளை அறியும் மாதிரிப்படிவம்

நோக்கம்

இப்பட்டியல் பலவகையான வேறுபாடுகளை அளவு செய்கிறது. அவை வயது, இனம் (ஆண்.்.பெண்), கல்வித் தகுதி, செய்யும் தொழில், திருமணமானவரா, குடும்ப மாத வருமானம், மதம், குடும்ப நிலை, குழந்தைகளின் எண்ணிக்கை மற்றும் இருப்பிடம்.

முன்குறிப்பு

கீழ்கண்ட கேள்விகளுக்கு விடை அளிக்கவும். இத்தகவல்களை ஆராய்ச்சியாளர் பூர்த்தி செய்வார். திறந்த மனதுடன் ஒளிவு மறைவில்லாமல் பதிலளக்கவும். இத்தகவல்கள் ரகசியமாக வைக்கப்படும்.

தன் நிலை விளக்கம்

மாதிரி எண் :

1. வயது (ஆண்டுகளில்) :

1.1 30 வயதுக்கு கீழ் ☐

1.2 31 – 40 வயது ☐

1.3 41 – 50 வயது ☐

1.4 51 – 60 வயது ☐

2. கல்வித் தகுதி

2.1 படிக்கவில்லை ☐

2.2 தொடக்கக் கல்வி ☐

2.3 உயர்நிலைக் கல்வி ☐

2.4 மேல்நிலைக் கல்வி ☐

2.5 பட்டப்படிப்பு மற்றும் அதற்கும் மேல் ☐

3. தொழில்

3.1 வேலையற்றவர் ☐

3.2 மாணவர் ☐

3.3 சுயதொழில் ☐

3.4 மற்ற மேசையடி தொழில் செய்பவர் ☐

3.5 கடின வேலை ☐

3.6 பணி ஓய்வுப் பெற்றவர் ☐

4. திருமணத் தகுதி

4.1 திருமணம் ஆகாதவர் ☐

4.2 திருமணம் ஆனவர் ☐

4.3 பிரிந்திருப்பவர் ☐

4.4 விவாகரத்தானவர் ☐

4.5 மனைவியை இழந்தவர் ∴ கணவரை இழந்தவர் ☐

5. குடும்பத்தின் மாத வருமானம்

5.1 2500 ரூபாய்க்கு குறைவு ☐

5.2 2501 – 5000 ☐

5.3 5000 – 10000 ☐

5.4 10000-க்கு மேல் ☐

6. மதம்

6.1 இந்து ☐

6.2 இஸ்லாமியர் ☐

6.3 கிறித்துவர் ☐

6.4 மற்றவை எனில் (குறிப்பிடவும்) ☐

7. குடும்ப வகை

7.1 தனிக்குடும்பம் ☐

7.2 கூட்டுக்குடும்பம் ☐

7.3 விரிவு படுத்தப்பட்ட குடும்பம் ☐

8. குழந்தைகளின் எண்ணிக்கை

8.1 குழந்தையில்லை ☐

8.2 ஒன்று ☐

8.3 இரண்டு ☐

8.4 இரண்டுக்கு மேல் ☐

9. குடும்பத்தில் எவரேனும் மதுவை பயன்படுத்துபவர் ∴ மதுவுக்கு அடிமை

9.1 ஆம் ☐

9.2 இல்லை ☐

10. இருப்பிடத்தின் சூழ்நிலை

10.1 நகர்புறம் ☐

10.2 கிராமப்புறம் ☐

APPENDIX XII

CLINICAL VARIABLES PROFORMA OF ALCOHOLIC CLIENTS

Purpose:

This inventory is used to assess the clinical variables such as age at which the alcohol consumption was started, duration of alcohol dependence, precipitating factor, feelings when first consumed alcohol, frequency, form, amount, associated symptoms, associated complications, psychosocial problems arisen due to alcohol consumption, History of abstinence, previous history of alcoholics de- addiction treatment and motivation to seek treatment.

Instructions:

Please answer the following questions. This information will be filled by the researcher. Please be frank and free in answering these questions. The collected information will be kept confidential and anonymity maintained.

1. Age at which the alcohol consumption was started

1.1 < 15 years ☐

1.2 16-25 years ☐

1.3 26-35 years ☐

1.4 > 35 years ☐

2. Duration of alcohol dependence

2.1 1 year ☐

2.2 2-5 years ☐

2.3 >5 years ☐

3. Precipitating factor for alcohol consumption

3.1 Peer pressure / Influence ☐

3.2 Family Problems ☐

3.3 Financial Problems ☐

3.4 Physical problems ☐

3.5 If others, Specify ☐

4. Feelings when you first consumed alcohol

4.1 Excited and relieved from all the problems ☐

4.2 Discomfort ☐

4.3 If others, Specify ☐

5. Frequency of alcohol consumption

5.1 Everyday ☐

5.2 Several times a week ☐

5.3 Once a week ☐

5.4 Once a month ☐

6. Form of alcohol used

6.1 Fermented beverages (beer, wine) ☐

6.2 Spirits (Gin, Vodka, Whisky etc) ☐

6.3 If others, Specify ☐

7. Amount of alcohol consumed in a day

7.1 One quarter (180ml) ☐

7.2 One bottle (720ml) ☐

7.3 More than one bottle (>720ml) ☐

8. Psychosocial problems arisen due to alcohol consumption

8.1 Conflicts in relationship ☐

8.2 Financial difficulties ☐

8.3 If others, Specify ☐

9. History of abstinence and efforts to cut down alcohol in the past

9.1 Yes ☐

9.2 No ☐

10. Previous history of Alcoholics De- Addiction Treatment

10.1 Yes ☐

10.2 No ☐

11. Motivation to seek treatment

11.1 Wish to improve oneself ☐

11.2 Availability and awareness of treatment ☐

11.3 Family pressure ☐

11.4 If others, specify ----------, ☐

if not motivated for treatment, specify why

மருத்துவ விவரங்களின் மாறுபட்டக் குறிப்புகளை அறியும் மாதிரிப்படிவம்

நோக்கம்

இந்த விளக்கப் பட்டியலின் நோக்கம் மாறுபடும் மருத்துவ குணங்களை ஆராய்வதே அவை எந்த வயதில் மது அருந்தும் பழக்கம் ஆரம்பித்தது, மதுவுக்கு அடிமையான கால அளவு, பலவந்தமாக ஈடுபடவைத்த காரணங்கள், பயன்படுத்தும் மது வகை, உளவியல் சார்ந்த சமூக பிரச்சனைகள், மது பழக்கத்திலிருந்து விடுபட எடுத்த மருத்துவ முயற்சி மற்றும் சிகிச்சை பெறுவதன் நோக்கம் ஆகியவை.

முன்குறிப்பு

கீழ்கண்ட கேள்விகளுக்கு விடை அளிக்கவும். இத்தகவல்களை ஆராய்ச்சியாளர் பூர்த்தி செய்வார். திறந்த மனதுடன் ஒளிவு மறைவில்லாமல் பதிலளக்கவும். இத்தகவல்கள் ரகசியமாக வைக்கப்படும்.

1. எந்த வயதில் மது அருந்தும் பழக்கம் ஆரம்பமானது

1.1 15 வயதுக்கு முன்னால் ☐

1.2 15-25 வயதுக்குள் ☐

1.3 25-35 வயதுக்குள் ☐

1.4 35 வயதுக்கு மேல் ☐

2. மதுவுக்கு அடிமையான கால அளவு

2.1 ஒரு வருடம் ☐

2.2 1-5 வருடம் ☐

2.3 5 வருடங்களுக்கு மேல் ☐

3. மது அருந்தும் பழக்கத்திற்கு திடீரென ∴ பலவந்தமாக ஈடுபட வைத்த காரணி

3.1 ஒத்த வயதினரின் வற்புறுத்தல் ∴ தாக்கம் ☐

3.2 குடும்பப் பிரச்சனைகள் ☐

3.3 பணப் பிரச்சனை ☐

3.4 உடல் சார்ந்த பிரச்சனைகள் ☐

3.5 மற்றவை எனில் குறிப்பிடவும் ☐

4. முதன் முதலில் மது அருந்தியப் பொழுது உண்டான எண்ணங்கள்

4.1 எல்லாத் பிரச்சனைகளிலிருந்தும் விடுபட்ட உணர்வு ☐

4.2 அசௌகர்யமாக உணர்ந்தேன் ☐

4.3 வேறு ஏதேனுமெனில் குறிப்பிடவும் ☐

5. அடிக்கடி மது அருந்தும் கால அளவு

5.1 தினசரி ☐

5.2 ஒரு வாரத்தில் பல முறை ☐

5.3 வாரத்திற்கு ஒரு முறை ☐

5.4 மாதத்திற்கு ஒரு முறை ☐

6. பயன்படுத்தும் மது வகை?

6.1 நொதிக்கப்பட்ட திரவம் (பீர், ஒயின்) ☐

6.2 எரிச் சாராயம் (ஜின், வோட்கா, விஸ்கி, மற்றவை) ☐

6.3 வேறு ஏதேனும் எனில் குறிப்பிடவும் ☐

7. ஒரு நாளில் அருந்தும் மதுவின் அளவு?

7.1. கால் குப்பி ☐

7.2. ஒரு பாட்டில் ☐

7.3 ஒரு பாட்டிலுக்கும் மேல் ☐

8. உளவியல் சார்ந்த சமூக பிரச்சனைகள்

8.1 உறவுகளில் உரசல்கல் ☐

8.2 பணப் பரச்சனைகள் ☐

8.3 வேறு ஏதேனும் எனில் குறிப்பிடவும் ☐

9. கடந்த காலத்தில் மது பழக்கத்திலிருந்து விடுப்பட மற்றும் மத அளவைக் குறைக்க முயற்சி செய்ததுண்டா?

9.1 ஆம் ☐

9.2 இல்லை ☐

10. மதுப்பழக்கத்திலிருந்து விடுபட மருத்துவ முயற்சி எடுத்ததுண்டா?

10.1 ஆம் ☐

10.2 இல்லை ☐

11. குணப்படுத்திக் கொள்ளக் கிடைக்கும் ஊக்கம் எவை?

11.1 தன்னிலை உயர்த்திக் கொள்ள ☐

11.2 மருத்துவம் பற்றிய விழிப்புணர்வும், வாய்ப்பும் ☐

11.3 குடும்ப நச்சரிப்பு ☐

11.4 மற்றவை, சிகிச்சை பெற விருப்பமில்லை என்றால் காரணம் கூறவும ☐

APPENDIX XIII

BLUE PRINT FOR CLINICAL ANGER SCALE

Sl. No	Content	Items	Total	Percentage (%)
1.	Question related to anger towards oneself	1,2,3,7,14,15, 16,17,18,19	10	48
2.	Question related to behavioral expression of anger	4,5,6,8,9,13,20	7	34
3.	Question related to anger towards family and environment	10,11,12	3	15
		Total	**20**	**100%**

APPENDIX XIV

CLINICAL ANGER SCALE

It is a standardized tool developed by Dr. William E .Snell, Jr(1995).

Purpose :

This tool consists of 20 items to measure anger. The scale has got 20 cluster of statement. The score ranges from 0-60.

Thus the total obtainable score range will be 0-60.

Instructions:

Below cluster of statement dealing with anger. The scale is a four point likert scale. Participants were asked to read each of the 20 groups of statement. Identify the statement that best reflects how you feel without any restraints by placing a tick mark (√). Describes your responses honestly. The responses will be kept confidential and used for research purpose only.

1. A. I do not feel angry.

   B. I feel angry.

   C. I am angry most of the time now.

   D. I am so angry and hostile all the time that I can't stand it.

2. A. I am not particularly angry about my future.

   B. When I think about my future, I feel angry.

   C. I feel angry about what I have to look forward to.

   D. I feel intensely angry about my future, since it cannot be improved.

3. A. It makes me angry that I feel like such a failure.

   B. It makes me angry that I have failed more than the average person.

   C. As I look back on my life, I feel angry about my failures.

   D. It makes me angry to feel like a complete failure as a person.

4. A. I am not all that angry about things.

   B. I am becoming more hostile about things than I used to be.

   C. I am pretty angry about things these days.

   D. I am angry and hostile about everything.

5. A. I don't feel particularly hostile at others.

   B. I feel hostile a good deal of the time.

   C. I feel quite hostile most of the time.

   D. I feel hostile all of the time.

6. A. I don't feel that others are trying to annoy me.

   B. At times I think people are trying to annoy me.

   C. More people than usual are beginning to make me feel angry.

   D. I feel that others are constantly and intentionally making me angry.

7. A. I don't feel angry when I think about myself.

   B. I feel more angry about myself these days than I used to.

   C. I feel angry about myself a good deal of the time.

   D. When I think about myself, I feel intense anger.

8. A. I don't have angry feelings about others having screwed up my life.

   B. It's beginning to make me angry that others are screwing up my life.

   C. I feel angry that others prevent me from having a good life.

   D. I am constantly angry because others have made my life totally miserable.

9. A. I don't feel angry enough to hurt someone.

   B. Sometimes I am so angry that I feel like hurting others, but I would not really do it.

   C My anger is so intense that I sometimes feel like hurting others.

   D. I'm so angry that I would like to hurt someone.

10. A. I don't shout at people any more than usual.

    B. I shout at others more now than I used to.

    C. I shout at people all the time now.

    D. I shout at others so often that sometimes I just can't stop.

11. A. Things are not more irritating to me now than usual.

    B. I feel slightly more irritated now than usual.

    C. I feel irritated a good deal of the time.

    D. I'm irritated all the time now.

12. A. My anger does not interfere with my interest in other people.

    B. My anger sometimes interferes with my interest in others.

    C. I am becoming so angry that I don't want to be around others.

    D. I'm so angry that I can't stand being around people.

13. A. I don't have any persistent angry feelings that influence my ability to make decisions.

    B. My feelings of anger occasionally undermine my ability to make decisions.

    C. I am angry to the extent that it interferes with my making good decisions.

    D. I'm so angry that I can't make good decisions anymore.

14. A. I'm not so angry and hostile that others dislike me.

    B. People sometimes dislike being around me since I become angry.

    C. More often than not, people stay away from me because I'm so hostile and angry.

    D. People don't like me anymore because I'm constantly angry all the time.

15. A. My feelings of anger do not interfere with my work.

    B. From time to time my feelings of anger interfere with my work.

    C. I feel so angry that it interferes with my capacity to work.

    D. My feelings of anger prevent me from doing any work at all.

16. A. My anger does not interfere with my sleep.

    B. Sometimes I don't sleep very well because I'm feeling angry.

    C. My anger is so great that I stay awake 1—2 hours later than usual.

    D. I am so intensely angry that I can't get much sleep during the night.

17. A. My anger does not make me feel anymore tired than usual.

    B. My feelings of anger are beginning to tire me out.

    C. My anger is intense enough that it makes me feel very tired.

    D. My feelings of anger leave me too tired to do anything.

18. A. My appetite does not suffer because of my feelings of anger.

    B. My feelings of anger are beginning to affect my appetite.

    C. My feelings of anger leave me without much of an appetite.

    D. My anger is so intense that it has taken away my appetite.

19. A. My feelings of anger don't interfere with my health.

    B. My feelings of anger are beginning to interfere with my health.

    C. My anger prevents me from devoting much time and attention to my health.

    D. I'm so angry at everything these days that I pay no attention to my health and well-being.

20. A. My ability to think clearly is unaffected by my feelings of anger.

    B. Sometimes my feelings of anger prevent me from thinking in a clear-headed way.

    C. My anger makes it hard for me to think of anything else.

    D. I'm so intensely angry and hostile that it completely interferes with my thinking.

Scoring key

Score is calculated as

A = 0,

B = 1,

C = 2,

D= 3.

Sum of the scores of twenty items**.**

Scoring interpretation:

S. No	Score	Interpretation
1.	0- 15	Minimal anger
2.	16- 30	Mild anger
3.	31- 45	Moderate anger
4.	46- 60	Severe anger

கோபத்துக்கான அளவீடு

Dr. வில்லயம் நு.ஸ்னெல் Jr. (1995) அவர்களால் தொகுக்கப்பட்ட கருவி

நோக்கம்

இக்கருவி கோப அளவீட்டிற்க்கான 20 உருப்படிகள் கொண்டது. இந்த அளவீடு 20 தொகுப்புகள் கொண்டது. 0-60 மதிப்பு உடையது.

வழிகாட்டி

கீழ்காணும் 20 தொகுப்புகளையும் படித்து எவ்விதத் தடையுமின்றி உங்கள் உணர்வுகளை (√) டிக் செய்யவும். பதில் அளிப்பதில் வெளிப்படையாக இருக்கவும்.

1. அ. நான் கோபப்படுவதில்லை

   ஆ. நான் கோபப்படுவேன்.

   இ. நான் எப்பொழும் கோபமடைகிறேன்.

   ஈ. எனக்கு சில விவரங்கள் ஒத்துக் கொள்ளாத பொழுது நான் கோபமாகவும் பகைமை உணர்வோடும் இருப்போன்.

2. அ. என் எதிர்காலத்தை குறித்து நான் கோபமடைய மாட்டேன்

   ஆ. எனது எதிர்காலத்தை நினைத்த உடனே எனக்கு கோபம் வருகிறதுக்

   இ. நான் என்ன எதிர்நோக்குகிறேன் என்பதை நினைத்தாலே கோமடைகிறேன்

   ஈ. என் எதிர்காலம் மேன்மையாக்க முடியாமையால் நான் மிகவும் கோபடுகிறேன்.

3. அ. எனக்கு ஏதேனும் தோல்வி ஏற்ப்படும் என நினைத்தாலே எனக்குக் கோபம் வருகிறது.

   ஆ. ஒரு சராசரி மனிதனின் தோல்வியை விட எனது தோல்வி அதிகமாக இருந்தால் எனக்குக் கோபம் ஏற்படுகிறது.

   இ. என் வாழ்வை திரும்பிப்பார்க்கும் பொழுது எனதுத் தோல்விகளால் எனக்கு கோபம் வந்து விடுகிறது.

   ஈ. முழுத் தோல்வியடைந்த ஒரு மனிதனாக உணரும் பொழுது அவ்வுணர்வு என்னை கோபம் கொள்ளச் செய்கிறது.

4. அ. நான் எல்லாவற்றையும் நினைத்து கோப்படுவர் அல்ல

ஆ. நான் முன்பு போல் அல்லாமல் மிகவும் பகைமை பாராட்டுபவராக மாறிக் கொண்டு விடுகிறேன்.

இ. நான் இப்பொழுது நடப்பதைப்பற்றி அதிகம் கோபம் கொள்கிறேன்.

ஈ. நான் எல்லாவற்றிற்கும் கோபமும் பகைமையுள்ளவராக உள்ளேன்.

5. அ. நான் மற்றவர்களிடம் குறிப்பிடும்படியாகப் பகைமைப் பாராட்டுவதில்லை

ஆ. நான் பெரும்பாலும் பகை உணர்வோடு இருந்திருக்கிறேன்.

இ. நான் எப்பொழுதும் பகை உணர்வு கொண்டவராக உள்ளேன்.

ஈ. நான் எப்பொழுதும் பகைமைப் பார்ப்பவர்தான்.

6. அ. மற்றவர்கள் எனக்குத் தொல்லைக் கொடுக்க முயன்றதாக உணரவில்லை.

ஆ. சில நேரங்களில் மற்றவர்கள் என்னை வெறுப்பேற்றுவதாக நினைக்கிறேன்.

இ. வழக்கத்தைவிட அதிகமாக மற்றவர்கள் என்னை கோமடைய வைக்கிறார்கள்

7. அ. என்னைப் பற்றி நினைத்தால் எனக்குக் கோபம் வருவதில்லை.

ஆ. இப்பொழுதெல்லாம் முன்பைவிட என்னைப்பற்றி நினைத்தாலே கோபம் கொள்கிறேன்.

இ. மிகுதியான நேரம் என்னைப்பற்றி நினைத்தாலே கோபம் கொள்கிறேன்.

ஈ. என்னைப்பற்றி நினைத்தாலே எனக்கு என்மேல் அதிகம் கோபம் வருகிறது.

8. அ. மற்றவர்கள் என் வாழ்வை நாசம் செய்த போது எனக்குக் கோபம் வரவில்லை.

ஆ. மற்றவர்கள் என் வாழ்வை நாசம் செய்வது கண்ட எனக்குக் கோபம் வந்து விடுகிறது.

இ. என் வாழ்கை நல்லபடி அமையவிடாமல் மற்றவர்கள் தடுப்பதைக் கண்டுக் கோபம் கொள்கிறேன்.

ஈ. மற்றவர்கள் என் வாழ்கையை துயரம் ஆக்குவதுக் கண்டுக் கோபம் கொள்கிறேன்.

9. அ. யாரேனும் புண்படுத்தும் அளவிற்கு எனக்குக் கோபம் வருவதில்லை.

ஆ. சில சமயம் மற்றவர்களைக் காயப்படுத்துமளவு கோபம் கொண்டாலும், உண்மையில் காயப்படுத்துவதில்லை.

இ. சில சமயம் மற்றவர்களை காயப்படுத்தும் அளவிற்குக் கோபம் கொள்கிறேன்.

ஈ. என் கோபத்தால் யாரையாவது காயப்படுத்த விரும்புகிறேன்.

10. அ. வழக்கத்தைவிட அதிகமாக மற்றவர்களிடம் கத்துவதில்லை.

ஆ. இப்பொழுதெல்லாம் நான் மற்றவர்களிடம் முன்பைவிட கத்துகிறேன்.

இ. இப்பொழுதெல்லாம் நான் எல்லோரிடமும் கத்துகிறேன்.

ஈ. என்னைக் கட்டுப்படுத்த முடியாத அளவிற்கு மற்றவர்களிடம் அடிக்கடிக் கத்தகிறேன்.

11. அ. வழக்கத்தைவிட அதிகமாக மற்றவர்களிடம் கத்தவதில்லை.

ஆ. இப்பொழுதெல்லாம் நான் மற்றவர்களிடம் முன்பை விட கத்துகிறேன்.

இ. மிகுதியான நேரம் நான் வெறுப்புற்றவனா உள்ளேன்.

ஈ. நான் எப்பொழுதும் எரிச்சலடைகிறேன்.

12. அ. என் கோபம் நான் மற்றவர்கள் மீது காட்டும் அக்கறையில் தலையிடாது.

ஆ. சில நேரங்களில் என் கோபம் நான் மற்றவர் மீது காட்டும் அக்கறையில் தலையிடும்.

இ. என்னுடைய கோபத்தினால் என்னைச் சுற்றி மற்றவர்கள் இருக்க விரும்புவதில்லை.

ஈ. என்னைச் சுற்றி ஆட்கள் இருந்தாலே நான் மிகவும் கோபமடைகிறேன்.

13. அ. என்னுடைய முடிவுகள் எடுக்கும் திறமையைக் கெடுக்கும் அளவிற்கு கோபப்படுவதில்லை.

ஆ. எப்பொழுதாவது என் முடிவெடுக்கும் திறமையை என் கோபம் கட்டுப்படுத்துகிறது.

இ. என்னுடைய நல்ல முடிவெடுக்கும் திறமையைக் கெடுக்கும் அளவிற்கு என் கோபம் உள்ளது.

ஈ. என் கோபத்தினால் என்னால் நல்ல முடிவுகளை எடுக்க முடியவில்லை.

14. அ. மற்றவர்களை என்னை வெறுக்குமளவு என் கோபமும், பகை உணர்வும் இல்லை.

ஆ. என் கோபத்தினால் மற்றவர்கள் என்னை சுற்றி இருக்க விரும்புவதில்லை.

இ. என் கோபம் மற்றும் பகை உயர்வினால் மற்றவர்களை எப்பொழுதும் என்னை விட்டு விலகி இருக்க விரும்புகிறார்கள்.

ஈ. நான் எப்பொழுதும் கோபதில் இரப்பதால் மற்றவர்கள் என்னை விரும்புவதில்லை.

15. அ. என் கோபம் என் வேலையில் தலையிடாது.

ஆ. அடிக்கடி என் கோபம் என் வேலையை கெடுக்கிறது

இ. என் அதிக கோபம் என் வேலை செய்யும் திறமையைக் இழக்க வைக்கிறது.

ஈ. நான் எந்த வேலை செய்வதையும் என் கோபம் தடுக்கிறது.

16. அ. என் கோபம் என் தூக்கத்தைக் கெடுப்பதில்லை

ஆ. சில நேரங்களில் என் கோபம் என் தூக்கத்தைக் கெடுக்கிறது.

இ. என் அதிக கோபத்தினால் நான் ஒன்றிலிருந்து இரண்டு மணி நேரம் அதிகமாக விழித்திருக்க நேரகிறது.

ஈ. என் அதிக கோபத்தினால் நான் தூக்கத்தை இழக்க நேரிடுகிறது.

17. அ. எனது கோபத்தினால் நான் அதிக அளவு களைப்படைவதில்லை.

ஆ. என் கோபம் என்னை மெதுவாக களைப்படைய வைக்கிறது.

இ. என் கோபம் அதிகமாக உள்ளதால், மிகவும் களைப்பு அடைந்துவிடுகிறேன்.

ஈ. என் கோப உணர்வினால் என்னை எந்த செயலையும் செய்யவிடாமல் களைபடபடைய வைக்கிறது.

18. அ. எனது கோப உணர்வினால் எனது பசித்தன்மை எந்த அளவும் பாதிக்கப்படுவதில்லை.

ஆ. எனது கோப உணர்வினால் எனது பசித்தன்மை பாதிப்படையும் ஆரம்ப நிலையில் உள்ளது.

இ. எனது கோப உணர்வு பசித்தன்மையை ஏற்ப்படுத்தாது.

ஈ. எனது தீவிர கோப உணர்வு எனது பசியை கொண்டுப்போய்விடும்.

19. அ. எனது கோப உணர்வு எனது ஆரோக்கியத்தில் தலையிடாது.

ஆ. எனது கோப உணர்வு எனது ஆரோக்கியத்தில் தலையிட ஆரம்பித்துள்ளது.

இ. எனது கோப உணர்வு எனது ஆரோக்கியத்திற்காக கவனிக்கும் நேரத்தைத் தடுக்கிறது.

ஈ. என்னை சுத்தி நடப்பவையின் மீதுள்ள கோபத்தினால் என் ஆரோக்கியத்தைக் கவனிக்க முடிவதில்லை.

20. அ. என் கோபம் தெளிவாக என் யோசிக்கும் திறமையைப் பாதிப்பதில்லை

ஆ. சில சமயம் என் கோபம் என்னை சரியாக யோசிக்கும் திறமையைக் தடுக்கிறது.

இ. என் கோபம் என்னை எதுவும் யோசிக்க விடுவதில்லை.

ஈ. என் கடுமையான கோபமும், பகை உணர்வும் என் யோசிக்கும் திறமையைக் கெடுக்கிறது.

APPENDIX XV

BLUE PRINT FOR LEVEL OF SATISFACTION

S.NO	CONTENT	ITEMS	TOTAL ITEMS	PERCENTAGE
1.	Virtual reality therapy	**1,2,3,4**	**4**	**40%**
2.	Outcome of Virtual reality therapy	**5,6,7,8**	**4**	**40%**
3.	Researcher's approach	**9,10**	**2**	**20%**

APPENDIX XVI

RATING SCALE ON LEVEL OF SATISFACTION ON

VIRTUAL REALITY THERAPY AMONG ALCOHOLIC CLIENTS

Purpose

This rating scale is designed to assess the level of satisfaction of the participants.

This is developed by the investigator to assess the satisfaction of the Virtual Reality Therapy among alcoholic clients. This is a 4 point rating scale ranging from 4-1(highly satisfied, satisfied, dissatisfied and highly dissatisfied).

Instructions

There are 10 items below. Kindly read the items. Response extends from highly satisfied, satisfied, dissatisfied and highly dissatisfied. Put a tick mark against your answers. Describe your responses freely and frankly. The responses will be kept confidential and used for research purpose only.

S. No	Items	Highly Satisfied	Satisfied	Dissatisfied	Highly Dissatisfied
1.	Explanation regarding Virtual Reality therapy.				
2.	Approach of the researcher.				
3.	Time spent by the researcher.				
4.`	Duration of the therapy.				
5.	Arrangements made during the programme.				
6.	The therapy was easy to understand.				
7.	Frequency of practicing Virtual Reality therapy.				
8.	Involvement of the clients.				
9.	Given at the appropriate time.				
10.	Usefulness of Virtual Reality therapy.				

Scoring key

Highly dissatisfied : Below 25%

Dissatisfied : 25- 50%

Satisfied : 47-73%

Highly satisfied : Above 75%

இணைப்பு

தன் நிறைவு அளவுகோல்

நோக்கம்

இந்தப் படிவம் பங்குபெறுவோரின் தன் நிறைவை அறிவதற்காக அமைக்கப்பட்டுள்ளது.

செய்முறை

கீழேபத்து கேள்விகளக் உள்ளன. கேள்விகளை வாசிக்கவும். பதில்கள், மிகவும் திருப்தி என துவங்கி, திருப்தி, மிகவும் அதிருப்தி என்பது வரை உள்ளது. பதில்களுக்கு நேராக, (√) செய்யவும். ஊங்கள் பதிலில், வெளிப்படையாகவும், உண்மையாகவும் இருக்கவும். உங்களுடைய குறிப்புகள், ஆராய்ச்சிக்காக மட்டுமே உபயோகிக்கப்படும். உங்கள் பெயர் வேறு எங்கும் வெளியிடப்படமாட்டாது. நன்றி.

வரிசை எண்.	கேள்விகள்	மிகவும் திருப்தி	திருப்தி	அதிருப்தி	மிகவும் அதிருப்தி
1.	ஆராய்ச்சியாளர் இந்த நிகழ்ச்சியைக் குறித்து விளக்கம் அளித்தது				
2.	ஆராய்ச்சியாளரின் அணுகு முறை				
3.	ஆராய்ச்சியாளர் செலவழித்த நேரம்				
4.	நிகழ்ச்சி நடத்திய காலகட்டம்				
5.	நிகழ்ச்சியின்போது செய்யப்பட்ட ஏற்பாடுகள்				
6.	நிகழ்ச்சி எளிதில் புரியும்படி இருந்தது				
7.	செயல்முறைவிளக்கம்				
8.	நிகழ்ச்சியில் பங்குபெறுபவரின் ஈடுபாடு				
9.	சரியானநேரத்தில் நிகழ்ச்சிஅமைப்பு				
10.	நிகழ்ச்சியின் உபயோகம்				

APPENDIX XVII

LESSON PLAN

VIRTUAL REALITY THERAPY

TOPIC	-	VIRTUAL REALITY THERAPY
GROUP	-	ALCOHOLIC CLIENTS
PLACE	-	SERENE LIFE DE-ADDICTION CENTER
DURATION	-	I WEEK
METHOD OF TEACHING	-	LECTURE CUM DISCUSSION
MEDIA OF TEACHING	-	DEMONSTRATION
EDUCATOR	-	II YEAR MSC (N) STUDENT, APOLLO COLLEGE OF NURSING CHENNAI

GENERAL OBJECTIVE

The alcoholic clients will gain adequate knowledge and practical skill on virtual reality therapy to reduce the anger level.

SPECIFIC OBJECTIVES:

AT THE END OF THE SESSION STUDY PARTICIPANTS ARE ABLE TO

- know about virtual reality therapy.
- nature of the virtual reality therapy
- highlight the importance of virtual reality therapy
- enumerate on the benefits of virtual reality therapy in alcoholic clients.
- know the effects of virtual reality therapy on anger.

TIME	SPECIFIC OBJECTIVE	CONTENT	TEACHER'S AND LEARNER'S ACTIVITY
5mts	introduces virtual reality therapy	**Introduction:** Virtual reality is a technique that allows a person to participate actively in a sense of being present in the virtual environment. Virtual reality has been proposed as a new way of conducting exposure therapy because it can provide a sense of being present in a feared situation. This method appears to have several advantages over standard exposure therapy. Virtual is artificial and reality is what we experience. The field of Virtual reality is growing rapidly due to recent advances in artificial intelligence and computer graphics. It has been believed that artificial intelligence can help to improve human health and longevity. Virtual reality was invented by Morton H. Eilig in 1956. Virtual reality was introduced in medicine by Dr. Ralph Larson in the year 1990. He introduced virtual reality in medicine to treat his own fear of height (Acrophobia). At present virtual reality is being used as part of treatment. Prof. V.S.Ramachandran from the university of California is noted for his use of virtual reality and the neuro imaging -mirror neurons.	Lecture cum discussion and Listening

2mts	define virtual reality therapy	**DEFINITION:** Virtual reality is a form of technology which creates computer generated worlds or immersive environment, which people can interact with it. Virtual is artificial and reality is what we experience. So, the term virtual reality basically means "Near Reality" **NATURE OF VIRTUAL REALITY THERAPY**	Lecture cum discussion and Listening
5mts	nature of the virtual reality therapy	Virtual reality treatment refers to immersive, interactive, multisensory, viewer-centered, sensor, projector viewed theatre environment which can be explored and interacted with by a person. The person becomes part of this virtual world or is immersed within this therapeutic environment and whilst, they will be able to manipulate objects or perform a series of actions displayed on the screen. Thereby the person feels relief from his problems by permanently registering the positive effects in the brain. Virtual reality therapy is the simulation of physical presence in the real or imaginary world. Seeing the world through different eyes. Imagine being taken to a place - a virtual reality ... Where there's relief from pain. You sleep soundly and your fears and inhibitions are momentarily taken away and the best part is There are no drugs or medication required . **AIMS OF VIRTUAL REALITY THERAPY** To promote and protect people's help throughout their lives. To reduce the incidence of major diseases and injuries and to alleviate the suffering.	Lecture cum discussion and Listening

5mts	state the uses of virtual reality therapy	**USES OF VIRTUAL REALITY THERAPY;** The virtual reality therapy is oftenly used to help patients face and overcome fear and phobias. This can be done in a monitored, controlled, sensored, projector viewed theatre environment, tailored to the needs of each individual patient. It permanently registers positive effects in the brain. Rehabilitative programmes for: • vertigo, • tinnitus, • vocal injuries, • stress, • headache, • dementia, • Schizophrenia Insomnia, • Sinusitis, • Vertigo, • Voice care • Stuttering, • Behavior Problems,	Lecture cum discussion Listening

5mts	Illustrate the advantages of virtual reality therapy.	**ADVANTAGES OF VIRTUAL REALITY THERAPY;** Prevention of chronic diseases Distraction of pain Improves coping mechanism Modulation of the effects of stimuli perceived by the brain	Lecture cum discussion Listening
5mts	justify the need for virtual reality therapy upon anger among alcoholic clients	**NEED FOR VIRTUAL REALITY THERAPY UPON ANGER AMONG ALCOHOLIC CLIENTS:** CET has been widely used to treat alcohol addiction, so, to explore the possible application of VR, four VEs to assess alcohol craving in different situations: with/without alcohol available and with/without social pressure to engage in drinking behavior. Results on ten healthy participants indicated Virtual Reality as a Tool for Cognitive Behavioral Therapy: A Review that VRT was able to induce alcohol craving, and that for this purpose, social pressure was more important than alcohol availability. Moreover, while patients undergoing CBT showed no electroencephalographic change after treatment, VR CET patients reported an increase in frontal alpha activity, suggesting a decrease in arousal. In addition, the increase in alcohol craving elicited by cues in VR CET was higher in patients with alcohol dependence than in healthy people, thus indicating that this tool is able to discriminate between high and low-risk individual.	Lecture cum discussion Listening

5mts	describe the benefits of virtual reality therapy	**VIRTUAL REALITY PLAY STATION** Virtual reality is an artificial environment created by software and projected by capturing the user by sensor. The user will be projected in the screen as a disease free user. The person suspends the belief of presence of disease and accepts the real environment. When the brain is preoccupied with virtual environment, it does not perceive other stimuli as effective as it otherwise good. This mechanism in turn, greatly lessens the sensation of real disease of the patient. The Virtual Reality replicates real life situation. Even though it may look like a game, but what we are doing is giving a very scientific prescription to rehabilitate yourself. The real time behaviors motions are captured by the sensor plug into the presentation media for creating rehabilitation applications. **BENEFITS OF VIRTUAL REALITY THERAPY** • Virtual reality stimulates sleep • Improve memory • Improve concentration • Reduce insomnia • Improve sleep during night time • Improve language skills Improve creative thought • Improve cognitive skills • Improve decision making • Improves self esteem	Lecture cum discussion Listening

	conclusion	• Lose weight • Increases Creative thoughts • Good Physical Exercises **CONCLUSION** Virtual reality is a new way of conducting exposure therapy because it can provide a sense of being present in a feared situation. It stimulates the physical presence in real or imaginary world. More specially designed environments with user friendly atmosphere can be created which allow for broader virtual reality usage in treatment and research.	

APPENDIX VIII

DATA CODE SHEET

DEMOGRAPHIC VARIABLES

1. AG- Age

1.1 > 30 years

1.2 31-40 years

1.3 41-50 years

1.4 51-60 years

2. **EDU- Educational status**

2.1 Non-literate

2.2 Primary education

2.3 Secondary education

2.4 Higher secondary education

2.5 Graduate and above

2.6 OS- Occupational status

2.7 Unemployed

2.8 Student

2.9 Business

2.10 Sedentary worker

2.11 Heavy worker

2.12 Retired

3. MS- Marital status

3.1 Unmarried

3.2 Married

3.3 Separated

3.4 Widow\ Widower

4. MI-Monthly income

4.1 >2500

4.2 2501-5000

4.3 5001-10000

4.4 >10000

5. RG- Religion

5.1 Hindu

5.2 Christian

5.3 Muslim

7. TOF- Type of family

7.1 Nuclear

7.2 Joint

7.3 Extended

8. NOC- Number of children

8.1 No children

8.2 One

8.3 Two

8.4 More than two

9. FHA- Family history of alcohol abuse

9.1 Yes

9.2 No

10. AR- Area of residence

10.1 Urban

10.2 Rural

CLINICAL VARIABLES

1. **AS-Age at which the alcohol consumption was started**
   - 1.1 < 15 years
   - 1.2 15-25 years
   - 1.3 25-35 years
   - 1.4 > 35 years

2 **DAD- Duration of alcohol dependence**
   - 2.1 1 year
   - 2.2 1-5 years
   - 2.3 >5 years

3 **PC-Precipitating factor for alcohol consumption**
   - 3.1 Peer pressure / Influence
   - 3.2 Family Problems
   - 3.3 Financial Problems
   - 3.4 Physical problems
   - 3.5 If others, Specify

4 **FAC-Feelings when you first consumed alcohol** 4.1Excited and relieved from all the problems
   - 4.2 Discomfort
   - 4.3 If others, Specify

5 **FC-Frequency of alcohol consumption**
   - 5.1 Everyday
   - 5.2 Several times a week
   - 5.3 Once a week
   - 5.4 Once a month

6 **FAU-Form of alcohol used**
   - 6.1 Fermented beverages(beer, wine)
   - 6.2 Spirits (Gin, Vodka, Whisky etc)
   - 6.3 If others, Specify

7 **AC-Amount of alcohol consumed in a day**
   - 7.1 One quarter (180ml)
   - 7.2 One bottle (720ml)
   - 7.3 More than one bottle (>720ml)

8. **PP-Psychosocial problems arisen due to alcohol consumption**
   - 8.1 Conflicts in relationship
   - 8.2 Financial difficulties
   - 8.3 If others, Specify

9. **HP-History of abstinence and efforts to cut down alcohol in the past**
   - 9.1 Yes
   - 9.2 No

10. **PH-Previous history of Alcoholics De- Addiction Treatment**
   - 10.1 Yes
   - 10.2 No

11. **MT-Motivation to seek treatment**
   - 11.1 Wish to improve oneself
   - 11.2 Availability and awareness of treatment
   - 11.3 Family pressure
   - 11.4 If others, specify ----------

APPENDIX- IX
MASTER CODE SHEET

DEMOGRAPHIC VARIABLES															ANGER SCORES		
Sample. No	AGE		ED		OS	MS	MI		RG	TOF	NOC		FAH	AR	PRETEST	POSTTEST	LOF
1	36	1.2	BCA	2.5	3.3	4.2	18000	5.4	6.1	7.1	2	8.3	9.1	10.1	25	15	100
2	34	1.2	1Oth	2.3	3.3	4.2	9000	5.3	6.1	7.1	1	8.2	9.2	10.1	40	28	100
3	25	1.1	BBA	2.5	3.2	4.1	14000	5.4	6.1	7.1	0	8.1	9.2	10.1	26	16	100
4	18	1.1	12th	2.4	3.2	4.1	20000	5.4	6.1	7.2	0	8.1	9.2	10.2	18	12	100
5	20	1.1	B.com	2.5	3.2	4.1	17000	5.4	6.1	7.1	0	8.1	9.2	10.1	22	16	100
6	28	1.1	MBA	2.5	3.4	4.2	22000	5.4	6.1	7.1	1	8.2	9.2	10.1	24	15	100
7	54	1.4	12th	2.4	3.3	4.2	10000	5.3	6.1	7.2	2	8.3	9.2	10.1	32	17	100
8	32	1.2	9th	2.3	3.4	4.3	12000	5.4	6.1	7.2	1	8.2	9.2	10.1	28	16	100
9	44	1.3	12th	2.4	3.4	4.2	8000	5.3	6.1	7.1	1	8.1	9.2	10.1	27	15	100
10	29	1.1	8th	2.3	3.5	4.2	9000	5.3	6.1	7.2	2	8.3	9.1	10.2	22	14	100
11	30	1.1	9th	2.3	3.5	4.2	8000	5.3	6.1	7.1	3	8.4	9.1	10.2	30	19	100
12	22	1.1	BA	2.5	3.2	4.1	9000	5.3	6.1	7.1	0	8.1	9.1	10.1	23	15	100
13	36	1.2	BSC	2.5	3.4	4.2	18000	5.4	6.1	7.2	2	8.3	9.2	10.1	25	18	100
14	26	1.1	10th	2.3	3.5	4.1	8000	5.3	6.1	7.1	0	8.1	9.2	10.1	31	17	100
15	34	1.2	BSC	2.5	3.3	4.2	20000	5.4	6.1	7.2	2	8.3	9.2	10.2	19	14	100
16	48	1.3	5th	2.2	3.3	4.2	8000	5.3	6.1	7.2	2	8.3	9.1	10.1	25	19	100
17	33	1.2	11th	2.4	3.3	4.2	7000	5.3	6.1	7.1	1	8.2	9.1	10.2	22	13	100
18	28	1.1	12th	2.4	3.3	4.1	10000	5.3	6.1	7.2	0	8.1	9.1	10.1	30	17	100

19	35	1.2	10th	2.3	3.5	4.2	6000	5.3	6.1	7.1	1	8.2	9.1	10.1	42	28	100
20	27	1.1	12th	2.3	3.5	4.1	9000	5.3	6.1	7.1	0	8.1	9.2	10.1	30	16	100
21	42	1.3	12th	2.3	3.5	4.3	8500	5.3	6.1	7.1	2	8.3	9.2	10.2	23	15	100
22	54	1.4	5th	2.2	3.3	4.2	7000	5.3	6.1	7.1	3	8.4	9.2	10.1	28	16	100
23	26	1.1	12th	2.4	3.3	4.1	10000	5.3	6.1	7.1	0	8.1	9.2	10.2	20	13	100
24	58	1.4	12th	2.4	3.3	4.2	10000	5.3	6.1	7.1	0	8.1	9.2	10.2	38	29	100
25	17	1.1	12th	2.4	3.2	4.1	15000	5.4	6.1	7.1	0	8.1	9.2	10.2	23	15	100
26	33	1.2	BBA	2.5	3.4	4.2	17000	5.4	6.1	7.1	2	8.3	9.2	10.1	46	22	100
27	35	1.2	10Tth	2.3	3.3	4.2	10000	5.3	6.1	7.1	1	8.2	9.1	10.1	48	24	100
28	22	1.1	BE	2.5	3.2	4.1	16000	5.4	6.1	7.1	0	8.1	9.2	10.1	40	18	100
29	42	1.3	8th	2.4	3.5	4.2	8500	5.3	6.1	7.1	2	8.3	9.1	10.2	36	15	100
30	21	1.1	BCA	2.5	3.2	4.1	20000	5.4	6.1	7.1	0	8.1	9.2	10.1	32	14	100

CLINICAL VARIABLE															
SAM.NO	**AGE**		**DAD**		**PC**	**FAC**	**FC**	**FAU**	**AC**	**AS**	**HC**	**pp**	**HP**	**PH**	**MT**
1	19	1.2	6yrs	2.3	3.1	4.1	5.2	6.2	7.1	8.2	9.4	10.1	11.1	12.2	13.3
2	23	2.1	1yr	2.1	3.2	4.1	5.1	6.1	7.2	8.1	9.4	10.2	11.1	12.1	13.3
3	20	1.2	5yrs	2.3	3.1	4.1	5.1	6.2	7.2	8.2	9.4	10.1	11.1	12.1	13.1
4	23	1.2	1yr	2.1	3.1	4.2	5.4	6.1	7.1	8.4	9.4	10.1	11.2	12.2	13.1
5	19	1.2	1yr	2.1	3.1	4.1	5.2	6.2	7.2	8.2	9.4	10.1	11.1	12.2	13.1
6	27	1.3	3yrs	2.2	3.1	4.1	5.3	6.2	7.1	8.4	9.4	10.2	11.2	12.1	13.3
7	20	1.2	5yrs	2.3	3.3	4.1	5.3	6.2	7.1	8.2	9.1	10.1	11.2	12.1	13.1
8	28	1.3	6yrs	2.3	3.2	4.1	5.3	6.2	7.1	8.2	9.4	10.1	11.1	12.1	13.2
9	18	1.2	7yrs	2.3	3.1	4.1	5.2	6.2	7.2	8.1	9.4	10.2	11.1	12.1	13.1
10	22	1.2	3yrs	2.2	3.2	4.1	5.3	6.2	7.2	8.2	9.4	10.1	11.1	12.2	13.1
11	20	1.2	5yrs	2.3	3.2	4.2	5.1	6.2	7.3	8.1	9.1	10.1	11.1	12.1	13.3
12	23	1.2	2yrs	2.2	3.4	4.1	5.2	6.2	7.2	8.1	9.3	10.1	11.1	12.2	13.1
13	36	1.4	1yr	2.1	3.2	4.1	5.4	6.1	7.1	8.2	9.1	10.2	11.1	12.1	13.1
14	22	1.2	3yrs	2.2	3.3	4.2	5.1	6.2	7.3	8.1	9.4	10.2	11.1	12.1	13.3
15	20	1.2	5yrs	2.3	3.1	4.2	5.2	6.1	7.3	8.1	9.1	10.2	11.1	12.1	13.1
16	19	1.2	6yrs	2.3	3.1	4.2	5.1	6.2	7.3	8.1	9.1	10.1	11.1	12.1	13.3
17	18	1.2	7yrs	2.3	3.1	4.2	5.2	6.3	7.1	8.1	9.1	10.2	11.2	12.1	13.2
18	14	1.1	9yrs	2.3	3.3	4.1	5.1	6.2	7.2	8.1	9.2	10.1	11.1	12.1	13.2
19	15	1.1	8yrs	2.3	3.3	4.1	5.2	6.2	7.3	8.2	9.4	10.2	11.1	12.1	13.1

20	19	1.2	6yrs	2.3	3.2	4.1	5.1	6.2	7.2	8.1	9.2	10.1	11.2	12.1	13.1
21	36	1.4	2yrs	2.2	3.2	4.2	5.3	6.2	7.1	8.2	9.1	10.1	11.2	12.2	13.1
22	24	1.3	6yrs	2.3	3.1	4.2	5.3	6.2	7.2	8.1	9.1	10.2	11.1	12.1	13.3
23	25	1.3	1yr	2.1	3.1	4.2	5.1	6.1	7.2	8.2	9.4	10.1	11.1	12.2	13.2
24	26	1.3	7yrs	2.3	3.5	4.1	5.1	6.2	7.2	8.1	9.1	10.1	11.1	12.1	13.1
25	18	1.2	1yr	2.1	3.5	4.2	5.4	6.2	7.2	8.4	9.4	10.1	11.1	12.2	13.3
26	23	1.2	2yrs	2.2	3.1	4.1	5.3	6.1	7.1	8.4	9.4	10.1	11.1	12.2	13.1
27	23	1.3	6yrs	2.3	3.2	4.2	5.2	6.2	7.1	8.1	9.4	10.1	11.1	12.1	13.3
28	22	1.2	4yrs	2.2	3.1	4.1	5.3	6.1	7.1	8.4	9.4	10.1	11.1	12.1	13.3
29	30	1.3	2yrs	2.2	3.3	4.2	5.2	6.2	7.2	8.4	9.4	10.2	11.2	12.2	13.1
30	24	1.2	4yrs	2.2	3.1	4.1	5.3	6.2	7.1	8.4	9.4	10.1	11.1	12.1	13.3

APPENDIX XX

PHOTOGRAPH DURING VIRTUAL REALITY THERAPY