CHAPTER - V
5. DISCUSSION AND LIMITATIONS

The present study was carried out to assess the health effects and coping strategies among children of alcohol dependent parents residing at Kirumambakkam Primary Health Centre, Puducherry. The sub centres Moorthikuppam and Koravallimedu were randomly selected. There are 14 villages in these two sub centres. The sample size of the study was 400 children of alcohol dependent parents. Investigator adopted non experimental, cross sectional, survey design in this study. Initially the investigator conducted a house to house survey to identify suspected parents with alcohol dependency and applied AUDIT tool to confirm it. The parents who had scored 8 and above in AUDIT and having adolescents in the age between 12 and 18 were included for the study. The investigator had collected required data about demographic and clinical variables from the parents. The investigator also collected data regarding demographic variables, Health effects, Coping strategies and Problems of the children. The investigator prepared a Module for Coping Strategies for the children of alcohol dependent parents and at the end of data collection the investigator educated the children regarding effective coping for parental alcohol dependence.

The conceptual framework of this study was based on Roy’s adaptation model. The model describes individuals are Bio-psycho-social being with an open adaptive system and to cope with a changing world, using both innate and acquired mechanisms. In this study the first component was input with various in external and internal stimuli. This step involves determining the input for adaptive system. By using purposive sampling technique, investigator collected data from 400 alcohol dependent parents and their children. The collected data were tabulated and analysed in accordance with the objectives of the study by using descriptive and inferential statistics. The results of the study were discussed here.

The Demographic variables are interpreted are follows,
The frequency distribution of the demographic variables of alcohol dependent parents of the study samples were presented in table 4.1.1. The demographic variables of fathers were listed down primarily. Regarding the age of fathers, majority of them (60.8%) were in the age group of 40-49 years, and 58 (14.5%) belong to 30-39 years. Only 9 (2.25%) were above 60 years. These findings showed it clear that nearly 61% of male in the productive age group were dependent to alcohol in Kirumambakkam Primary Health Centre area. Among them 26.5% were not educated, 30.75% had primary school certificate and only 2.25% were graduates or post graduates. The data clearly showed that alcohol dependence was more prevalent among illiterate and low educated population and was not found common among better educated.

Even the occupational status of fathers provided a picture that 156 (39%) unskilled workers, 103 (25.75%) semi skilled workers, 28(7%) clerk, shop owner, farmer, and 37(9.25%) skilled worker wrer having alcohol dependency. only 13 (3.25%) professionals and 12(3%) semi –professionals were dependent to alcohol. There are two angles in which this aspect should be analysed. Either an individual who was basically unemployed or semi-skilled worker was influenced to be an alcoholic or alcohol dependence led them to be an unemployed person. Further research in this aspect is needed to shower light on the relationship between alcohol dependence and occupational status of persons dependent to alcohol.

Additionally, the data regarding income status of the alcohol dependent fathers revealed that majority of them 273 (68.25%) earn less than 5000 rupees per month, 62(15.5%) were earning between Rs.5001 – 10000, 33(8.25%) were earning Rs.10001 – 15000 per month. There were only 8.0% of fathers who earn above 15000 rupees per month, affected with alcohol dependence.

A study by Reshma et al. [42] well supported the current study results that the mean age of the alcohol dependent men was 43 years and reported significant association seen between alcohol dependence scores and annual income (p<0.01) , education (p<0.001), occupation (p<0.0001) and work timing (p<0.0001). They gave recommendation for family based intervention which should focus on unskilled, less educated individuals having high work stress. The present study results were also
supported by Ganesh et al [43], as they found the mean age at initiation of alcohol dependence was 25.3+9 years, and middle age (15-44 years ) (OR = 3.56), male gender (OR=11.23), illiteracy (OR= 6.16), lower education levels (OR = 2.57) and smoking (OR=17.78) were independently associated with alcohol use.

The frequency distribution of parental demographic variables present that majority of the mothers were belonging to the age group 30-39 years (40.0%) and 40-49 years (48.75%). Also most of them were illiterate (36.25%) and educated up to primary school certificate (36.75%) and only two (0.5%) had got graduate or post graduate education. The data regarding their occupation revealed the truth that majority of the mothers (56.5%) were unemployed. Very small proportion of them were employed as unskilled workers (19.75%) and semi- skilled workers (13.0%). Only 2(0.5%) were semi professionals and 3 were (0.75%) professionals. Regarding their income status, the findings of the research showed most of them (87.75%) were earning less than 5000 rupees per month. Only 13 (3.25%) were earning more than 15000 rupees per month. The current findings were well supported by Muthurajesh et al. [45], confirming the prevalence of alcohol consumption was found more among lower literacy level, having family history of alcohol consumption and cigarette smoking which were found to be positively associated with alcohol consumption. Also Ganesh et al [43] extended support that prevalence of alcohol dependence was more among men (16.8%) compared to women (1.3%). World Health Organization report [2] also confirm the prevalence of alcohol dependence among female was less (<0.1) in India.

The clinical variables pertaining to parents were represented in the Table 4.1.2. In that 98% of the fathers were dependent to alcohol and remaining 2% both parents were addicted in the family were included for the study. Related to duration of addiction a chronic state of dependence was identified among 87.75% of parents who have been dependent to alcohol for more than 5 years. Harmful effects of a alcohol consumption was reported among 142 (35.5%) parents in which 42 (10.50%) suffered from alcohol liver disease, 16(4.0%) were malnourished, 45 (11.25%) had ulcers 13(3.25%) diagnosed with Ascites, 1(0.25%) had epilepsy, 9 (2.25%) suffered from hematemesis, 15(3.75%) had neurological complications and one male parent
was diagnosed with tuberculosis. More significantly 371 (92.75) alcohol dependent parents were not seeking help from de addiction centres. Only 29 (7.25%) were getting treatment for alcohol addiction.

The **World Health Organization** [2] report elaborated, the prevalence of alcohol use disorders were more among males (4.5%) compared with females (0.6%). Among both sexes the prevalence was 2.6%. More specifically, Age Standardized Death Rates (ASDR) due to cirrhosis of liver in male was 39.5% and in female it was 19.6%. The report also added the information that ASDR of Road Traffic accidents was 41.0% in male and 11.4% in female. The study on life expectancy in urban Pondicherry by **Sarkar et al [46]** revealed that the overall better life expectancy of study population hide the fact that the mortality among middle aged men was heavily influenced by alcohol causing death directly and indirectly through its vicious relationship with infectious diseases like Tuberculosis.

Frequency and percentage distribution of demographic variables among children of alcohol dependent parents was presented in table 4.1.3.

There were 173 (43.25%) male and 227 (56.75%) female children of alcohol dependent (COA) parents were included in the study. Maximum numbers of COAs (25%) in the present study were 14 years old. Twenty per cent of COAs were in the age of 18 years. Comparatively less number (8.25%) of COAs were in the age of 15 years. Regarding their educational qualification nearly equal number of children were in the groups of High school (28.0%) and graduate (28.5%). Less number of COAs (20.5%) with intermediate or Post High school certificate in the study. There were 92 (23.0%) COAs with Middle school Certificate found in the present study. As far as religion was concerned, the samples in the present study were consisting of majority 354 (88.5%) of Hindus, less number of Christian 33 (8.25%) and Muslim 13 (3.25%) children. Most of the families of COAs were having either 2 (40.0%) or 3 (42.25%) number of children in their family. Having single child 8 (2.0%) in the family was very minimum. Families with 6 (0.25%) and 7 (0.5%) number of children were also identified among the present study samples. Majority of the children of alcohol dependent parents were the first 158 (39.5%) and second 149 (37.25%) child in their birth order. In the fifth 2 (.5%) and sixth 1 (.25%) birth
orders also children were included. Regarding type of family, majority 326 (81.50%) were in the nuclear family and only less 74 (18.5%) number of them were living in the joint families.

As mentioned by the investigator in the first phase of conceptual framework [Input for adaptive response] the investigator collected details of demographic and clinical variables of parents and demographic variables of children.

**The first objective of the study was to assess health effects among children of alcohol dependent parents**

The data represented in the tables from 4.2.1 to 4.2.8 showed the health effects among children of alcohol dependent parents.

Table 4.2.1 shows that in the BMI classification of COAs, there were 83 (20.75%) children found underweight, 19 (4.75%) were overweight and 9 (2.25%) children were obese. This study findings were correlated with the findings of Tomaz. H [120] who found children raised in families with alcohol addicted parents were shorter and had lower BMI than the reference group. It was concluded by him that underweight was more and overweight or obesity were rare among the children of alcohol dependent parents and the observed differences seem to result from other factors than bad living conditions.

Table 4.2.2 illustrates haemoglobin level of children of alcohol dependent parents, where, though 182 (45.5%) children were having normal Haemoglobin level of above 12gm/dl, 145 (36.25%) children were suffering with mild (10-12gm/dl) anaemia and 73 (18.25%) children had moderate (<10gm/dl) degree of anaemia. The current study findings correspond with Rao et al. [121], who ruled out alcoholism in parents of malnourished children were frequently ignored in routine clinical evaluation as 86% of COAs in their study were found malnourished.

Table No.4.2.3 represents the frequency and percentage distribution of physical health efforts among children of alcohol dependent parents. According to the findings, 39 (9.75%) of them were suffering with worm infestation, 2 (0.5%) had chicken pox, and 17 (4.25%) had scabies. The study results indicated that 166
(41.5%) children were suffering with headache, 53 (13.25%) of children had backache, and 124 (31%) had stomach ache. More significantly 63 (15.75%) children were having the problem of sleeplessness. Among the children there were many other significant health problems also identified. They include 3 (0.75%) had allergy, 3 (0.75%) had angular stomatitis, and 3 (0.75%) had brown hair indicating Marasmus.

The study conducted by Deepa T [163] is consistent with the current study findings that children of alcohol abusing fathers had physical health problems as 16.6% had severe, 61.7% moderate and 21.7% of them experienced mild degree problems due to the father’s alcoholism. The study concluded to focus on primary prevention of the health problems among the COAs. The study results of Cleveland et al. (2008) also significant with the current findings that the high severity of parental substance abuse had significantly more medical condition, physical symptoms and negative moods than those in the low or moderate severity groups.

Balsa et al. [58] also indicated that parental problem drinking was associated with significant health consequences for children that persist far into adult and he also recommended for designing and financing intervention, targeting problem drinkers and their families. Serec et al [123] also reported that COAs had families which had higher unemployment and lower economic status and spending less time in physical activities with poor eating habits along with more mental health difficulties. They specified that girls reported more emotional and somatic symptoms compared to boys.

The present study results found that among the COAs, 45(11.25%) reported that they were physically abused by parents under the influence of alcohol. A Scottish based study by Walsh et al. [129] also agreed with the findings of this study that children living with harmful parental drinking reported several negative impacts including different emotional distress, physical abuse and violence and a general lack of care support and protection. and also revealed that parental substance abuse was associated with more than two fold increase in the risk of exposure to both physical and sexual abuse.
The study by Laslett et al [34] also correlates the findings that in Australia 12% of parents / carers reported that one or more of their children under 18 had been physically hurt, emotionally abused or exposed to domestic violence because of their drinking.

Shanta et al. [131] found that compared to persons who grew up with no parental alcohol abuse , the adjusted odds ratio for category of adverse childhood experiences (ACEs) was approximately 2-13 times higher if either the mother, father, or both parents abused alcohol(P<0.05). Chaffin et al. [132] identified parental depression was found to be a strong risk factor for physical abuse (relative risk =3.45).

More significant finding of the current study was that 3 daughters of alcohol dependent parents were sexually abused by their alcohol dependent parents made under the influence of alcohol. A study by the Priory Clinic group [128] found that children who grow up with alcoholic parents bear emotional, behavioural and mental scars in their early lives quite often, with sexual and physical abuse. Studies have also shown that a third of daughters of alcohol dependent parents experienced physical abuse and a fifth sexual abuse – up to four times higher than in non-alcoholic homes.

Peukonis [68] who revealed that parental drinking promote negative family relationships which along with maltreatment leads to the development of both mental and physical problem and carrying somatic symptoms, which may invariably affect the COAs through multiple stressors and negatively affect the child development remitted in poor health outcomes. Tomasz [120] also agreed with the present study results that the impact of parental alcoholism on children’s growth remains significant when controlled for socioeconomic status. He also concluded that suppression of growth was rather an effect of chronic stress and poverty.

Psychological health effects of children of alcohol dependent parents were presented as follows,

Table 4.2.4 represents the level of stress among children of alcohol dependent parents. It was found that only 16(4%) children had low level of stress, whereas 30 (7.50%) children had average level of stress and more significantly, 176 (44%)
children had high level of stress and 137 (34.25%) children of alcohol dependent parents reported very high level of stress. Cohen, Kaplan and Salonen [69] have also agreed with the study findings that there is an association between stress and increased health problems of COAs. The current study finding related to stress level of children of alcohol dependent parents correlated with Andrea et al (2008) that COAs would differ from their peers in the life domains in which they are vulnerable to stressors, in the recurrence of stressors, and in the severity of stressors. COAs consistently reported greater risk for stressors in the family domain. They were also more likely to experience stressors repetitively and to rate their stressors as more severe (in adulthood). Irene et al [138] supported this results that parental alcohol dependence was associated with greater stress reactions among their children.

The table 4.2.5 showed the comparison of mean stress score between the male and female children of alcohol dependent parents. The t- test results of items, been upset because of something that happened unexpectedly, felt that things were going out of way and the item felt difficulties were piling up so high that could not be overcomed had shown statistically significant difference between the male and female children in their level of stress at p<0.05 level.

The table 4.2.6 portrayed the gender wise comparison of stress perceived by the children of alcohol dependent parents and it revealed that the overall mean score of stress among female children was 18.1 with S.D 5.16 and the mean score of stress among male children was 16.5 with S.D 5.3. The calculated un paired ‘t’ value of 3.006 was found to be statistically significant at p<0.05 level. This clearly indicates that there was significant gender difference in the level of stress perceived by the children of alcohol dependent parents and also it shows that female children perceived more stress than male children. A study by Hampel and Petermann [157] also revealed that compared with boys, girls evaluated a higher amount of perceived interpersonal stress. It was well supported by Ana et al [134] who found in their study that the psychological outcomes were worse for daughters of problem drinkers than for sons.

The self-esteem levels of children of alcohol dependent parents in the present study was represented in the table 4.2.7
Beumeister et al [27] reported that for children, Self-esteem has a strong relation to happiness and low self-esteem is more likely than high to lead to depression. People high in self-esteem claim to be more likable and attractive, to have better relationships, and to make their better impressions on others than people with low self-esteem. Overall, the benefits of high self-esteem are enhanced initiative and pleasant feelings for the children. The results shows majority of the children 232 (58%) were having normal self-esteem, whereas 153 (38.25%) had low self-esteem. Interestingly 15 (3.75%) had high self-esteem. Hence the analysis confirms significant proportion of children of alcohol dependent parents have low self-esteem.

The results also agree with the outcomes of Kannus E [141] that parental alcohol abuse had significantly lower self-esteem of COAs and had negative correlation between the scores of students rating of direct effects of parental alcohol abuse and scores of self-esteem (r = 0.69, p<0.05). This better explain the psychological wellbeing of the children of alcoholics. The current study result was also supported by the findings of Moolakkatt [142] who had done a study among adolescent COAs and concluded that 28% of COAs reported to have low self-esteem and 70% had adjustment with school and its environment.

The table 4.2.8 shows the comparison of self-esteem score between the male and female children of alcohol dependent children. The items “I feel that I have a number of good qualities” and “I am unable to do things as well as most other people” had shown statistically significant difference between the male and female children in their level of self-esteem at p<0.05 level. The study by Elaine Rodneya & Robert M [150] reported COAs scored lower on self-esteem than the non COAs and females in general scored lower on self-esteem than males. COAs were found to experience a higher level of depression than the non COAs and higher levels of depression were also found in females in general than in males.

Selwyny et al. [143] in their study found that there existed a significant relationship between parental alcoholism and self-esteem of their children and also found that poor adjustment across all domains studied in COAs. Hussang and Chassin [158] found that children of alcohol dependent parents showed statistically significant difference in their emotional and behavioural aspects such as shyness,
insecurity and low self-esteem. Also observed five separate factors related to Negative Self-concept, Acting-out, Somatic / Distributed Symptoms, Mood and Hopelessness and depressive symptoms displayed by children of substance abusers were related to self-concept and externalization. In his report Killeen M.R [146] explains the impact of families on children’s self-concept and self-esteem that they do not learn to realistically assess their strength and abilities and explored the role of social support within family in relation to self-esteem.

The second objective of the study was to describe the coping strategies adopted by children of alcohol dependent parents

The table 4.3.4 shows the gender wise overall coping among children of alcohol dependent parents. The calculated chi-Square value of 9.1495 was found to be statistically significant at p<0.01 level. This clearly indicated that there was significant difference in the level of coping between the male and female children.

A study by Hampel and Petermann [157] revealed that compared with boys, girls evaluated a higher amount of perceived interpersonal stress and used more social support. Additionally, girls scored higher on maladaptive coping strategies and emotional distress and scored lower on distraction than boys. Problem focused and emotional focused coping was negatively related to emotional and behavioural problems, whereas perceived stress and maladaptive coping was positively associated with adjustment problems and these relations were stronger in female than male adolescents.

Table 4.3.5 shows the dimensions of coping among children of alcohol dependent parents. With regard to productive coping, the present study identified that 0.75% it was never adopted, 9% seldom adopted, 13.25% sometimes adopted, 50.5% often adopted and 26.5% very often adopted by the COAs. As for as nonproductive coping was concerned it was 1.25% seldom adopted, 4.25% sometimes, 26.75% often and 67.75% very often adopted by the children of alcohol dependent parents. Whereas, other types of coping was 1.25% never adopted, 3% seldom , 5.5% sometimes, 21.75% often and 68.5% very often adopted by COAs.
Hence it was very clear that though productive coping was often adopted by COAs nearly 50% non-productive coping and other types of coping were very often adopted by them, which concluded that the coping strategies adopted by COAs to health effects and problems were found ineffective.

Hyng et al [153] also concluded that the mental health of collegiate students of alcohol dependent parents including self-esteem and coping styles negatively affected by parents drinking behavior. Kanus D [141] has agreed to the fact that the alcohol dependent parents family does show characteristics of dysfunctionality and poor adaptation over the family member’s alcohol dependence.

The table 4.3.6 shows the mean score for overall coping of children of alcohol dependent parents. The mean score of productive coping was 51.21 ± 13.24 whereas the mean score of non-productive coping was 51.93 ± 10.41. The mean score of other coping was 13.64 ± 4.25. Hence it was concluded that the children of alcohol dependent parents were equally adopting both productive and nonproductive coping strategies for health effects and problems resulting from parental alcoholism. Vincent Thusi [152] also states that adolescent COAs adopt various positive coping styles like involvement in sports and positive self talk, but they compromise themselves from socialization and funny activities due to economic limitation.

The table 4.3.7 represented the comparison of dimension of coping among children of alcohol dependent parents. The item “recreation activity” of productive coping had shown statistically significant difference between the male and female gender which clearly indicates there was significant difference in the level of coping through recreation activity between the male and female children. The items “worry” and “act up” in nonproductive coping had shown statistically significant difference at P<0.05 level between the male and female children of alcohol dependent children.

The study by Andrea and Husson [137] supports both continuity and change in coping over development with the coping skills of adolescence developing into those of adulthood when they impact adjustment. Greater levels of planning coping in early adolescence predicted greater active coping ingoing adulthood (β=0.36,
z=4.50, p<0.001) and greater levels of adolescent coping (β=0.26, z=3.35, p<0.001) and lower levels of adolescence planning coping (β=-.27, z=-3.59, p<0.001) predicted greater young adult avoidant coping. They suggested that intervention and prevention efforts should be guided by a focus on the function of coping with respect to various domains of stress that create risk for substance misuse rather than by assuming that certain coping styles are universally more optimal than are others.

Sankaran et al [12] suggests the role of problem solving at the time of the parents heavy drinking is effective as it continue to help children in coping through adulthood. The support received from the caring persons (within and outside the family), distancing from the dysfunctional situations, the ability to think through situations and formulate coping strategies have a protective role to play.

Skinner et al. [159] also stated that problem focused coping is associated with higher level of self-esteem and resiliency, whereas other coping such as denial have only led to negative outcomes and feelings in general among young people and adults.

According to conceptual frame work after assessing input, the second step is assessing Coping mechanisms and Adaptation modes [Through put] of the children of alcohol dependent parents were assessed by the investigator.

The third step of the conceptual framework is the response [Output] of children of alcohol dependent parents. In case of productive coping mechanism the response was more adaptive, enabling the child to enjoy a state of wellbeing and in case of non-productive coping the responses were maladaptive resulting in altered BMI, Haemoglobin, physical symptoms, high stress and low self-esteem leading the child to live a negative life.

The third objective of the study was to correlate between health effects coping strategies adopted and problem of children of alcohol dependent parents

Correlation between health effects, problems and coping strategies among children of alcohol dependent parents was presented in table 4.4.1
The physical health effects, Body Mass Index (BMI) and Haemoglobin levels of children of alcohol dependent parents were positively correlated ($r=0.26$, $p<0.05^*$) which means when BMI increase Haemoglobin also increases. which indicated the physical status of COAs was affected a large in parents heavy drinking situations

- The current study findings regarding stress and BMI of COAs found a positive correlation ($r=0.049$) which was not significant
- A non significant, negative correlation ($r=-0.022$) between stress and haemoglobin among children was identified
- Similarly, the correlation between self-esteem and BMI of children of alcohol dependent parents ($r=-0.065$) was negative and non-significant
- The correlation between the stress and Haemoglobin ($r=-0.074$) of children was negative and found non-significant
- Even among the two psychological health effects of stress and self-esteem, a non-significant, negative correlation ($r=-0.093$) exist
- Coping and physical health effects like BMI and haemoglobin were negatively correlated [BMI: $r=-0.078$, Hb: $r=-0.087$], but found non-significant

Interestingly, coping and the psychological health effect, stress ($r=-0.31$, $p<0.05^*$) was positively correlated and found significant. It is undoubtedly clear when stress increase the coping of children of alcohol dependent parents was poor

The coping of children and their self-esteem ($r=0.17$, $p<0.05^*$) had a fairly positive correlation and was highly significant. Which indicates when self-esteem increases coping of the children also increases.

The first hypothesis of the study was that there is no significant correlation between the health effects and coping strategies adopted by the children of alcohol dependent parents. The data provided in 4.4.1 shows that there was a significant correlation found between the health effects (psychological) and coping strategies adopted by the children of alcohol dependent parents. Hence the hypothesis stated that there is no significant correlation between the health
effects and coping strategies adopted by the children of alcohol dependent parents was rejected.

- There exist a positive, non-significant correlation between the COAs problem levels and their BMI (r=0.005)
- And also a positive, non significant correlation was found between the COAs problem and their Haemoglobin (r=0.034) levels

The correlation found between problem of COAs and their stress was positive and significant (r=0.15, p<0.05). It clearly indicates when problems increase stress also fairly increases.

- But the self-esteem and problem levels of COAs were negatively correlated (r=-0.025) and were non-significant.
- Whereas, problems and coping of COAs are negatively correlated and was significant (r=-0.12, p <0.05), which means when the problem increase their coping decreases.

The second hypothesis of the study was that there is no significant correlation between the problems faced by the children of alcohol dependent parents and coping strategies adopted by them. The data provided in 4.4.1 shows that there was a significant correlation found between problems and coping strategies adopted by the children of alcohol dependent parents. Hence the hypothesis stated that there is no significant correlation between problems faced by the children and coping strategies adopted by them was rejected.

- The present study analysis found the correlation between AUDIT score of alcohol dependent parent and the BMI of their children (r=-0.004) was negative and non significant
- The correlation between AUDIT Score and the Haemoglobin level of their children was negative and significant (r=-0.10, p<0.05). That is when the parents dependency to alcohol worsens, the nutritional status of their children especially haemoglobin level decreases resulting in severe anaemia. This might be a condition resulting from nutrition neglect in the alcohol dependent family and also could be due to poor economic status of the addicted family.
• Among the psychological health effects, stress level of COAs was positively correlated \((r=0.066)\) with the AUDIT scores of parents, but was not significant

• While coping of children was positively correlated \((r=0.074)\), their problems level was negatively \((r=-0.031)\) correlated with the AUDIT scores of parents, but both were non-significant

The fourth objective of the study was to associate health effects and coping strategies of children of alcoholic dependent parents with selected demographic variable of parents

Table 4.5.1 shows the association of BMI of COAs and demographic variables of parents where none of the variables are associated significantly with BMI of children.

Table 4.5.2 also depicted none of the clinical variables of parents had a statistically significant association of BMI of children.

Table 4.5.3 shows the association of demographic variables of the parents and haemoglobin of children

- Education \((\chi^2=16.87, \ p<0.05**)\) of the mother was significantly associated with haemoglobin of the children

- Occupation of the mother \((\chi^2=21.57, \ p<0.001**)\) had a significant association with haemoglobin level of children

- Duration of addiction of parents had a significant association with \((\chi^2=15.97, \ p<0.01**)\) haemoglobin level of children and no other clinical variable of the parents was found associated with haemoglobin.

Table 4.5.5 shows the association of demographic variables of parents and level of stress of children

- Occupation of father had a significant association with \((\chi^2=57.48, \ p<0.05*)\) stress level of children

- There was no significant association identified with the clinical variables of parents and stress level of the children

Table 4.5.7 depicts the association between self-esteem of COAs and any of the demographic variables of the parents.
- Age of father had a significant association with \( (\chi^2=8.51, \ p<0.05^*) \) self-esteem level of children.
- Income of father had a significant association with \( (\chi^2=7.87, \ p<0.05^*) \) self-esteem level of children.

Table 4.5.8 also shows that there was no association found between any of the clinical variables of the parents and self-esteem of the children.

The third hypothesis of the study was that there is no significant association between the health effects of the children and selected demographic variables of parents. The data provided in 4.5.1 to 4.5.8 shows that there was a significant association found between the health effects of the children and selected demographic variables of parents. **Hence the hypothesis stated that there is no significant association between the health effects of the children and selected demographic variables of parents was rejected.**

The table 4.5.9 presents the association of coping strategies of children of alcohol dependent parents with selected demographic variables of parents. The demographic variable, income of father \( (\chi^2=8.24, \ p<0.05^*) \) had shown statistically significant association with coping strategies of children and the other demographic variables had not shown any statistical significant association with coping strategies of children of alcohol dependent parents.

The table 4.5.10 shows the association of coping strategies of children of alcohol dependent parents with selected clinical variables of parents. The variable de addiction treatment \( (\chi^2=4.76, \ p<0.05^*) \) had shown statistically significant association with coping strategies of children of alcohol dependent parents.

The fourth hypothesis of the study was that there is no significant association between the coping strategies adopted by the children and selected demographic variables of parents. The data provided in 4.5.9 and 4.5.10 shows that there was a significant association found between the coping strategies adopted by the children and selected demographic variables of parents. **Hence the hypothesis stated that there is no significant association between the coping strategies adopted by the children and selected demographic variables of parents was rejected.**
The fifth objective of the study was to associate the health effects and coping strategies adopted by children of alcohol dependent parents with their selected demographic variables.

The table 4.6.1 shows the association of the demographic variables of children of alcohol dependent parents with their BMI. None of the demographic variable had shown statistically significant association with level of BMI of the children of alcohol dependent parents.

The table 4.6.2 depicts the association of level of haemoglobin of children of alcohol dependent parents with their demographic variables:

- The demographic variable age ($\chi^2 = 35.5$, $p<0.01^{**}$) had shown statistically significant association with level of haemoglobin among children.
- The demographic variable sex ($\chi^2 = 8.63$, $p<0.01^{**}$) had shown statistically significant association with level of haemoglobin among children.
- Educational status ($\chi^2 = 28.13$, $p<0.01^{**}$) had shown statistically significant association with level of haemoglobin among children.
- And the other demographic variables had not shown any association with level of haemoglobin of children of alcohol dependent parents.

The table 4.6.3 depicts the association of age of children of alcohol dependent parents with their level of stress:

- The item “felt nervous and stressed” (F=2.60, $p<0.01^{**}$) and
- “Been angered because of things that happened that were outside of your control” (F=2.20, $p<0.05^{*}$) had shown statistically significant association with age of the children of alcohol dependent parents at $p<0.05$ level.

This clearly states the difference in the perception of stress among different age group of children. Other items had not shown statistically significant association with age of children of alcohol dependent parents.

Also in table 4.6.4 association of selected demographic variables of children with their stress was presented:

- Significant association exist among the gender of COAs with their perceived stress level ($\chi^2 = 7.12$, $p<0.05^{*}$)
• Educational status also had significant association ($\chi^2=15.93$, p<0.05*) with stress level of the children.

Moreover, as far as overall stress was concerned more number of female COAs had perceived high stress than male COAs. As male children have many social and recreational outlets, they may not experience much stress compared with female COAs whose recreation activities are much restricted and also assume more responsibilities in the family. Socialization and funny activities as well as their love for reading books were found to be the compensating activities adapted by COAs related to stress that was resulting from parental alcohol dependence as concluded by Vincent Thusi [152].

The table 4.6.5 shows the association of item wise self-esteem score with age of the children.

Almost all items except two in the scale had shown statistical association with age of the children p<0.01**. This clearly indicates that age of the children of alcohol dependent parents influences their self-esteem.

The table 4.6.6 shows the association of demographic variables among children with their level of self-esteem.

Even though 232 (58%) children were having normal self-esteem, very minimum number of COAs 15(3.75%) only had above normal self-esteem.

• Age had a significant association with the overall self-esteem scores of COAs ($\chi^2=16.47$, p<0.01**)

• The demographic variable educational status had shown statistically significant association ($\chi^2=20.90$, p<0.001**8) with level of self-esteem among children and

The current study findings do not agree Selwyn and Vanitha [143], who found no significant relationship of self-esteem with the age of the COAs, (r=0.15, p<0.05) or their birth order (r=0.15, p<0.05) was established. However a negative correlation was obtained between self-esteem scores and the number of siblings of the respondent child (r=-0.30, p<0.01).

The fifth hypothesis of the study was that there is no significant association between the health effects and selected demographic variables of children. The data provided in 4.6.1 and 4.6.6 shows that there was a significant association found
between the health effects and selected demographic variables of the children. **Hence the hypothesis stated that there is no significant association between the health effects and selected demographic variables of children was rejected.**

The table 4.6.7 shows the association of coping adopted among children with their demographic variable age.

- Age had shown statistically significant association with dimension of social support (F=2.87, p<0.001***)
- The dimension of focus on the positives in the productive coping among children was statistically significant (F=5.24, p<0.05*) with their age
- **The overall productive dimensions had significant association (F=2.367, p<0.05*) with age of the child**
- In the non-productive coping, the dimension of worry had a statistical significance (F=2.395, p<0.05*) level with age.
- Tension reduction and children’s age had a statistical significance (F=2.212, p<0.05*)
- And keep to self in the nonproductive coping had shown statistically significant association (F=2.395, p<0.05*) with age among children of alcohol dependent parents.
- Age and the overall nonproductive coping strategies was found statistically significant (F=0.802, p<0.05). But the other coping dimensions were not shown any statistical significance.

The sixth hypothesis of the study was that there is no significant association between the coping strategies adopted and selected demographic variables of children. **The data provided in 4.6.7 and 4.6.11 shows that there was a significant association found between the coping strategies adopted by the children and selected demographic variables of parents. Hence the hypothesis stated that there is no significant association between the coping strategies adopted and selected demographic variables of children was rejected.**
Hence through the present descriptive study the hypotheses were generated that there was a significant correlation between the health effects and adopted coping strategies among children of alcohol dependent parents.

The secondary objective of the study was to assess the problems among children of alcoholic dependent parent

The COAs have a wide range of problems as a result of their parental alcoholism. Among them educational, family and social problems were found more common aspects and also mostly disturbing the self-worth of COAs. The analyses related to the problems of children were presented in the tables from 4.7.1 to 4.7.4.

The frequency distribution of problems among COAs was listed in Table 4.7.1

Problems related to Academic Aspect:

- The problem of afraid to go school was present among 52(13%) and it was severe among 22(5.5%) children
- Absenteeism was present in 59(14.8%) samples and was found severe among 20(5%)
- The problem of coming late to school was present among 101(25.2%) and it was severe among 43(10.8%) children of alcohol dependent parents
- Difficulty in concentration in academic area was present among 130(32.5%) and the same was severe among 54(13.5%)
- 147(36.8%) children found they lack interest in studies and 72(18%) expressed that they had the problem severely
- The academic problem of forgetting easily was present among 91(22.8%) and severe among 49(12.2%)
- 137(34.2%) children expressed that they had problem of difficulty in completing lessons and it was severe among 71(17.8%)
- Among the children of alcohol dependent parents 151(37.8%) said they were getting low marks and among 77(19.2%) of them this problem was found severe
- The problem of avoiding responsibilities was present among 130(32.5%) and severe among 58(14.5%)
Problems related to Family Aspect:

- Lack of intimate relation with family members was present among 104(26%) and the same was severe among 62(15.5%)

- The problem of quarreling between parents in the family was present among 145(36.2%) and severe among 89(22.2%) children’s family

- There are 247(61.8%) children who perceived that parents consume alcohol and 82 (20.5%) of them perceived it severe in their families

- The problem of fighting with siblings was present among 302(75.5%) and absent among 97(24.2%)

- Absence of good home atmosphere was perceived among 127(31.8%) and severe among 79(19.8%)

- Financial insufficiency was present among 137(34.2%) and severe among 70(17.5%)

- The problem of lack of care from parents was present among 113(28.2%) and severe among 58(14.5%) were the most serious areas for COAs where they need real help

Problems related to Social aspect:

- The problem of wants to stay along was present among 114(28.8%) and was severe among 66(16.5%) children

- Shyness to ask help was present among 133(33.2%) and severe among 76(19%) children

- The social problem of feeling shame was present among 115(28.8%) and severe among 65(16.2%)

- Presence of unable to make intimate relationship was found among 122(30.5%) and was severe among 49(12.2%)
• The problem of avoiding social activities was present among 134(33.5%) and severe among 61(15.2%)

• 140(35%) had the problem of difficulty to express feeling and 54(13.5%) had severe problem of difficulty to express their feeling

• Frequent quarrels with people was present among 93(23.2%) and severe among 62(15.5%)

• 105(26.2%) had the problem of shy to interact with opposite sex and 57(14.3%) had severe problem of difficulty to interact with opposite sex.

The overall problem level was depicted in the Table 4.7.2

• It was found that 334(83.25%) of children were having low academic problems and 60 (15%) of them had moderate and 6 (1.50%) had high academic problems.

• Regarding the family problems 261(65.25%) had low, 118(2.50) had moderate and 21(5.25%) had high problems respectively.

• It was also found that 317(7.25%) had low, 73(18.25) had moderate and 10 (2.5%) had high social problems.

The results of present study regarding the problems encountered by COAs were also consistent with Selwyn and Vanitha [143]. The COAs and NCOAs manifest a high statistically significant difference on the scores of educational adjustments (t=4.95, p<0.01), Home adjustment (t=10.29, p<0.01) and social adjustments (t=8.70, p<0.01).

The findings of Serec et al. [123] also agreed with the present results of poorer school performance (p=0.000) among COAs. McGranth [161] added additional information through concluding with same findings. Lower level of concentration was also reported by John and Godwin [44]. Lower academic performance was supported by Cases Gil and Navarro Guzman [92], Cerle & Chassin [88] and Raman V et al [160].
Nonetheless, growing up with a substance-abusing parent is often a painful experience, with many children being at increased risk for negative outcomes with a variety of emotional, behavioral, physical, cognitive, academic, and social problems as stated by Ana et al [134].

The problems encountered by the COAs in the social dimension were well supported by John and Godwin [44] that COAs felt ashamed of their homes. Butler [101] also supplements that parented drinking problem can impact the Children through social and psychological disorders such as shyness and under performing at school. Findings of Vijaya et al [94] extends support for a family environment in the family of alcohol dependent persons.

Recent neurological and psychological studies revealed that children who grow up in violent and otherwise traumatizing houses holds suffer not just from the psychological impact. The report from National survey on Drug use and health [32] supports the family problems of COAs in the current study, confirming arguments and violence among parents dysfunctional families. Marital conflicts were also reported by Ranganathan [84] and Furtado et al [85].

The table 4.7.3 shows the association between problems of children with the demographic variables of parents.

- The table represents that the demographic variables mother education had shown statistically significant association ($\chi^2=17.91$, p<0.05*) with problems of children
- Income of mother also had shown statistically significant association($\chi^2=12.50$,p<0.001*) with problems of children
- And the other demographic variables of parents had not shown any statistically significant association with problems of children.

The table 4.7.4 shows the association between problems of children with their demographic variables. The table shows that none of the demographic variables had shown statistically significant association with problems of children which clearly
indicates that problems of children were not influenced by the demographic variables of children of alcohol dependent parents.

The samples who were diagnosed with different health problems were referred for further medical treatments as follows:

- The children who had minor ailments like worm infestations, chickenpox, scabies were referred for treatment in Kirumambakkam Primary Health Centre
- The samples with the clinical symptoms like headache, stomach ache, back ache were referred to Indira Gandhi Government General Hospital, Puducherry, for further investigation.
- For those children who were complaining about sleeplessness were taught measures to improve pleasant sleep during night
- For the reported significant health problems follow up was insisted
- Children who reported physical abuse were educated about personal protective measures to avoid future abuse
- Special counselling sessions were arranged for those sexually abused children and they were also educated to call child Helpline in case of emergency situations
- Personal safety measures were also informed to the high risk adolescents

Measures for the alcohol addicted parents:

- Counselling sessions were conducted for the alcohol addicted parents regarding harmful effects of alcohol.
- The parents also referred for de addiction treatment and rehabilitation services
The samples with the clinical symptoms complications were referred to Indira Gandhi Government General Hospital, Puducherry, for further investigation and treatment.

The conceptual framework supported the present study by acting as a backbone which supports the body by providing that better adaptive responses like productive coping will reduce the health effects and problems of children of alcohol dependent parents and help them to a well protected, safe and joyful life.

The above discussion clearly represent that there has been a statistically significant impact of parental alcohol dependence on the health effects and problems of their children, also a significant association found with the selected demographic variables of parents and children. These study findings help the nursing staffs, nursing students and other health care professionals to understand the problems of children of alcohol dependent parents. So they can give appropriate and comprehensive care to children of alcohol dependent parents in community and in their family.

LIMITATIONS

1. The investigator found it difficult to collect data from 14 villages
2. Literature from Indian scenario on children of alcohol dependent parents is limited
3. The study could not assess follow up of coping strategies of children of alcohol dependent parents because of time constraint.

CHAPTERIZATION

Chapter-5: Dealt the discussion and limitation

Chapter-6: Gives the summary of the study and its conclusions, implications, Limitations, and recommendations.

Reference and appendices follow this chapter.