Chapter 5

ANALYSIS OF THE DATA

Case Studies
Statistical Analysis
Tests of the Hypotheses
Interpretation of the Results
5.1. CASE STUDIES

5.1.1. Case Histories

Case 1 Raju

As it was arranged earlier, Raju, a chronic alcoholic patient was brought to a de-addiction treatment centre by his wife. A meeting of Alcoholics Anonymous was going on in the centre. Before getting admitted they were advised to attend the meeting. They took seats in the last row of chairs in the hall. Sitting there they could have a general idea of the centre’s activities. At the entrance there are rooms of the director and manager where registration is done. A room on one side of the hall is the pharmacy and the nurses’ station; and on the other side are rooms of residing patients. In the adjoined building there are the canteen, classrooms and counselors rooms. On the walls of the hall, A.A. dictums, A.A. prayers, A.A. principles and A.A. traditions are inscribed.

At the dice of the meeting hall a senior counselor presided over the meeting. The A.A. participants after writing their names in the register book kept at the corner of the hall came one by one and introduced themselves in a typical way. “My name is … I am an alcoholic patient. With the Grace of God the Almighty and the help of A.A. fellowship I am sober today”. Then each one went on sharing his experiences-how he became an addict, how he was treated, how he is sober today etc.
Raju, his wife and brother sat hearing the stories of A.A. members. Raju’s wife and brother listened to the sharing of 3 persons. When the fourth one stood up and was approaching the dice Raju’s wife looked around and found that Raju was not in the hall. He had gone out sometime ago.

After some time it was confirmed through a phone call that Raju had gone home. He decided not to undergo the treatment. It was with a desperate mood that Seena and her brother parted from the treatment centre with bags and luggage. Thus a much expected treatment attempt was aborted.

That evening Raju came home drunk. The conversation between Raju and Seena was limited to the minimum. On the following day Seena called to the treatment center by telephone and narrated the failed attempt to introduce her husband to treatment. The psychologist at the center told her that she must wait for the time when he is not drunk. She should understand him as he is. She should explain to him the negative consequences of his drinking and how concerned she is about his drinking. She should convince him that recently his drinking has gone out of control. It has caused problems of health, and financial, social and occupational problems. It led to family problems. It affected the education of their children; it leads to loss of friends etc. She should suggest that de-addiction treatment would help him for a change. She was also reminded that it would be a difficult task to make Raju convinced of the need for treatment. An ambivalent attitude should be expected from an alcoholic. On one hand he may be willing to undergo treatment and to have a change in the life style. On the other hand the
dependence will be so deep that there will be strong withdrawal. That is why the addict will continue postponing treatment and repeating his pledge to abstain by himself. But somehow he should be brought either to start treatment or for a discussion with a psychologist.

Hardly after a week a ‘trap’ was prepared by the ‘conspiracy’ by a team consisting of the brother of Raju, Seena’s brother and two friends of Raju. Cunningly he was made to drink gradually to a level at which he reached completely ‘off’. Seena took the luggage. A jeep was hired and they brought Raju to the treatment centre with his hands tied.

The director at the centre told them that this is not the way patients are to be brought for treatment. They explained why they brought him like this. All the attempts to convince him of the need for treatment had failed.

After some discussion and signing necessary documents Raju was admitted. Routine tests like blood pressure were taken. Detoxification and other medicines started according to the prescription of the psychiatrist. Seena and Raju’s brother stayed with him as support persons.

On the first day Raju was under the influence of the medicine. On the second day he came to a gradual awareness of the situation, where he is, how he was brought, for what he was brought etc. It was with a mixture of feelings that he observed the situation-anger, guilt, sorrow, despair, failure, pain, etc. Many a time he thought of running way.
In the small sessions with the counselors there were excuses, justifications resolutions and request to go home. But he finally accepted. He went through the routine-individual, family and group counseling, play, recreation, yoga class, etc.

Social History

The brief history that follows is based on the information collected from Raju during treatment and from Seena.

Raju’s parents were farmers. They had 4 children-three sons and one daughter. Raju was the second son. The family belonged to a lower economic class. Earning was from agricultural wage labor of the father. The family did not suffer from starvation. But it was with great struggle that the family was maintained. Father came home everyday moderately drunk.

Raju was never a satisfied boy. In a revolting mood he behaved at home and school. He could not come to terms with his deficiencies. He learned occasional petit thefts at home and neighborhood. He got punishments also for these. He was just an average student and sometimes, below average. He was not happy either at home or school. From standard V onwards he looked forward to little earnings. He used to carry toddy and liquor to unauthorized selling points. The small amounts of money he earned thus were used for buying sweets, extra food or for viewing films. Occasionally he drank such local liquors either with the knowledge of the person concerned or without. Thus he tasted alcohol at the age of 11 and from the age of 14 he used to drink.
There were occasions in which he was chased by the police. He escaped or was sometimes caught and was rescued.

At the age of 16 he was in standard 10. He had no much academic interest. His main interest was in making some earnings, to spend them for extra food, viewing film or having some ‘luxuries’, which his poor parents could not provide at home.

While he was in standard 10, before the terminal exam started there was an incident at school. An amount of Rs.50/- was lost from the bag of a girl. Others suspected Raju. His denials failed. Actually he had not stolen the money. But none would believe him. He was asked by the school authorities to give the money back. He was sent away from school till the money is given back. He was sure his father would beat him.

He came home early. He took whatever money there was at home-about Rs.400/- and some dress and went away without telling parents. He traveled without knowing where to go. He caught a bus, went to the town. He had some food from hotel, went for a film and the rest of the night he spent at the railway station. Next day he went to another place by train. When the money was spent out he managed to get employed as a helper in a hotel. He started with the menial labor of carrying water, washing dishes and serving at table. In this manner he worked in three different hotels. After initial difficulties in the first few weeks, he got enough to eat, though irregularly.
Drinking continued. He had no contact with home. There was an occasion in which Raju suspected to have come to contact with one of his neighbors. He changed his work place to avoid being noted again.

Working three years in a hotel he had some earnings, which he had to give to policeman and local leaders due to a quarrel with a fellow local worker. The he went to another place and came to be associated with a “thattukada” namely, a fast food shop. There he started as a laborer first. After two years he started another such a shop in partnership with a fellow worker. He conducted the business for some years. Drinking continued and the quantity increased considerably.

By this time he became a full grown man, aged about 30. His business prospered and had a good amount of money as savings. At this time he had the first contact with home. He casually met a neighbor who told him that his father is sick. He sent a letter to house and after a week he went home and gave some money for the treatment. Raju’s parents and family were happy. His elder brother was looking after the house. Marriage of his sister was conducted selling a piece of land. His elder brother had married and put up another house but it was not complete. He gave some money to complete the house.

He spent hardly one month at home. Then he went back and continued the fast food shop. He made more money and had some influence there.
Raju had to escape that place all on a sudden after about 6 months due to a suspected involvement in a rape case. He collected his earnings and money-whatever he could and escaped.

Raju sold his belongings and after 5 days he reached home. At home for some time he did not find a stable employment. With the money he had, he started building a house. He could only complete the basement and buy doors and windows. A good amount was spent for drinking.

Gradually Raju got the work as a sand mining laborer. There were many restrictions in sand mining. Hence it was very difficult to get sand in proper channel and the cost of sand is very high. There were lot of unauthorized sand mining, hoarding, political involvement and lot of corruption prevailed in this field. Workers and agents got enormous money in a short time.

From early morning till about 11.00 am the workers have a very strenuous and hard work. But within that time they will get approximately Rs.750.00. Raju’s alcohol consumption increased to such an extent that almost the entire amount was spent for alcohol. Whatever amount of money that was left behind on working days was spent out on days on which he had no job. So ultimately no balance amount was left.

It came to a level that he could not start a day without alcohol. When he had no money he quarreled with parents and brothers for money. This state continued for about one year. When he was 35 years
old his parents and brothers arranged for his marriage thinking that marriage would improve the situation.

The girl and her parents were informed that Raju has the habit of drinking. But they did not find it anything unusual or very serious. For them this proposal appeared advantageous because they belonged to a poorer family. A huge quantity of liquor was served in connection with the marriage.

The first years of married life were happy. Raju tried to control drinking, though he succeeded only in a limited extent. Seena did not object to Raju’s drinking. As an innocent and poor village girl she adjusted and accepted the situation. After one year they had a girl child.

Selling the gold ornaments of Seena and with the help of Raju’s brothers and Seena’s family a small house was put up in part of the family property. When the child was just one year old Raju, wife and child shifted to the new house though the construction was not complete.

Raju had work on 4 to 5 days in a week on an average. Most of the money was spent for beverage and very little was brought home. Seena and the child struggled hard to maintain the family. Any complaint by Seena ended up in quarrel and sometimes beatings by Raju. Such instances will lead to guilt feeling and further indulging in alcohol abuse to overcome guilt. Hence Seena preferred to silently suffer to avoid conflicts. When Raju wanted money he would pick whatever he got from home. Gold ornaments of Seena were thus taken one by one.
When Raju tried to take the wedding chain of Seena by force his brother intervened. It ended up in a quarrel.

In the compromise talk initiated by a local leader to end the quarrel it was decided that Raju should go for de-addiction treatment. That is how Raju was brought for treatment at the first time.

In the second attempt of treatment Raju gradually cooperated with the treatment. He participated in all the programmes. While completing three weeks of treatment he pledged to abstain from beverages.

There were very clear changes in the life style of Raju just after treatment. Raju reached home early and consciously avoided beverage and other drugs. There were conscious attempts to save money and clear away debts.

But it was noted that Raju showed a diminished drive. Formerly he showed a greater urge to work and make more money. Now he seemed to be more silent, apathetic, lonely and less powerful. That is why Seena is reported to have wished if Raju takes a little bit of beverage to be normal. Raju attended Alcoholic Anonymous group meetings in the early weeks regularly.

But the collapse was very gradual. Only drinking was stopped. Happiness had not returned. Old drinking friends were lost but new friends were not gained. Loneliness prevailed. He stopped attending A.A. meetings. Reminders from the A.A. centre were discarded. In two
attempts for follow-up visits by the social worker from the treatment center he consciously avoided the chance to meet.

On one hand he wanted to make more money to regain whatever he lost through liquor. But the sand mining lobby and former drinking friends seemed to have conspiracy against him. He lost many days of labor. There was a slight quarrel. Knowing this his wife came. In the conversation that followed he felt that not even his wife is able to understand him. In the few minutes of silence in which he experienced feelings of anger, loneliness, sadness, failure, vengeance and despair, he was driven by an invisible force to the same old ways. That was the starting of great fall. He indulged in a greater dependence to alcohol.

Raju did not heed to any persuasion or advise to return to the treatment center for relapse admission. He started days by early morning drinking and each day ended by drinking. Psychological and health problems increased.

Case 2 Mathew

Mathew, an ex-serviceman came to a de-addiction treatment centre. Without waiting for his turn, he came to the room of the director by passing two visitors who were waiting to meet the director. The director was talking with another person. Not to embarrass him the director did not ask him to wait outside of the room. Mathew tried to interrupt the conversation the director was having with another visitor.
After winding up the conversation the director received him. Mathew introduced himself and began talking about many things. The director understood that the person is drunk.

Mathew was not at all focused in the conversation. He switched frequently from one topic to another. He boasted himself frequently. He used to repeat that he has drink today but he is in control. He is drunk because of his wife. He wanted to show his wife that he is in control. He asked the director to counsel his wife how to behave to husband. He wanted some medicine and be allowed to stay there till evening. Thus he wanted to convince his wife that he has control with regard to alcohol use.

The director understood that the person has a long history of alcohol abuse from early teen age. It has affected practically all areas of his life. He used many defenses for alcohol use.

It required lot of time and effort to convince Mathew that his alcohol use has gone out of control and that he needed treatment. Then he started making lot of excuses that he will not get leave from job, he cannot stay back from home etc. Upon further telephonic enquiries it was found that these were baseless. He was working in an insurance company office. His uncontrollable alcohol abuse was causing lot of career problems. The superiors had given several warnings. They offered leave and assured their support including giving treatment costs. His wife also told that this is very appropriate time for treatment. She will manage things at home. Actually he was not managing home affairs. She said if he is willing for treatment she will arrange
everything—bring his dress and essentials and stay with him in the treatment center. Thus Mathew agreed to undergo treatment.

On medical examination it was found that he had lot of health problems like gastritis, diabetes, heart complaints, high blood pressure etc. de-addiction treatment started under the direction of the visiting psychiatrist at the centre, continuing the regimen he is already having.

Wife of Mathew came shortly with the luggage both of them required, the medicine he was regularly taking and money for treatment cost.

The wife of Mathew, Chinnamma, aged 48, gave a mature look. She is a senior high school teacher. On the first day she attended Mathew near his bed. He was under sedation for a few hours. For physical needs and taking food she helped him. She made necessary arrangements at home and office. She contacted to his office and got confirmation regarding leave. To his friends she gave different information. She did not want them to come here enquiring him and she did not want to make her husband embarrassed letting them know of his treatment.

The next day when everything was settled, and preliminary arrangements were complete and having made sure that Mathew is resting on bed Chinnamma went to the counselor’s cabin. She first helped to complete the details in the case file. She gave a complete picture regarding his drinking history, and his mental and physical status.
Social History

The description Chinnamma gave was very different from that given by Mathew. In the session that continued Chinnamma described their family history since marriage. Their marriage was 21 years ago. She was 27 and Mathew 36 years old. Mathew was the second son in the family among 3 sons. He has two sisters. Before his marriage his elder brother and two sisters had married. Elder brother has a business in forest produce. He is financially sound. He takes liquor very casually and in low quantity. He has a disciplined life. He has put up a nice house and leads a very happy life. The younger brother had better education and is having a highly paid job.

At the time of marriage Mathew was in military service. Chinnamma was a school teacher. Her appointment was confirmed permanent just a year ago. Chinnamma came from a very happy family. Her family was a large one. Father was a farmer. He provided for the family by hard work.

For the family of Chinnamma the alliance with Mathew was considered to be very advantageous socially and economically. Mathew was a very handsome young man with a rather good salary. The house of Mathew was much better than that of Chinnamma. The marriage was celebrated in a royal manner. She felt proud of her husband who was fairer than herself, she felt proud of his home and family.

On the day of marriage liquor was served largely not on the table but in different rooms and elsewhere. After the formal reception, many
friends came. Most of them were served liquor. This went on till late in the evening. By evening Mathew was fully drunk. The first night was spoiled by alcohol. For Chinnamma this was very much against her expectations. Mathew had one full month of leave.

Chinnamma believed or rather wished to believe that this was just for the day of marriage. She found that her husband Mathew has different faces when he is with friends and when alone. Alone and with her he was found very weak, not confident and with low self image. This was very much true of the sexual life. He acted to be very brave and competent. He wanted to boss her but she found that it was due to his feeling of inferiority and incompetence.

After leave for marriage he went back and Chinnamma continued working in school. In the first 4 years since marriage they had 2 children—one boy and a girl. They had stayed only about a year in the military quarters. Otherwise she stayed at home either at her own house or at the husband’s house. He used to come home for the leave. For bringing up children her own mother and husband’s mother helped her. She enjoyed the teaching profession. She also concentrated well on the education of her own children as well.

Mathew came home for every leave but when he came home he spent more time with friends. Much of his earnings were spent for drinking with friends. He did not like his wife enquiring about his earnings. Chinnamma understood that managing home and providing for the needs of children etc. are her responsibilities. When he came home
there were quarrels if she asked for money. He used to make her believe that his salary is saved for children and to make a house of their own.

At the completion of 20 years in service Mathew retired. He got a good sum of money after few months besides the regular pension. He came home. For about two years he did not go for any other job. By this time his younger brother had married. He got a transfer to an office near home. In partition Mathew got a sum of money and the younger brother got the house.

Chinnamma wanted Mathew to be actively involved in family, find a work, purchase a property, build a house, concentrate on the education of the children etc. But he made her desperate. He did nothing of these but was interested in drinking and spending money with friends. Every month he got good quality liquor as military quota. Much of this he drank with friends. Some bottles were sold to friends. The money he got thus also was needed to purchase liquor when his stock was finished. He used to keep bottles in dress cupboard, bathroom, table draws etc. Chinnamma hated this most. Mathew wanted privacy. He did not like wife and others enter his room or open his shelf. He suspected these as probing to find his bottles. He reacted very strongly against such suspected attempts.

This style of behaviour continued about 2 years. Much of the money he got as his property share was spent out. He pretended to invest his money in local finance activities, real estate, vehicle finance etc. and meeting expenses for the education of the children. Actually he was only squandering his money and lending money to his drinking friends who
could not return. He did not like being questioned by wife regarding his money dealings. As a result much of the money he got as property share was lost in about two years.

There were quarrels between Mathew and wife regarding his money dealings. His brothers also intervened. Thus a plot of land to put up a house was purchased with what was left and with the money he got from military fund. Construction of a house was started. After making a basement he could do nothing more. Nothing was left with him. As usual he gave lot of excuses and explanations.

After about six months Chinnamma gradually assumed the role. She got a house loan. In a much planned manner the construction was completed in about 6 months. Mathew tried to handle money and involve in the house construction and purchase of materials. Chinnamma did not allow such attempts. Mathew made futile attempts to convince others that he is doing everything. But at home he found himself very weak and depended on wife for his personal needs and drinking.

The family shifted to new house. Relatives knew very well that it is Chinnamma who controls everything. To cover up his incompetence he began to make allegations about his wife’s integrity. He began to be suspicious of her. For Chinnamma these baseless allegations and suspicions were very painful. But she faced them courageously, managed the household affairs well, remitted loan repayments regularly, attended to the education of the children etc.
Mathew succeeded to get employed in the office of an insurance company. Gradually he began to draw better salary, but very little was left from his salary for house affairs. Mathew’s consumption of alcohol increased. He used to bring home his friends. Chinnamma showed her difficulty to entertain them. His allegation against her fidelity increased.

She knew it was because of his inferiority feeling that he pretended to be effective and managing things at home and it was because of his haunting feeling of incompetence that he entertained suspicion towards her.

This situation continued for years. Meanwhile he developed several health problems also. Though he used to draw better salary and regular pension, she had to find money from her salary to solve his problems occasionally besides managing things at home education of the children etc.

In the next days of treatment Mathew also had separate sessions and some joint sessions. He also gave his own versions. But his version had no much convincing difference from her version of the situation.

Mathew admitted that his suspicion of wife is baseless and he used to consult psychiatrists and is taking medicine for this disorder. He described that when he sees somebody coming home-post man, electricity line man, news paper agent or the like, he will imagine as if they are having intercourse with her. It was clear that he was experiencing mental agony because of his paranoia.
In the counseling session Mathew narrated his story from childhood. He belonged to all agricultural family. His father was an alcoholic but managed the family very well. He was an above average student. He was very social in nature. He developed friendship with many. In friends’ circle he used tobacco for the first time when he was in standard 6. This was followed by use of alcohol. He gave love letter to a junior lady teacher when he was in standard 8. When this became public in the school he had to change the school.

At home he used to give the impression that he is a studious and responsible boy. He enjoyed special attention as a preferred child. Very cunningly he used to avail special favors. Thus he got pocket money from mother and it was used to enjoy among friends.

With regard to alcohol use history Mathew told that since his father was an alcoholic he used to get taste of it very early and he drank with friends secretly from early school age. Good quality alcohol was available at the military. While being at borders with extreme climate, he and his friends used beverage in large quantity very frequently. By the time he got retired he had become dependent on alcohol. After retirement government was “sponsoring” alcohol intake by making it available at nominal price.

Mathew participated in the different aspects of the treatment like medication, awareness classes, individual, family, and group counseling, yoga, prayer sessions and other group activities. In the classes he participated as if he knew everything. In counseling sessions he used many defenses. In the various facilities like accommodation and mess he
had lot of complaints. But gradually he adjusted more and more. In counseling he cooperated and expressed his desire and plan for an alcohol free life. When the treatment ended he gave the impression that he will lead an abstinent life. In family counseling Chinnamma had expressed doubt against his determination for real change. But later she forced her mind to believe that he will keep his words. She promised her cooperation. It is with a very positive mood that the couple went back from the treatment center.

For a few days he did not go to office. He had sufficient leave. He was very calm and was disciplined with regard to schedules of personal and family life. The first A.A. meeting after discharge was attended. He shared well regarding his past and present. He got appreciation from the group.

In the office some approached him with surprise on account of the changes in him, some doubted his sincerity, and some believed that he would resume the previous state shortly. Some friends who had come to his company for drinking left his company thinking that association with him is not going to have benefit any more. Gradually he began to feel lonely, gloomy and less efficient.

At home he tried to master the affairs of the house. He took up the project of an improvement of the house and began to involve in the financial affairs of the family. Gradually it became evident that he was not at all efficient in this. Much money was lost. Everything turned out to be a mess. He was in terrible confusion. He complained that, his wife tried to boss him, did not cooperate with him, was trying to control him
etc. In A.A. meeting he described a different version of himself. He claimed that he is efficiently managing things. He repeatedly stressed the role of life partner of addicts to offer support and encouragement, which will help them remain abstinent. Chinnamma did not intervene in public what he said but told the counselors the actual developments. She was advised not to do anything that will reduce his self-confidence.

Gradually the things became worse. Mathew’s money dealings only made terrible loss for the family. Financial problems created by him had to be solved by Chinnamma. He began to make false allegations about her fidelity. He began to openly complain that she is having unholy relations with others. Such arguments in the presence of the children were very painful for Chinnamma. Mathew began to associate with former drinking friends. He began to come home late. A.A. meetings began to be dropped repeatedly. There were changes in the dealings of Chinnamma. She tried her best to keep the good name of the family and to see that the education of the children does not suffer in this mess.

In an A.A. meeting Mathew came and described that he is keeping abstinent. He narrated that in spite of negative experiences from wife he is able to control himself. He said that his wife has made the children to believe that he is a drunkard, he is inefficient and it is she who manages the family affairs. He said, he loves the children but because of the influence of his wife the children do not love him and try to avoid him. It is his friends who support him. He used to move with them and enjoy being with them. He goes with them even to bar. When
they drink alcohol he takes only cool drinks or soda. He said sitting with then he could control his craving for alcohol.

But it did not take a long time for Mathew to relapse. One evening fully drunk Mathew came to the counselor. He said he is drunk. His speech was like the one he had on the day he came for treatment. He said now he has drunk but he has not lost control. He can start drinking and also stop. It doesn’t matter that he is drunk. It is because of his wife that he is drunk.

Mathew described how he has drunk. Last evening Mathew came home and suggested an outing on the next day. He had obtained leave. Chinnamma said it is good to have an outing and a weekend. But she said tomorrow is not convenient. She suggested that after the examination of the children next month they can have outing. Their brother–in-law and family would also join. Tomorrow she has to go and meet her father in the hospital. Having all his plans upset, it was very difficult for Mathew to accept. He argued for sometime but it was in vain. Next morning after break-fast Chinnamma went to hospital. Mathew stayed back. He spent some time reading newspaper and watching T.V. He felt terrible loneliness. He went to bed for rest. But he stood up after a short while. He rang up to his son. It was class time. So he could not speak to him. He sat idly for some time. By noon he went to the kitchen, opened the shelf and fridge. He did not feel like eating what his wife had prepared and put in the fridge. He dressed himself and took some money. He had received salary on the previous day. So he had enough money. He called two of his friends. One of them said he is in the office. Mathew compelled them to take leave and come. Mathew
said he went to a bar-attached hotel and had lunch. He also ordered few bottles of beer saying that it is a light drink and will not intoxicate. After lunch he also went to the military canteen. He collected that month’s quota of liquor. After treatment for alcoholism he was selling it for money. Now he brought it home. Mathew said the boredom and craving were so uncontrollable that he could not resist the temptation. He had consumed one full bottle and had started from the second by evening. The conversation was very much confused.

The counselor advised him to come to the treatment centre for a three-day’ relapse management programme. But Mathew never turned up.

**Case 3 Chackochan**

Chackochan, aged 43, is on a three weeks de-addiction treatment. He will complete the course next day and he is prepared to be discharged.

Chackochan was a chronic alcoholic when he was brought to the treatment centre three weeks ago. His heavy drinking has made him utterly poor. Financial debts had made him almost desperate. Day-to-day family needs were met in a very meager way by the mercy of others. He had lot of physical problems like gastritis and liver complaints caused by his binge drinking. He had lost all confidence in treatment for alcoholism. In the preceding year he had gone for treatment courses in three different treatment centres. They were of one-week’s treatment courses. After one week of ‘treatment’ including counseling, prayer and
retreat. Chackochan would remain abstinent for hardly two to three weeks. Thus he had lost confidence in treatment as such.

The fact that motivated Chackochan and family to treatment in this center is the experience of his brother-in-law. Mathew, the brother-in-law of Chackochan was treated here. Now he is abstinent for more than one year.

Chackochan cooperated in the treatment well. He attended in the classes, participated in the routine activities—counseling, yoga therapy, recreational activities etc. With great confidence he went home after 3 weeks of treatment. He followed the recovery steps and attended A.A. meetings regularly.

In four years he missed only 24 A.A. meetings. The following brief history is collected from the detailed sharing in an interview after one A.A. meeting.

**Social History**

Chackochan belonged to a poor family in a remote village. His father was engaged in goat business. There were six children in the family—four males and two female children. Chackochan was the fourth child and second son. His father was not an alcoholic and the family was happy, though financial poor.

When Chackochan was in standard 4 his father died. His elder brother went away from house. Chackochan had to stop going to school.
He began rearing goats and gradually continued the goat business. His elder brother returned home after four years but again went away after 3 years and there was no knowledge of his whereabouts.

The entire burden of the family came to the shoulders of Chackochan. There were local illegal distilleries around. He tasted liquor at the age of 10 and gradually the quantity increased. He also started making such local liquor and selling it. For three years he was engaged in it.

The income from it was not sustained. Those involved usually drink too much. Police and excise officers are bribed. When caught, huge money is spent to be freed. Thus carrying out this business for three years, very little income was left.

When 18 years old Chackochan went to Orissa and after some time went to Andhra. At Andhra, he met his elder brother. He was working in a prawn processing factory. He stayed with him for few days. Then he went to Orissa, worked in another prawn processing factory. After four years he came home. But he went to Madras and started prawn business.

He continued drinking. At the age of 23 he came home. Due to pressure from family he remained at home. Meantime his sister was married with the help of relatives.
Chackochan started a small-scale business in forest produce. At the age of 24 Chackochan married. Married life was happy. They have one daughter and one son.

Drinking continued. Due to drinking the business failed. There was no discipline in money management. Many decisions were taken without proper assessment and planning. Hence there was financial loss. Many who purchased goods from him on credit did not pay him back. To settle his liabilities he had to sell his properties and reserves.

Now the alcohol intake increased. This led to further economic problems and disturbances in his relationship with wife. There were health problems like gastritis, and diabetes. But liquor use was out of his control. His efficiency and confidence decreased. Financial debts increased. The family was in very great financial crisis. Education of the children greatly suffered.

Due to pressure from relatives, social workers and religious leaders he attended some retreat and counseling programmes as mentioned earlier. But they did not make any stable improvement.

It is the 3 weeks treatment in the present treatment centre that helped Chackochan. He participated in all the activities of the centre like awareness classes, individual, family and group counseling, yoga, recreational activities, prayer etc.

After the formal treatment he attended in all the follow-up programmes organized by the centre. He also attended regularly in the
A.A. meetings arranged in the treatment centre. Besides these, he also attended in the A.A. meetings organized in the local area near his village. Chackochan told that he took interest in helping other alcoholics by motivating them for treatment, bringing them to A.A. meetings, financially helping to meet treatment cost etc.

Chackochan narrated the overall development in his life. There is order in every area of his life. He did things only after planning. He spent money only after proper thinking. In business and money dealings there was no greed. There were problems in business. There were losses and problems like debtors not paying back in time. Many old friends deserted him. But he was keen to make new non-drinking friends.

Family relations greatly improved. He spent more time at home, with wife and children. He was glad to help mother and brothers. He keenly attended to the education of children. He got support from wife. Even when there were problems in business he got consolation from wife. When interviewed he was proud of the gains from alcohol-free life. Daughter was doing nursing course. Son was a plus 2 student. While encountering frustrations or loss he felt no tension. He could bear failures in life. He consoled himself that the losses or failures in life in alcohol-free life are nothing when compared those during life under the control of alcohol.

Chackochan concluded that it is participation in A.A. that helped most in remaining abstinent from alcohol. Secondly it is spirituality that helped in maintaining alcohol free life. Thirdly, it was the constant contact with the counselors at the treatment centre and A.A. members.
Chackochen recollected that he was visited 5 times by the personnel of the treatment centre. He also used to call by telephone whenever he felt emotional problems or lack of confidence.

**Case 4 Mohan**

Mohan, aged 34, was a wandering wage laborer who had come to the town Ernakulam about 4 years ago. He was a healthy man. He used to go for any menial and manual work for wage. Most of the wage was spent on the same day for food, alcohol, smoking, drugs like ganja etc. He had very little belongings with him, which he kept in a plastic kit. He slept the night on the corridor of any sharper public place like bus stand. He had a thoroughly undisciplined life. He used to watch movie almost daily. He was involved in immoral activities like addiction, theft or mutual fight. In four years he was caught by the police 5 times for any one of these crimes. Some associates used to come for his rescue.

It was at this time that Mohan was called to an institution of priests to work in the cattle shed as a substitute for another person. He worked there for just two weeks. Hearing his story and seeing that he is a good worker a priest began to show interest in his case.

He was brought to a bigger institution-the provincial house of that priestly congregation. First he was brought to a de-addiction treatment center. They bore the cost of the treatment.

For Mohan the first four days of treatment was very difficult. On one side there was strong withdrawal. I.V. administration of de-
addiction drug was started. Unlike other patients, the life partner or direct brothers were not with him to attend him. When the sedation of the drug was reduced he attempted to escape. That attempt was interrupted. Watchman of the center brought him to the director.

Mohan was in a great confusion. He did not want to stop alcohol and drugs use. He couldn’t adjust to the time-table of the center. An orderly life is not familiar to him. He did not see a purpose in life or any goal before him. The counselors’ advises and counsels seemed to make no effect. But he could not escape. He was in close observation by the nurses, attendees, and counselors.

There was no external force. The support person who was sent with him by the priest at the Provincial house attended to him. He was given food and medicine regularly. The staff of the center treated him with concern.

Gradually Mohan moved with the various activities of the center-the regular food, prayer, classes, check-up and medicine etc. He was a passive participant till the fourth day. On the fifth day there was the A.A. group meeting. The patients who were treated in the center as well as other addicts in places around came for the meeting. The patients who are undergoing treatment could also attend the meeting. Mohan also came and sat. Having kept away from alcohol and drugs for the last 5 days and keeping an orderly schedule these days he was able to attend what is going on. He heard the stories and experiences of the members. When he heard these Mohan identified these with his own story and experiences.
From the fifth day, Mohan began to cooperate with the treatment. He began to participate with the various activities with great interest. The counselors and fellow patients acknowledged this change with appreciation and encouragement.

In the counseling session and group session Mohan described his story. His father was a diary farm worker. Like the grandfather his father also was a drunkard. Mohan recollected an incident that happened at home on one night when he was 6 years old. His father was lying over his mother. Mother kicked him away. A brief fighting followed. Then the mother escaped and ran away. Mohan later discovered that this was an attempt for sexual intercourse and mother’s revolt against it. Father was coming from the cattle shed. He was fully drunk. He had not properly bathed himself. There is no surprise that in such a situation no women will enjoy sexual relationship. That was the kind of life he had at home. The couple had four sons and one daughter. Mohan had one brother younger to him. Others were elder.

The main income of the family was from father’s labour in the cattle shed. There was also some farming. The family did not have to starve. But the life was a crude one. The housing, clothing, education etc. were just elementary. The friends at school had good clothes, ornaments and good houses. Mohan felt inferiority and disgust. But Mohan and brothers were physically healthy.

Father of Mohan died of heart attack when the latter was at standard 8 at school. He continued going to school. His elder 2 brothers stopped their studies and went to work in the cattle shed. Shortly later
they began to rear cows. The diary unit prospered. When Mohan was in standard 10 the family had 60 cows. Mohan discontinued studies and came to work in the dairy unit. There was good income. Mohan was in charge of collection of the price of milk. Mohan had access to good amount of money every day.

Mohan said though his father, grand-father and elder brother were drunkards, till the age of 18 years he never took alcohol. He was against drinking. He used to advice his brothers and friends to stop drinking.

Mohan narrated his story of fall to alcoholism as follows. At the age of 18 Mohan and friends were going for a pilgrimage cum tour. Most of the friends were smoking and drinking beer and alcohol. For some time he resisted the temptation. After some time under compulsion of friends Mohan took some bear and later liquor also.

Then Mohan used to have beer and liquor with a friend. But he says he was not a heavy drunkard. He took only occasionally and that too in a reasonable quantity.

The marriage of Mohan was when he was 22. The diary farm was prosperous. Mohan’s elder brothers’ and Mohan’s use of liquors also increased in quantity and frequency. But the family life went on fairly well.

At the age of 30 Mohan had 3 children aged 7, 4 and 1 year respectively. It was at this time that his wife died. She was suffering
from Tuberculosis, diabetes and low blood pressure. She died following 6 months of treatment. The death of wife was a great blow for Mohan. He became thoroughly desperate. His drinking drastically increased in frequency and quantity. All what he earned through work Mohan spent for drinking. He disregarded everybody’s advice. When someone tried to correct him he used to drink more in protest. He was thoroughly desperate.

For a few months more he worked in his brother’s dairy farm. He used to get one hundred rupees each per day. This did not suffice for his drinking. He used to borrow money. He did not care for the children. His mother and sister-in-law attended to their basic needs. He did not know what to do. He had no plan in life. His only concern was to get some more money for drinking.

Mother left home. He went to Ernakulam. There he led a thoroughly desperate, instinct driven, undisciplined life, fully under the dependence of alcohol and drugs. It was in this condition that Mohan was brought to the treatment centre.

Mohan described the life in the treatment centre as ‘heavenly’. He took everything in the centre with a positive attitude. He was the first to come for class, prayer, dining, yoga class, group sessions etc. He took initiative for any activity. He had several individual sessions with the counselor. He perceived life with a purpose, he was grateful to the priest and the brother at the institution where he worked and those at the treatment centre who were instrumental in renewing him. He described the staff of the centre as ‘angels’.
He went out of the treatment centre as a different person. Mohan went back to the institution where he worked earlier. The members of the institution appreciated his change and encouraged him. He worked there and remained there till weekend. On every Saturday he went home, and gave something for the children to express his concern for them. He also used to give money for the education of the children.

Now it is about 4 years since treatment. Mohan came regularly for A.A. meeting. In the first 3 months the authorities of the institution where he worked allowed him to come for A.A. meeting without taking leave. He used to come after work till 12 o’ clock. Then, in about two hours he reached the centre. After sharing his experiences, attending the sharing of one or two members and meeting the counselor he returned to finish his day’s work. He says even if till the eve of the A.A. meeting he planned not to go, on the day of the meeting he usually decided to go for the meeting.

Later he began to come for the meeting taking leave for those days. He got a wage of Rupees 150.00 per day after all the expenses being met. He is fully satisfied with this. He said, even when he used to get more wages his pocket remained empty due to addiction.

Mohan described an occasion in which he felt a strong temptation to take drink while going near a liquor shop. But he resisted the temptation by silently reciting a small prayer. Mohan says since then he had no such temptation.
As to what helped to overcome the temptation to go back to former style of life, Mohan narrated the following things:

1. Participation in A.A. meeting. For the last 4 years he has missed very few of the weekly A.A. meetings.

2. Spirituality. Daily he used to pray 15 to 30 minutes at least. He used to read Holy Scriptures like Bible, Quran etc. and A.A. literature.

3. The satisfaction he got from helping others in need. He succeeded in his attempt to lead his elder brother to an alcohol-free life. He brought the latter for treatment and has now recovered from dependence to alcohol. Mohan has helped a couple whose marital life was near a breakdown.

4. Mohan gratefully remembers many who have been genuinely interested in his welfare-the priest and the brother at the institution, the counselors and other staff at the center, some of his friends etc. Their support and encouragement were really helping him. When he used to have any tension or difficult experiences and frustrations he used to meet him or talk through telephone.

At times Mohan felt the pain of the loss of his wife. He even sometimes felt guilty that he could not love her properly, she has suffered much because of him, that he could not give her good treatment etc.
As to his future plans, Mohan said that he wishes to give good education to his children. His property and that of his deceased wife together is worth Rupees 1.1 million. He wants to set this apart to his 3 children. He also plans to have a second marriage if a woman of right match is prepared to accept him.

5. A.2. Critical Analysis of Case Studies

Case 1 Raju

In the case of Raju we see some very clear aspects regarding the etiology of Alcoholism. Father of Raju was an alcoholic. As already mentioned in chapter three there are research findings that males having one alcoholic parent has up to 30 percent of risk for becoming alcoholic. Psychological factors like stress, failures in parental guidance etc. are also true in the case of Raju. He had association with liquor from early stage of life. He experienced deprivation, he had to engage in hard and risky jobs, he was wrongly suspected of theft, he had to flee from home, live in unprotected surroundings, and to face opposition. He had no adequate training in a disciplined life.

As many other alcoholics, Raju had an ambivalent attitude towards treatment. On one hand he wanted to have a change but the dependence was so strong and deep that he resisted the chances of treatment. It is very interesting to note that some patients are brought for treatment by the relatives using force. As the psychologist in this case has correctly noted, this is not the way, patients are to be brought for treatment. It is important to have personal motivation. But as in the case
of Raju, motivation can be gradually gained by learning from others’
experiences. Raju cooperated in the treatment and earnestly tried to lead
an abstinent life.

It is easier to stop drinking but it is very difficult to sustain in
abstinence. This is very much true in the case of Raju. He failed to grow
in emotional maturity and tolerate stress. At the same time there was no
adequate attempt to effectively use the sources of emotional support like
Alcoholic Anonymous group meetings. All these gradually led to the
inevitable condition of relapse.

The role of stress to facilitate relapse after treatment is clear in
this case. Stress in the case of Raju is related to financial matters and
interpersonal relationship with family and friends.

We see Raju struggling to make money as if he wanted to regain
what he lost due to alcohol abuse. It is unrealistic to expect that others
will whole heartedly cooperate in this attempt. When they seemed to
come in his way he was terribly frustrated. When the expected support
from wife was found missing, his fall was certain. Moreover the
possibility to use the association with Alcoholic Anonymous too regain
strength was not used.

Thus we see the role of three variables- Alcoholics Anonymous
affiliation, social support perception and stress tolerance in the case of
Raju for leading to relapse.
Case 2 Mathew

Mathew’s case clearly exhibits the typical characteristics of the alcoholic. Even when utterly drunk, Mathew claimed to be in perfect control. He boasted himself, used many defenses and justifications, and blamed wife for his excessive drinking. Right from childhood he clearly showed two different faces. In social situations he presented himself as a very social, efficient and mature person. But at home, he was thoroughly different. He was very inefficient, not confident, feeling inferior and weak. His paranoid tendency sprouted from his feeling of inferiority.

In the character of Mathew we see aspects of character disorder and paranoid disorder. Right from childhood he was a cunning boy. He gave the impression of a good boy hiding under this façade a different manipulating character.

One of the characteristics of chronic alcoholism is paranoia. It is really a torturing experience for the life partner of alcoholic is to be doubted of the integrity.

Regarding etiology and progress of alcoholism here too we find the father’s alcoholism and early involvement with liquor. Mathew’s case clearly shows how the easy availability of liquor can influence one to excessive use.

It is true that he participated in the various aspects of treatment. But what was lacking was the humble and sincere acceptance of the fact that he is an alcoholic and a sincere effort to change, seek and accept
help, readiness to undergo through the recovery plan step by step. During the early periods of recovery he did not earnestly follow in emotional maturity and discipline. Even in A.A. meetings he attempted to impress others and accuse his wife.

Case 3 Chackochan

Unlike in the case of others Chackochan’s father was not an alcoholic. But since the death of his father he lost the loving care, parental attention and role model. He had continuous struggles. He was engaged in illicit liquor distilling and sale and started using it even from his school days. At an age when others were concentrating on education and equipping themselves for future career, Chackochen was engaged in goat rearing, liquor distilling, etc. In the struggle to make a living he had to travel long way and engage in labor and business in unfamiliar places.

Chackochan’s case represents the success stories of alcoholism treatment. Chackochan wholeheartedly cooperated in the treatment and post treatment recovery measures. During the post treatment period also Chackochan had problems in business field. But he faced them in a peaceful manner. He learned to tolerate stress. Realistically comparing the failures and losses in the life during alcohol dependence and after he found that the latter was very negligible than the former. This helped him to maintain a positive outlook in life.

A.A. participation, spirituality and contact with counselors are explained as the things which helped him to keep an abstinent lifestyle. He followed the twelve steps of Alcoholics Anonymous. He regularly
participated in the meetings of Alcoholics Anonymous. His sharing was sincere and truthful. He was careful to use the sources of emotional support—the family, friends, and the counselors at the treatment center. He openly shared his problems and was humble enough to accept the guidance and emotional support.

**Case 4 Mohan**

The case of Mohan clearly demonstrates how stressful family background can contribute to the etiology of alcoholism on one hand and how the timely intervention and care from social workers can help the addict to have a thorough change and lead an alcohol-free life.

There is a clear family history of addiction. The picture of the bed scene of the parents of Mohan imprinted deep down in the mind though it did not have an immediate connection with his alcoholism, vividly describes the family life of an addict.

It is clear that in such a family children lack care, parental attention and guidance. Mohan experienced deprivation, inferiority and disgust. There is no surprise that all the brothers of Mohan developed alcoholism. Mohan tried to keep away from alcohol.

As Mohan describes, the compulsion of friends during the tour led to the use of liquor. This was only accidental. No much importance is to be attached to the compulsion of friends.
The role of stress in alcoholism is also very clear. Social and occasional drinking in the company of friends usually develops into chronic alcoholism when it is linked with stress and the person cannot effectively manage them. That was the beginning of the fall into a ‘deep pit’, from which Mohan thought, he could never escape.

In the recovery of Mohan to an abstinent state we see a reverse process. It started with the interest of a social worker-a Christian priest-who took genuine interest in his case. The counselors, social workers, nurses and others in the treatment centre joined in the line of persons who were instrumental in ‘renewing’ him. Mohan described them as ‘angels’.

Mohan had many bitter experiences in life. He had lot of deprivations in life including effective parental guidance. Later when he got these, change was initiated. What is important from the part of Mohan is that he was able to maintain a positive outlook in life. He was able to discern them and receive help with gratitude. In the case of many alcoholics this is not seen often.

Other factors that helped Mohan to lead an abstinent life as explained by Mohan were spirituality and participation in Alcoholics Anonymous. One thing specially noted in the case of Mohan is the practice of the twelfth step of Alcoholics Anonymous. We see him trying to bring back other addicts to abstinent life style. This definitely added more strength to his-own abstinent life style.
### 5.2. STATISTICAL ANALYSIS

#### 5.2.1. Results of t test and the Test of Hypothesis 1

#### Table 13

The Data and Results of t test: the Mean, the Standard Deviation, and the t values of the Subjects’ Responses in the Four Variables (N=50 each)

<table>
<thead>
<tr>
<th>No</th>
<th>Variable Name</th>
<th>Relapsed Alcoholics</th>
<th>Abstinent Alcoholics</th>
<th>t Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
</tr>
<tr>
<td>1</td>
<td>Stress Tolerance</td>
<td>61.54</td>
<td>8.09</td>
<td>86.68</td>
</tr>
<tr>
<td>2</td>
<td>Social Support Perception (S.S.P.)-Family</td>
<td>12.40</td>
<td>3.02</td>
<td>23.60</td>
</tr>
<tr>
<td>3</td>
<td>S.S.P.-Friends</td>
<td>14.80</td>
<td>2.24</td>
<td>22.24</td>
</tr>
<tr>
<td>4</td>
<td>S.S.P.-People</td>
<td>12.08</td>
<td>2.36</td>
<td>21.84</td>
</tr>
<tr>
<td>5</td>
<td>S.S.P.-Total</td>
<td>39.28</td>
<td>4.20</td>
<td>67.68</td>
</tr>
<tr>
<td>6</td>
<td>Alcoholics Anonymous Affiliation</td>
<td>3.96</td>
<td>1.15</td>
<td>6.89</td>
</tr>
<tr>
<td>7</td>
<td>Spirituality</td>
<td>73.14</td>
<td>11.02</td>
<td>99.94</td>
</tr>
</tbody>
</table>

Note: *Indicates significance at 0.01 level.
In order to test the tenability of hypothesis one, the statistical technique of t test was found most appropriate because two groups of subjects were involved here. Using t test it was investigated whether the values of the subjects in the various scales significantly differed with the type of respondents.

5.2.1.1. Stress Tolerance: Result of t test

As it is clear from the Table 13, the t test has shown that the variables are not independent. Stress tolerance score differed significantly with the type of respondents. That is, abstinence in alcoholics is influenced by stress tolerance.

For the relation between stress and alcohol abuse and between post-treatment stress and relapse, there are several research findings. In a remarkable study by Brown et al. (1995), it was found that the subjects who relapsed experienced twice as much severe and prolonged stress before their return to drinking as those who remained abstinent. Those most vulnerable to stress related relapse scored low on measures of coping skills and self efficacy.

Several studies indicated that both acute and chronic stress play a role in the precipitation of relapse in recovering alcoholics (Brady & Sonne, 1999).
5.2.1.2. Social Support Perception-family: The Result of t test

As it is clear from the Table 13, the t test has shown that the variables are not independent. Social support perception-family score differed significantly with the type of respondents. That is, the social support perception-family influences abstinence in alcoholic patients.

There are several other researches with similar findings. Social support of the three types-emotional, instrumental and informational-received from three sources, namely, family, friends and other people, are found to be effective in recovery from dependence to alcohol (Thomas et al., 1992).

However, according to Nelmark and Convey (1994), social support received from family is highly effective. “It creates an enthusiasm in both the drinker and the family that a life without alcohol is possible”. A study by Weisner and others (2003) has demonstrated that informational support and community services have significant impact on recovery in alcoholic patients.

In a longitudinal study on the effect of social support on substance abuse relapse in a residential treatment setting by Ellis et al. (2008) it was found that positive activities such as families getting along and helping each other during post discharge period significantly decreased the likelihood of relapse.
5.2.1.3. Social Support Perception: The Result of t test

As it is clear from the Table 13, the t test has shown that the variables are not independent. The social support perception score differed significantly with the type of respondents. That is, social support influences abstinence in alcoholic patients.

There are several research findings that the perception that one is loved and cared by family, friends and others is related to a person’s recovery. The positive effect of social support on health in alcohol and drug dependent patients was established by Malhotra and Colleagues (2002). It was found that social support influences motivation, treatment compliance and outcome in alcohol dependent patients.

5.2.1.4. Alcoholics Anonymous Affiliation: The Result of t test

As it is clear from the Table 13, the t test has shown that the variables are not independent. Alcoholic’s Anonymous affiliation score differed significantly with the type of respondents. That is, affiliation to Alcoholics Anonymous influences abstinence in alcoholic patients.

The study very clearly indicates that alcoholic patients who attend more number of Alcoholic Anonymous (A.A.) meetings. Several studies were quoted in chapter 3 explaining the positive relationship between A.A. involvement and abstinence in alcoholic patients. Attendance in A.A. meetings prior to, during and after inpatient treatment is found to positively influence abstinence (Gossop et al., 2003). Frequency of participation in A.A. meetings was associated with
higher likelihood of abstinence (Moos & Moos, 2004). Individuals who entered A.A. quickly after treatment had better outcome and longer duration of participation in A.A. had better outcome. It was also found that those who discontinued participation had increased risk for relapse (Moos, 2005).

5.2.1.5. **Spirituality: The Result of t test**

As it is clear from the Table 13, the t test has shown that the variables are not independent. The spirituality score differed significantly with the type of respondents. That is, spirituality influences abstinence in alcoholic patients.

Alcoholic patients who have abstained have more scores in spirituality. As reviewed in chapter 3 there are lot of studies indicating the relationship between spirituality and alcoholic’s recovery. In the twelve-step programme of Alcoholic Anonymous steps 11 and 12 are related to spirituality. They deal with the purpose in life which is an area of interest for people who are spiritual. An important result of the study by Zemore and Kaskutas (2004) is that longer sobriety predicted significantly more time spent of recovery helping and higher levels of Theism and Self-transcendence. Patients’ religious beliefs were studied in relation to alcoholics’ sobriety. In a significant study by Poage, Ketzenberger and Orson (2004) it was found that the length of sobriety of alcoholics was significantly associated with spirituality.
A Spiritual or religious connection to the transcendent is part of the recovery. Recovering participants in one study expressed a sense of needing something to depend on that could be trusted and that was there always (Morjaria & Oxford, 2006).

5.2.1.6. Test of Tenability of Hypothesis 1

As shown in the Table 13, in all the cases it can be seen that as per the result of the t test, the two populations-alcoholics who have relapsed and those who were abstinent-significantly differed in all the variables under study at a significance level of 0.01. Hence the hypothesis formulated in this context that “There will be significant difference between alcoholics who have relapsed and those who remain abstinent, in stress tolerance, social support perception, Alcoholics Anonymous affiliation and spirituality” is accepted.

5. 2.2. The Result of Correlation Analysis and Test of Hypothesis 2

The correlations among the different variables were calculated for the three groups of subjects-the alcoholic patients who have relapsed, those who remain abstinent and the non-alcoholics. The results are given in separate tables. The inter relationship among the variables have been estimated using Carl Pearson Product Moment Method of Correlation. All the variables and the three sub-variables were correlated mutually each other.
Table 14

The Correlations among the Four Variables, in the Alcoholics who have Relapsed (N=50)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Pearson Correlations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>1 Stress Tolerance</td>
<td>( )</td>
</tr>
<tr>
<td>2 Social Support Perception</td>
<td>-</td>
</tr>
<tr>
<td>3 Alcoholics Anonymous Affiliation</td>
<td>-</td>
</tr>
<tr>
<td>4 Spirituality</td>
<td>-</td>
</tr>
</tbody>
</table>

*Indicates significance at 0.01 level.

As shown in the Table 14, significant correlations, among the variables in the relapsed group of alcoholics, were found in three cases.

- The correlation coefficient obtained between stress tolerance and spirituality is 0.494.
- The correlation coefficient obtained between social support perception and Alcoholics Anonymous affiliation is 0.409.
- The correlation coefficient obtained between social support perception and spirituality is 0.400. These are significant at 0.01 level and are interpreted as substantial correlations.
Table 15

The Correlations among the Three Sub-sets of the Variable, Social Support Perception, in the Alcoholics who have Relapsed (N=50).

<table>
<thead>
<tr>
<th>Variables</th>
<th>Pearson Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>1 Social Support Perception (S.S.P.) - Family</td>
<td>( )</td>
</tr>
<tr>
<td>2 S.S.P.-Friends</td>
<td>-</td>
</tr>
<tr>
<td>3 S.S.P.-People</td>
<td>-</td>
</tr>
</tbody>
</table>

Note: The Correlations are not significant statistically

As shown in the Table 15, only negligible and low levels of correlations were found among the sub-sets of the variable, social support perception, in the relapsed group of alcoholics.
Table 16

The Correlations among the Four Variables in the Alcoholics who are Abstinent (N=50).

<table>
<thead>
<tr>
<th>Variables</th>
<th>Pearson Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>1 Stress Tolerance</td>
<td>( )</td>
</tr>
<tr>
<td>2 Social Support Perception</td>
<td>–</td>
</tr>
<tr>
<td>3 Alcoholics Anonymous Affiliation</td>
<td>–</td>
</tr>
<tr>
<td>4 Spirituality</td>
<td>–</td>
</tr>
</tbody>
</table>

Note:* Indicates significance at 0.01 level.
# Indicates significance at 0.05 level.
As shown in the Table 16, significant correlations were found between the variables in the abstinent group of alcoholics in some cases.

- In the abstinent group of alcoholic patients, the correlation coefficient obtained between stress tolerance and social support perception is 0.26.
- The correlation coefficient obtained between stress tolerance and Alcoholics Anonymous affiliation is 0.38.
- The correlation coefficient obtained between stress tolerance and spirituality is 0.26
- The correlation coefficient obtained between social support perception and, Alcoholics Anonymous affiliation is 0.28
- The correlation coefficient obtained between social support perception and spirituality is 0.37.
- These are interpreted as low levels of correlations.
- The correlation coefficient obtained between Alcoholics Anonymous affiliation and spirituality is 0.08. This is interpreted as a negligible degree of correlation.

Several research studies explain the mutual relationship between these variables. Social support has a buffering role of to cope with stress. Affiliation to Alcoholics Anonymous and religious groups are known to provide social support. A.A. acknowledges the role of spirituality as a mechanism for change. In religious and spiritual practices, a person offers himself in simple belief and trust. Through the A.A. the addict develops spirituality by looking inward to recognize his breadth and potential with the practice of the 11th and 12th steps of A.A. - the two spiritual tenets - a sense of life purpose (Turner, 2000).
The Correlations among the Three Sub-sets of the Variable Social Support Perception in the Alcoholics who are Abstinent (N=50).

<table>
<thead>
<tr>
<th>Variables</th>
<th>Pearson Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>1 Social Support Perception(S.S.P.) -Family</td>
<td>( )</td>
</tr>
<tr>
<td>2 S.S.P.-Friends</td>
<td>-</td>
</tr>
<tr>
<td>3 S.S.P.-People</td>
<td>-</td>
</tr>
</tbody>
</table>

Note:*Indicates significance at 0.01 level.  
#Indicates significance at 0.05 level.

As shown in the Table 17, significant correlations were found between the sub-variables of social support perception in the abstinent group of alcoholics.

In the abstinent group of alcoholic patients, the coefficient of correlation obtained between social support perception (S.S.P.)-friends and S.S.P.-people is 0.29. This is significant at 0.05 level and is interpreted as low correlation. The coefficient of correlation found between S.S.P.-family and S.S.P.-friends is 0.43 and the correlation obtained between S.S.P.-family and S.S.P -people is 0.46. These are significant at 0.01 level and are verbally interpreted as substantial.
Table 18

The Correlations among the Three Variables in the Non-alcoholics (N=50)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Pearson Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>1 Stress Tolerance</td>
<td>( )</td>
</tr>
<tr>
<td>2 Social Support Perception</td>
<td>-</td>
</tr>
<tr>
<td>3 Spirituality</td>
<td>-</td>
</tr>
</tbody>
</table>

Note: *Indicates significance at 0.01 level.

As shown in the Table 18, significant correlations among the variables were found in the non-alcoholic group of subjects.

- The correlation coefficient obtained between stress tolerance and social support perception, is 0.39. This is significant at 0.01 level and is verbally interpreted as low degree of correlation.
- The correlation coefficient obtained between stress tolerance and spirituality is 0.45.
- The correlation coefficient obtained between social support perception and spirituality is 0.66.
- Both these are significant at 0.01 level and are verbally interpreted as substantial correlation.
Table 19  

The Correlations among the Three Sub-sets of the Variable, Social Support Perception, in the Non-alcoholics (N=50).

<table>
<thead>
<tr>
<th>Variables</th>
<th>Pearson Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>1 Social Support</td>
<td>( )</td>
</tr>
<tr>
<td>Perception (S.S.P.)</td>
<td></td>
</tr>
<tr>
<td>-Family</td>
<td></td>
</tr>
<tr>
<td>2 S.S.P.-Friends</td>
<td>-</td>
</tr>
<tr>
<td>3 S.S.P.-People</td>
<td>-</td>
</tr>
</tbody>
</table>

Note:*Indicates significance at 0.01 level.
     #Indicates significance at 0.05 level.
As shown in the Table 19, significant correlations were found between the sub-variables of social support perception in the non-alcoholic group of subjects.

- In the non-alcoholic group of subjects the coefficient of correlation between S.S.P.-family and S.S.P.-friends is 0.28. This is significant at 0.05 level, though the correlation is verbally interpreted as low.
- The coefficient of correlation between S.S.P.-family and S.S.P.-people is 0.28. This is significant at 0.05 level and the correlation is verbally interpreted as low.
- The coefficient of correlation between S.S.P.-family and S.S.P.-people is 0.66. It is significant at 0.01 level and is verbally interpreted as substantial correlation.

According to the method of interpretation proposed by Garrett, the correlation among the variables in the present investigation is substantial in 8 cases, low in 11 cases, and negligible in 5 other cases out of 24 total cases of the relationship. The variables having substantial or marked degree of correlation were more among the relapsed alcoholics and non-alcoholics.
Test of Tenability of Hypothesis 2

In the total of 24 comparisons, there were significant mutual correlations among the variables in 14 cases-11 cases of correlations at 0.01 level of significance and 3 cases of correlations at 0.05 level. Thus, the results of correlation analysis as a whole support the hypothesis that “There will be significant positive inter correlations among the variables, stress tolerance, social support perception Alcoholics Anonymous affiliation and spirituality in the relapsed alcoholic patients, abstinent alcoholic patients and the non-alcoholics” to a moderate extent.

This significant result of the study is in agreement with other research studies. Affiliation with Alcoholic Anonymous is a great source of social support. Social support has a high buffering role in coping with stress. Belief in God, life after life, prayer and other religious practices on one hand help people to deal stress situations effectively. On the other hand they also help the believer to be affiliated to a particular religious group and thereby experience mutual support. The twelve-step programme is very much similar to religious practices. According to the studies of Poage and others, (2005), length of sobriety was significantly associated with spirituality. Spirituality and contentment were positively related.
5. 2.3. Analysis of Variance and the Test of Hypothesis 3

Hypothesis 3 was proposed to investigate the effect of different variables on the major variables under study namely, stress tolerance, social support perception and spirituality. In order to test this hypothesis t test and Analysis of Variance were used in the present investigation. The technique of t test was used when only two groups were involved and Analysis of Variance was used when more than two groups were involved. ANOVA consists of splitting the variance into its various components for analytical purposes. The variance was split into variance between groups and variance within groups.

In the present investigation the subjects were grouped on the basis of various criteria such as: educational qualification, marital status, separation from spouse, financial debt and father’s alcoholism. Each category of subjects was treated separately and each sub group was compared to find the effect on the major variables.

One of the major variables, namely, Alcoholics Anonymous Affiliation is not included in this hypothesis and the tests because this variable is applicable only for the first and second groups of subjects, namely, the relapsed and the abstinent groups of alcoholics.

The results of the tests of Analysis of Variance and t tests comparing the different groups on the major variables namely, stress tolerance, social support perception, and spirituality are given in the following tables.
Table 20

Results of ANOVA for the variables Stress Tolerance, Social Support Perception (SSP) and Spirituality: Comparison of Subjects Classified on the Basis of Educational Qualification.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stress Tolerance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>15057.98</td>
<td>7</td>
<td>2151.14</td>
<td>10.85</td>
<td>0.01</td>
</tr>
<tr>
<td>Within Groups</td>
<td>28159.06</td>
<td>142</td>
<td>198.30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>43217.04</td>
<td>149</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SSP-Family</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>1137.27</td>
<td>7</td>
<td>162.47</td>
<td>6.75</td>
<td>0.01</td>
</tr>
<tr>
<td>Within Groups</td>
<td>3417.82</td>
<td>142</td>
<td>24.07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>4555.09</td>
<td>149</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SSP-Friends</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>776.67</td>
<td>7</td>
<td>110.95</td>
<td>9.93</td>
<td>0.01</td>
</tr>
<tr>
<td>Within Groups</td>
<td>1586.41</td>
<td>142</td>
<td>11.17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2363.07</td>
<td>149</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SSP-People</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>1808.09</td>
<td>7</td>
<td>258.29</td>
<td>14.37</td>
<td>0.01</td>
</tr>
<tr>
<td>Within Groups</td>
<td>2551.79</td>
<td>142</td>
<td>17.97</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>4359.89</td>
<td>149</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SSP-Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>10777.76</td>
<td>7</td>
<td>1539.68</td>
<td>12.89</td>
<td>0.01</td>
</tr>
<tr>
<td>Within Groups</td>
<td>16953.57</td>
<td>142</td>
<td>119.39</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>27731.33</td>
<td>149</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spirituality</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>17840.90</td>
<td>7</td>
<td>2548.70</td>
<td>10.60</td>
<td>0.01</td>
</tr>
<tr>
<td>Within Groups</td>
<td>34132.97</td>
<td>142</td>
<td>240.37</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>51973.87</td>
<td>149</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
5.2.3.1. Differences among Subjects Belonging to Various Educational Levels, on the Variables Stress Tolerance, Social Support Perception and Spirituality.

Subjects belonging to different educational levels were compared on the variables stress tolerance, social support perception and spirituality.

Table 20 shows that as per analysis of variance there were significant differences among the different groups compared on the basis of different educational qualifications, namely, below SSLC, SSLC, DC & Diploma, in the variables stress tolerance, social support perception and spirituality. The difference was significant 0.01 level.

Education is found to positively help people to learn tolerance towards stress and to acquire skills to cope with stress.

Education is also found helpful to appraise social life situations in family and friendship circles in a healthy manner acknowledging and experiencing support from family members, friends and other people.

Better education was also found in this investigation helpful to have a spiritual outlook.
Table 21

Results of t test for the Variables Stress Tolerance, Social Support Perception and Spirituality: Comparison of Subjects Classified on the Basis of Marital Status.

<table>
<thead>
<tr>
<th>No</th>
<th>Variable Name</th>
<th>Married Subjects (N=130)</th>
<th>Unmarried Subjects (N=20)</th>
<th>t</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Stress Tolerance</td>
<td>30.98</td>
<td>16.93</td>
<td>80.50</td>
<td>18.12</td>
<td>.12</td>
</tr>
<tr>
<td>2</td>
<td>S.S.P.-Family</td>
<td>20.45</td>
<td>5.48</td>
<td>20.56</td>
<td>5.98</td>
<td>.07</td>
</tr>
<tr>
<td>3</td>
<td>S.S.P.-Friends</td>
<td>20.70</td>
<td>4.05</td>
<td>20.20</td>
<td>3.60</td>
<td>.36</td>
</tr>
<tr>
<td>4</td>
<td>S.S.P.-People</td>
<td>19.96</td>
<td>5.24</td>
<td>20.00</td>
<td>6.58</td>
<td>.02</td>
</tr>
<tr>
<td>5</td>
<td>S.S.P.-Total</td>
<td>61.11</td>
<td>13.50</td>
<td>60.85</td>
<td>14.92</td>
<td>.04</td>
</tr>
<tr>
<td>6</td>
<td>Spirituality</td>
<td>94.41</td>
<td>18.62</td>
<td>92.00</td>
<td>19.42</td>
<td>.54</td>
</tr>
</tbody>
</table>
Table 22

Results of t test for the Variables Stress Tolerance, Social Support Perception and Spirituality: Comparison of Subjects Classified on the Basis of Separation from Spouse.

<table>
<thead>
<tr>
<th>No</th>
<th>Variable Name</th>
<th>Separated Subjects (N=14)</th>
<th>Subjects not Separated (N=136)</th>
<th>t</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Stress Tolerance</td>
<td>73.86</td>
<td>14.78</td>
<td>81.65</td>
<td>17.13</td>
<td>1.64</td>
</tr>
<tr>
<td>2</td>
<td>S.S.P.-Family</td>
<td>18.75</td>
<td>4.77</td>
<td>20.64</td>
<td>5.60</td>
<td>.98</td>
</tr>
<tr>
<td>3</td>
<td>S.S.P.-Friends</td>
<td>17.96</td>
<td>3.80</td>
<td>20.91</td>
<td>3.96</td>
<td>1.87</td>
</tr>
<tr>
<td>4</td>
<td>S.S.P.-People</td>
<td>18.84</td>
<td>4.50</td>
<td>20.09</td>
<td>5.50</td>
<td>.66</td>
</tr>
<tr>
<td>5</td>
<td>S.S.P.-Total</td>
<td>55.55</td>
<td>12.10</td>
<td>61.64</td>
<td>13.76</td>
<td>1.18</td>
</tr>
<tr>
<td>6</td>
<td>Spirituality</td>
<td>90.14</td>
<td>13.16</td>
<td>94.49</td>
<td>19.15</td>
<td>8.29</td>
</tr>
</tbody>
</table>
5.2.3.2. **Differences between Married and Unmarried Subjects on the Variables: Stress Tolerance, Social Support Perception and Spirituality.**

Married and unmarried subjects were compared on the variables stress tolerance, social support perception and spirituality.

Table 21 shows that as per the t test there were no significant differences between the subjects who were married and those who were unmarried on the variables stress tolerance, social support perception and spirituality.

5.2.3.3. **Differences between Subjects who were separated from Spouse and who were not separated, on the Variables Stress Tolerance, Social Support Perception and Spirituality.**

Subjects who were separated from spouse and who were not separated, were compared on the variables stress tolerance, social support perception and spirituality.

Table 22 shows that as per the t test, there were no significant differences between the subjects who were separated from spouse and those who were not separated, on the variables stress tolerance, social support perception and spirituality.
Table 23

Results of t test for the Variables Stress Tolerance, Social Support Perception and Spirituality: Comparison of Subjects Classified on the Basis Financial Debt.

<table>
<thead>
<tr>
<th>No</th>
<th>Variable Name</th>
<th>Subjects having Financial Debt (N=71)</th>
<th>Subjects having no Financial Debt (N=79)</th>
<th>t</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Stress Tolerance</td>
<td>73.80</td>
<td>16.29</td>
<td>87.32</td>
<td>15.12</td>
<td>5.27</td>
</tr>
<tr>
<td>2</td>
<td>S.S.P.-Family</td>
<td>17.94</td>
<td>5.48</td>
<td>22.74</td>
<td>4.94</td>
<td>4.51</td>
</tr>
<tr>
<td>3</td>
<td>S.S.P.-Friends</td>
<td>18.91</td>
<td>3.86</td>
<td>22.18</td>
<td>3.80</td>
<td>3.67</td>
</tr>
<tr>
<td>4</td>
<td>S.S.P.-People</td>
<td>17.85</td>
<td>5.71</td>
<td>22.01</td>
<td>4.58</td>
<td>4.11</td>
</tr>
<tr>
<td>5</td>
<td>S.S.P.-Total</td>
<td>54.70</td>
<td>13.67</td>
<td>66.93</td>
<td>11.93</td>
<td>4.66</td>
</tr>
<tr>
<td>6</td>
<td>Spirituality</td>
<td>87.72</td>
<td>17.16</td>
<td>99.81</td>
<td>18.22</td>
<td>4.17</td>
</tr>
</tbody>
</table>
5.2.3.4. Differences between subjects who had Financial Debt and who had no Debt, on the Variables Stress Tolerance, Social Support Perception and Spirituality.

Table 23 shows that as per the t test, there were significant differences between subjects who had financial debt and who were not having debt, on the variables stress tolerance, social support perception and spirituality. The difference was significant 0.01 level.

Financial debt has a very evident effect on the subjects’ level of tolerance. Stress from financial debt may be above the level of stress that some individuals can easily bear.

In the present investigation people with financial debt were also found less able to experience support from family, friends and other people and turn to spiritual values.

During the time of financial debt people may withdraw from social situations fearing that they will not get enough support from friends.
Table 24

Results of t test for the variables Stress Tolerance, Social Support Perception and Spirituality: Comparison of Subjects Classified on the Basis of Fathers’ Alcoholism.

<table>
<thead>
<tr>
<th>N0</th>
<th>Variable Name</th>
<th>Subjects Having Alcoholic Fathers (N=86)</th>
<th>Subjects not having Alcoholic Fathers (N=64)</th>
<th>t</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Stress Tolerance</td>
<td>74.64, 15.85</td>
<td>89.36, 14.86</td>
<td>5.78</td>
<td>148</td>
<td>0.01</td>
</tr>
<tr>
<td>2</td>
<td>S.S.P.-Family</td>
<td>17.96, 5.42</td>
<td>23.83, 4.46</td>
<td>5.65</td>
<td>148</td>
<td>0.01</td>
</tr>
<tr>
<td>3</td>
<td>S.S.P.-Friends</td>
<td>19.17, 4.09</td>
<td>22.61, 3.40</td>
<td>3.83</td>
<td>148</td>
<td>0.01</td>
</tr>
<tr>
<td>4</td>
<td>S.S.P.-People</td>
<td>17.59, 5.03</td>
<td>23.16, 4.85</td>
<td>5.46</td>
<td>148</td>
<td>0.01</td>
</tr>
<tr>
<td>5</td>
<td>S.S.P.-Total</td>
<td>54.72, 13.15</td>
<td>69.60, 11.28</td>
<td>5.72</td>
<td>148</td>
<td>0.01</td>
</tr>
<tr>
<td>6</td>
<td>Spirituality</td>
<td>87.90, 17.70</td>
<td>102.41, 16.72</td>
<td>5.08</td>
<td>148</td>
<td>0.01</td>
</tr>
</tbody>
</table>
5.2.3.5. Differences between Subjects whose Fathers were Alcoholic and Those Whose Fathers were not Alcoholic, on the Variables Stress Tolerance, Social Support Perception and Spirituality.

Table 24 shows that as per the $t$ test, there were significant differences between subjects whose fathers were alcoholic and those whose fathers were not alcoholic, in stress tolerance, social support perception and spirituality. The difference was significant at the 0.01 level.

Father’s alcoholism has a very evident effect on subjects’ level of tolerance. Children of alcoholic parents lacking emotional and social support at home may be unable to learn skills of coping with stress.

People who are less fortunate to experience care at home are more likely to withdraw from social situations fearing that they will not get enough support from others. People who have alcoholic fathers are also found in this study to be lacking in spiritual orientation.

5.2.3.6. Test of Tenability of Hypothesis 3

In the 30 comparisons made above, there existed significant relationship in 18 cases. Hence the hypothesis that “There will be significant differences among the various categories of subjects classified according to educational qualifications, marital status, separation from spouse, financial debt and father’s alcoholism in their stress tolerance, social support perception and spirituality” is partially accepted to that extent.
5.2.4. Analysis of Variance and Test of Hypothesis 4

The scope of the study of the topic is extended a little further by the inclusion of hypothesis 4. By comparing the first and the second groups (the relapsed and abstinent groups of alcoholics) with the third (the non-alcoholics) it was investigated whether being abstinent from alcoholic drinks is the same as being non-alcoholic.

The theoretical background of the study, as already explained in chapters two and three, bases largely on the disease concept of alcoholism and the philosophy of Alcoholics Anonymous. Both of these conceive alcoholism as a permanent disease, i.e., once alcoholic, one is ever an alcoholic. According to this view, the alcoholics who remain abstinent retain the possibility of relapsing any time. By comparing the non-alcoholic group of subjects with the alcoholic groups the attempt was to find out whether our study confirms such a permanent nature of alcoholism.

The scale values of three groups of subjects-alcoholics who have relapsed, those who remain abstinent and the non-alcoholics-were subjected firstly to one way ANOVA and subsequently to multiple comparisons using Duncan’s Analysis.

Before going to the test of significance of difference, the means of scores of the different groups in the major variables are summarily given in the table 25.
<table>
<thead>
<tr>
<th>Variables</th>
<th>Type of Respondent</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Relapsed Alcoholics</td>
<td>Abstinent Alcoholics</td>
</tr>
<tr>
<td>Stress Tolerance</td>
<td>61.54</td>
<td>86.68</td>
</tr>
<tr>
<td>Social Support Perception (S.S.P.)-Family</td>
<td>12.40</td>
<td>23.60</td>
</tr>
<tr>
<td>S.S.P.-Friends</td>
<td>14.80</td>
<td>22.24</td>
</tr>
<tr>
<td>S.S.P.-People</td>
<td>12.08</td>
<td>21.84</td>
</tr>
<tr>
<td>S.S.P.-Total</td>
<td>39.28</td>
<td>67.68</td>
</tr>
<tr>
<td>Spirituality</td>
<td>73.14</td>
<td>99.94</td>
</tr>
</tbody>
</table>

The Table 25 shows the mean values for the three variables and subsets of the variable, social support perception. They were greater in the abstinent group of alcoholics than in the relapsed group. They were greater in the non-alcoholic group than in both the relapsed and abstinent groups.
Table 26

The Significance of Variance of the Three Groups of Subjects in the Three Variables (N=50 each).

<table>
<thead>
<tr>
<th>Variables</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Squares</th>
<th>F</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stress Tolerance</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>29713.32</td>
<td>2</td>
<td>14856.66</td>
<td>161.73</td>
<td>.01</td>
</tr>
<tr>
<td>Within Groups</td>
<td>13503.72</td>
<td>147</td>
<td>91.86</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>43217.04</td>
<td>149</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Social Support Perception</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>22093.85</td>
<td>2</td>
<td>11046.93</td>
<td>288.05</td>
<td>.01</td>
</tr>
<tr>
<td>Within Groups</td>
<td>5637.48</td>
<td>147</td>
<td>38.35</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>27731.33</td>
<td>149</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Spirituality</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>35041.65</td>
<td>2</td>
<td>17520.83</td>
<td>152.11</td>
<td>.01</td>
</tr>
<tr>
<td>Within Groups</td>
<td>16932.22</td>
<td>147</td>
<td>115.19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>51973.87</td>
<td>149</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As it is clear from the Table 26, Analysis of Variance has shown that all the three groups compared, differed each other. The difference among the groups was significant at 0.01 level of significance Therefore further analysis was done using Duncan’s Analysis.
Table 27

Result of Duncan’s Test of the Significance of Difference among the Three Groups of Subjects in Stress Tolerance.

<table>
<thead>
<tr>
<th>No.</th>
<th>Type of Respondents</th>
<th>N</th>
<th>Means of Different Groups</th>
<th>Significance of Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Relapsed Alcoholics</td>
<td>50</td>
<td>61.54</td>
<td>( ) # #</td>
</tr>
<tr>
<td>2</td>
<td>Abstinent Alcoholics</td>
<td>50</td>
<td>86.68</td>
<td>- ( ) #</td>
</tr>
<tr>
<td>3</td>
<td>Non-Alcoholics</td>
<td>50</td>
<td>94.54</td>
<td>- - ( )</td>
</tr>
</tbody>
</table>

Note: # Denotes pairs of groups which differed at 0.05 level of significance.

As it is clear from the Table 27, Duncan’s Analysis has shown that:

- There is difference between the relapsed group of alcoholics and the abstinent group of alcoholics in stress tolerance. The difference is significant at 0.05 level.
- The abstinent group of alcoholics has greater stress tolerance than the relapsed group.
- There is mutual difference between the relapsed and the abstinent group of alcoholics, and the non-alcoholics group in stress tolerance. The difference is significant at 0.05 level.
- The non-alcoholic group has more stress tolerance than both the relapsed and the abstinent groups of alcoholics.
Table 28

Result of Duncan’s Test of the Significance of Difference among the Three Groups of Subjects in Social Support Perception

<table>
<thead>
<tr>
<th>No.</th>
<th>Type of Respondent</th>
<th>N</th>
<th>Means of Different Groups</th>
<th>Significance of difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Relapsed Alcoholics</td>
<td>50</td>
<td>39.28</td>
<td>( ) # #</td>
</tr>
<tr>
<td>2</td>
<td>Abstinent Alcoholics</td>
<td>50</td>
<td>67.68</td>
<td>- ( ) #</td>
</tr>
<tr>
<td>3</td>
<td>Non-Alcoholics</td>
<td>50</td>
<td>76.09</td>
<td>- - ( )</td>
</tr>
</tbody>
</table>

Note: # Denotes pairs of groups which differ at 0.05 level of significance.

As it is clear from the Table 28, Duncan’s Analysis has shown that: There is difference between relapsed group of alcoholics and the abstinent group of alcoholics in social support perception. The difference is significant at 0.05 level.

- The abstinent group of alcoholics has greater social support perception than the relapsed group.
- There is mutual difference between the relapsed and the abstinent group of alcoholics, and the non-alcoholics in social support perception. The difference is significant at 0.05 level.
- The non-alcoholic group has more social support perception than both the relapsed and the abstinent groups of alcoholics.
Table 29

Result of Duncan’s Test of the Significance of Difference, among the Three Groups of Subjects, in Spirituality.

<table>
<thead>
<tr>
<th>No.</th>
<th>Type of Respondent</th>
<th>N</th>
<th>Means of different Groups</th>
<th>Significance of difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Relapsed Alcoholics</td>
<td>50</td>
<td>73.14</td>
<td>( ) # #</td>
</tr>
<tr>
<td>2</td>
<td>Abstinent Alcoholics</td>
<td>50</td>
<td>99.94</td>
<td>- ( ) #</td>
</tr>
<tr>
<td>3</td>
<td>Non-Alcoholics</td>
<td>50</td>
<td>109.18</td>
<td>- - ( )</td>
</tr>
</tbody>
</table>

Note: # Denotes pairs of groups which differ at .05 level of significance.

As it is clear from the Table 29, Duncan’s Analysis has shown that:

- There is difference between relapsed group of alcoholics and the abstinent group of alcoholics in spirituality. The difference is significant at 0.05 level.
- The abstinent group of alcoholics has greater spirituality than the relapsed group.
- There is difference between the relapsed and the abstinent group of alcoholics, and the non-alcoholics group in spirituality. The difference is significant at 0.05 level.
- The non-alcoholic group has more spirituality than both the relapsed and the abstinent groups of alcoholics.
Analysis of Variance has shown that the three groups of subjects—the alcoholics who have relapsed, the alcoholics who remain abstinent and the non-alcoholics—differed from one to the other in the three variables under study. It can be seen that all the pair-wise comparisons yielded that no two means were equal for any of the variables. In all the cases the three groups of subjects mutually differed each from the other. That is, the abstinent alcoholics differed not only from the relapsed alcoholics but also from the non-alcoholics. This result denotes the permanent character of alcohol dependence.

Being abstinent from alcoholic drinks is not the same as being non-alcoholic. Alcoholism is described as a permanent disease. That is, once alcoholic means ever an alcoholic. As any other chronic disease, the disease of alcoholism is not completely cured, but only controlled. An alcoholic who remains abstinent always keeps the possibility and tendency to relapse. This is the view of Alcoholics Anonymous. The participant in Alcoholics Anonymous has the typical expression: ‘I am an alcoholic patient. Today I am sober with the help of God and the Alcoholics Anonymous’. This view is confirmed by the present study.

**Test of Tenability of Hypothesis 4**

In the 9 comparisons made to test the hypothesis 4, significant differences were found in all the cases. Hence the hypothesis that “Both the abstinent and the relapsed groups of alcoholics will differ significantly from the non-alcoholic group in stress tolerance, social support perception and spirituality, denoting the permanent character of alcohol dependence” is accepted.