

**Original Article****Psychopathology and Coping strategies in adolescent children of patients with alcohol dependence in an urban population**

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**Abstract**

**Background:** Alcohol dependence is a mental disorder and a “Family illness.” Indian survey on substance use (2019) found 14.6% of the population (age 10 to 75 years) using alcohol. Adolescence is crucial with social and biological changes. Parental alcohol dependence causes a chaotic family environment. Adolescent children comprise 21% of the Indian population, and those having drinking parents face a lot of stress. Effective coping is a crucial component of resilience.

**Aim:** To Study psychopathology, coping, and their association in adolescent children of patients with alcohol dependence and comparing with adolescent children of parents without alcohol dependence.

**Methods:** Subjects were adolescent children of patients with alcohol dependence in a tertiary care hospital, and controls were children of parents without alcohol dependence selected from a school. CBCL was applied to study psychopathology and A-COPE for coping strategies.

**Results:** Subjects included 67 boys and 33 girls whose fathers were alcohol dependent. Thirty-nine children did unskilled work to earn money, including students. The majority had academic

problems, less involvement in games, selective friends and substance use. Subjects had high internalizing (mainly girls) and externalizing scores (mainly boys) compared to controls indicating higher psychopathology. Subjects would cope by ventilating feelings while controls developed social support and sought professional help. Comparing coping in subjects, boys avoided problems, used humour and relaxation while girls sought spiritual support.

**Conclusion:** Psychopathology in adolescent children of drinking parents is higher, and they lack problem-focused coping strategies. Early screening and interventions improving coping with individualized care considering social context are important.

**Keywords:** Coping, adolescents, externalizing, internalizing, psychopathology.

## **Introduction**

Industrialization, urbanization, and migration have led to the loosening of the traditional methods of social control rendering an individual vulnerable to the stresses and strains of modern life. Changing cultural values, increasing economic stress, and dwindling supportive bonds are leading to initiation into substance use and running away from stress. India is caught in this vicious cycle of drug abuse, and the number of people using substances is increasing day by day. This has led to a damage to the youth's physical, psychological, moral, and intellectual growth [1]. Diagnostic and Statistical Manual of Mental Disorders (DSM IV-TR) defines alcohol dependence as a "Cluster of cognitive, behavioral, and physiological symptoms indicating that the individual continues to use alcohol despite significant alcohol-related problems. Socially and culturally unacceptable alcohol use is called "Problem Drinking" [2,3].

According to the National Survey on Extent and Pattern of Substance Use in India (2019), 14.6% of the population between 10 and 75 years of age uses alcohol. The use of alcohol is

considerably higher among men (27.3%) compared to women (1.6%) [4]. Over the last two decades, the consumption of alcohol in India has increased by 106% as against many countries where the consumption of alcohol declined [5]. The lifetime risk for alcohol dependence is approximately 10-15% for men and 3-5% for women [2,6]. However, the point of concern is that there has been a rapid change in patterns and trends of alcohol use in India. The most important among them is that people are beginning to drink at even younger ages, mainly adolescents [7,8]. The World Health Organization (WHO) defines adolescents as those between 10 and 19 years of age. This is a crucial period for the adolescent child with significant social and biological changes. Adolescents develop an awareness of sexuality, inclination towards independence and identification with peers, learn socializing skills with little hesitation to take risks. The hormonal and neurochemical changes combined with daily life experiences, often produce varying levels of stress. "Plasticity" of the adolescent brain makes them more vulnerable to stress. It can lead to impairment in the prefrontal cortex's cognitive functioning, a brain region that is critical for insight, judgement, and the inhibition of inappropriate behaviors [9]. Children in the adolescent age group comprised 21% of the total Indian population i.e., about 243 million [10].

Alcohol dependence is referred to as a "family illness". To one degree or another, all the members of the family are affected. According to Velleman (1993), there are seven key aspects of family life that are seriously affected in such families i.e., roles, rituals, routines, social life, finances, communication, and conflict [11]. Parental alcohol dependence can cause poor or inconsistent parenting, a chaotic environment, financial challenges, increased risk of child neglect or abuse, trauma, parental separation, and early exposure to substances [12]. Seixas & Youcha found that nearly all children living in families with parental alcohol dependence live with emotional and/or physical scars [13]. Children of substance-abusing parents are at high risk

of multiple problems, including depression, anxiety, suicidal ideation, delinquent behavior disorders, and low self-esteem, including using substances such as tobacco and alcohol [12,14].

Coping strategies refer to specific efforts, both behavioral and psychological, that people use to master, tolerate, reduce, or minimize stressful events. Adolescents should develop effective coping as it is important in influencing patterns of positive growth and development. The children in families with alcohol dependence patients are called the "Forgotten children" as most interventions point towards rehabilitation programs for patients. The environmental stressors and coping act as independent variables impacting the developmental trajectory of the child even if the parent quits alcohol. Therefore, it is important to understand in adolescents not only the presence of psychopathology but also the coping strategies used to deal with everyday life stressors. However, gender differences in psychopathology and its relation with coping and its role in coping patterns in children of parents with alcohol dependence are not well understood [15].

Therefore, we decided to study psychopathology, coping strategies, and their association in male and female adolescent children of patients with alcohol dependence. We also compared this group with adolescent children of parents without alcohol dependence.

## **Method**

The study was conducted in an outpatient set up of the department of Psychiatry in a tertiary care public hospital. Study subjects (referred elsewhere as "Subjects") were all the adolescent children (age between 10 to 19 years& any gender) of patients who have been diagnosed as alcohol dependence as per diagnostic assessment by DSM-IV TR criteria and taking treatment for de-addiction either on an outpatient basis or by admission in the ward. Controls were adolescent children recruited from a school with none of the parents with alcohol dependence.

We excluded those who were already diagnosed as mental retardation, those with acute exacerbation of pre-existing or newly diagnosed medical or psychiatric illness, and those with a family history of psychiatric illness other than alcohol dependence.

Following tools were used:

*Semi-structured Proforma* was used to study the socio-demographic profile of the patient.

#### *Achenbach Child Behavior Check List (CBCL) [16]*

The Child Behavior Check List (CBCL) is composed of 118 items designed to record, in a standardized format, behavioral problems and competencies of children, as reported by their parents or other primary caregivers. CBCL has test-retest reliabilities of 0.73-0.94, internal consistency reliabilities (alphas) of 0.63-0.97, and inter-rater reliabilities of 0.57-0.88. The CBCL allows for the calculation of raw scores and t-scores in 8 different behavioral domains: withdrawn, somatic complaints, anxious/depressed, social problems, thought problems, attention problems, delinquent behavior, and aggressive behavior.

#### *Adolescent coping orientation for problem experiences (A-COPE) [17]*

The 54-item self-report questionnaire assesses twelve different coping behaviours: ventilating feelings, seeking diversions, developing self-reliance & optimism, avoiding problems, developing social support, solving family problems, seeking spiritual support, investing in close friends, seeking professional support, engaging in demanding activity, being humorous, and relaxing. The scale was used after purchasing the licensed copy.

#### *Procedure*

All participants were enrolled after obtaining assent from children and informed consent from parents. After ethics committee approval, details about socio-demographic status, medical

comorbidities, and family history of psychiatric illness were obtained from subjects using semi-structured proforma. The CBCL was given to the spouse of the patient with alcohol dependence to retrieve the information of psychopathology in their adolescent children. The adolescent children were given the Adolescent Coping Orientation for Problem Experiences (A-COPE) scale to study the coping behavior used by them in stressful conditions.

After taking proper permission from the principal of a nearby school, we enrolled the adolescent children studying in a nearby school as a control sample. We first interviewed the parents of adolescent children during the parents-teacher meeting. Those families with no history of alcohol dependence in either parent were selected for the study. Parents were given CBCL to know about their child's behavior. The children of these parents were interviewed for coping strategies used by them during stressful situations.

The data were analysed using the GraphPad InStat, version 3.10. We used a t-test to find the significance of the difference between the mean scores and Pearson correlation (r) to find a correlation between the two scales and other scores, if any.

## **Results**

### *Demographic profile*

The study comprised of 67 boys and 33 girls as subjects. In all the subjects, the father was suffering from alcohol dependence.

While all the controls were going to school, 21 subjects were not studying and had dropped out. Among those subjects who were going to school (n=79), 21 had to work after school. Fathers of 64 subjects were not working and majority of mothers (77) had to work as their spouses were not able to work due to problems related to alcohol dependence (table-1).

**Table-1: Sociodemographic profile**

|                                | <b>Subjects<br/>(n=100)</b> | <b>Controls<br/>(n=100)</b> |
|--------------------------------|-----------------------------|-----------------------------|
| <b>Age (years)</b>             |                             |                             |
| Early Adolescence (10-14)      | 25                          | 33                          |
| Middle Adolescence (14-16)     | 38                          | 44                          |
| Late Adolescence (17-19)       | 37                          | 23                          |
| Average Age                    | 15.95                       | 15.34                       |
| <b>Sex</b>                     |                             |                             |
| Males                          | 67                          | 58                          |
| Females                        | 33                          | 42                          |
| <b>Religion</b>                |                             |                             |
| Hindu                          | 85                          | 82                          |
| Muslim                         | 15                          | 11                          |
| Christian                      | 00                          | 07                          |
| <b>Whether going to school</b> |                             |                             |
| Yes                            | 79                          | 100                         |
| No                             | 21                          | 00                          |
| <b>Occupation</b>              |                             |                             |
| Student                        | 58                          | 100                         |
| Student + Unskilled Service    | 21                          | 00                          |
| Unskilled Service              | 18                          | 00                          |
| Nothing                        | 03                          | 00                          |
| <b>Annual Family Income</b>    |                             |                             |
| Upper                          | 00                          | 00                          |
| Upper Middle                   | 22                          | 56                          |
| Lower Middle                   | 32                          | 31                          |
| Upper Lower                    | 28                          | 10                          |
| Lower                          | 18                          | 03                          |
| <b>Father's Occupation</b>     |                             |                             |
| Working                        | 36                          | 92                          |
| Not Working                    | 64                          | 08                          |
| <b>Mother's Occupation</b>     |                             |                             |
| Working                        | 77                          | 28                          |
| Not Working                    | 23                          | 72                          |

*Achenbach Child Behavior Check List (CBCL)*

Subjects were found to be less involved in games as compared to controls. We found that 39 subjects were doing jobs or chores to earn money while none of the children in the control group did any job. Considering friends, although the time spent with them was three days or more per

week by subjects, they didn't perceive it as a close friendship. Sixty-seven subjects had academic problems (the majority having both failure and behavioral) as against only eighteen in the control group. These differences were statistically significant. When we compared "Hobbies" and "Association in groups", no significant difference was noted (table-2).

**Table-2: Comparison of “Demographic Information” part of CBCL**

| Item on CBCL                                   |                                     | Subjects<br>(n=100) | Controls<br>(n=100) | p-Value   |
|--|-------------------------------------|---------------------|---------------------|-----------|
| <b>Games</b>                                   | Yes                                 | 35                  | 78                  | <0.00001* |
|  | No                                  | 65                  | 22                  |           |
| <b>Hobbies</b>                                 | Yes                                 | 29                  | 32                  | 0.6455    |
|  | No                                  | 71                  | 68                  |           |
| <b>Association with Group</b>                  | Yes                                 | 06                  | 10                  | 0.2983    |
|  | No                                  | 94                  | 90                  |           |
| <b>Job or chores</b>                           | Yes                                 | 39                  | 00                  | <0.00001* |
|  | No                                  | 61                  | 100                 |           |
| <b>Close Friends</b>                           | 1                                   | 01                  | 09                  | 0.0093*   |
|  | 2 or 3                              | 45                  | 36                  | 0.1936    |
|  | 4 or more                           | 48                  | 55                  | 0.3221    |
|  | None                                | 06                  | 00                  | 0.0127*   |
| <b>Time given for these friends (day/week)</b> | <1                                  | 43                  | 51                  | 0.2584    |
|  | 1 or 2                              | 23                  | 35                  | 0.0614    |
|  | 3 or more                           | 34                  | 14                  | 0.0009*   |
| <b>Academic Problems</b>                       | Yes                                 | 67                  | 18                  | <0.00001* |
|  | No                                  | 33                  | 82                  |           |
| <b>Types of Problems</b>                       | Failure & Behavioral                | 25                  | 01                  | <0.00001* |
|  | Failures                            | 20                  | 10                  | 0.0047*   |
|  | Interpersonal                       | 09                  | 00                  | 0.0021*   |
|  | Behavioral                          | 05                  | 07                  | 0.5485    |
|  | Failure, Behavioral & interpersonal | 04                  | 00                  | 0.0433*   |
|  | Failure & Interpersonal             | 02                  | 00                  | 0.1556    |
|  | Behavioral and interpersonal        | 02                  | 00                  | 0.1556    |
| <b>Special School</b>                          | Yes                                 | 01                  | 00                  | 0.3173    |
|  | No                                  | 99                  | 100                 |           |

\*p value<0.05 is statistically significant



### *Substance use*

Alcohol was used by 21 subjects (20 had abuse pattern and 1 had dependence) and 2 controls (both abuse pattern). Whitener was used in dependence pattern by five subjects while none of the controls used it. These differences were statistically significant. Tobacco was abused by 12% of subjects followed by drugs like opioids/cannabis (3%).

Amongst controls, tobacco was the commonest substance abused but no substance dependence was noted (table-3).

**Table-3: History of Substance**

| <b>Substances</b> | <b>(n=100)</b> | <b>Abuse</b> | <b>Dependence</b> | <b>Total</b> | <b>p Value</b> |
|-------------------|----------------|--------------|-------------------|--------------|----------------|
| <b>Alcohol</b>    | Subjects       | 20           | 1                 | 21           | <0.00001*      |
|                   | Controls       | 2            | 0                 | 2            |                |
| <b>Whitener</b>   | Subjects       | 0            | 5                 | 5            | 0.0238*        |
|                   | Controls       | 0            | 0                 | 0            |                |
| <b>Tobacco</b>    | Subjects       | 12           | 0                 | 12           | 0.3472         |
|                   | Controls       | 8            | 0                 | 8            |                |
| <b>Opioids</b>    | Subjects       | 2            | 0                 | 2            | 0.1556         |
|                   | Controls       | 0            | 0                 | 0            |                |
| <b>Cannabis</b>   | Subjects       | 1            | 0                 | 1            | 0.3173         |
|                   | Controls       | 0            | 0                 | 0            |                |

\*p value<0.05 is statistically significant

### *Comparison on CBCL subscales*

The mean scores of subjects were higher on all the subscales of CBCL and the difference between the means was statistically significant on all the subscales except “thought problems”.

Subjects had high internalizing scores (withdrawn, somatic complaints, anxious and depressed), externalizing scores (delinquent and aggressive behavior) and total problem scores (which includes social and attention problems) as compared to controls with statistically significant difference (table-4).

**Table-4: Comparison on subscales of CBCL (Study subjects and Controls)**

| Sub-Scale              | Subjects (n=100) |       | Controls (n=100) |       | p Value      |
|------------------------|------------------|-------|------------------|-------|--------------|
|                        | Mean             | SD    | Mean             | SD    |              |
| Withdrawn              | 4.26             | 3.76  | 1.66             | 1.91  | <0.0000001 * |
| Somatic complaints     | 2.09             | 2.69  | 0.58             | 1.09  | 0.0000004 *  |
| Anxious and Depressed  | 4.16             | 3.5   | 1.58             | 1.96  | <0.0000001 * |
| Social problems        | 2.23             | 2.17  | 0.97             | 1.22  | 0.0000009 *  |
| Thought problems       | 0.39             | 1.32  | 0.34             | 0.76  | 0.7431       |
| Attention problems     | 4.1              | 3.45  | 1.83             | 1.91  | <0.0000001 * |
| Delinquent behavior    | 3.42             | 4.7   | 0.75             | 1.14  | 0.0000001 *  |
| Aggressive behavior    | 6.92             | 7.88  | 3.27             | 3.82  | 0.00004 *    |
| Internalizing Behavior | 10.51            | 7.85  | 3.82             | 4.2   | <0.0000001 * |
| Externalizing Behavior | 11.46            | 12.53 | 4.02             | 4.02  | <0.0000001 * |
| Total problem score    | 31.72            | 19.81 | 14.04            | 12.06 | <0.0000001 * |

\*p value<0.05 is statistically significant

On comparing male and female subjects, girls had more mean scores on somatic complaints, anxious and depressed subscales and boys had more mean scores on delinquent behavior, aggressive behavior, social and attention problems subscales with statistically significant difference.

Girls had high total internalizing score (withdrawn, somatic complaints, anxious and depressed) and boys had high total externalizing score (delinquent and aggressive behavior) with statistically significant difference. Overall the total problem score (which also includes social, attention and thought problems) was higher for boys compared to girls but there was no statistically significant difference noted (table-5).

**Table-5: Comparison on subscales of CBCL (Study subjects – Males and Females)**

| Sub-Scale             | Males (n=67) |      | Females (n=33) |      | p Value  |
|-----------------------|--------------|------|----------------|------|----------|
|                       | Mean         | SD   | Mean           | SD   |          |
| Withdrawn             | 4.14         | 3.92 | 4.48           | 3.44 | 0.6724   |
| Somatic complaints    | 1.25         | 1.89 | 3.78           | 3.24 | 0.0002 * |
| Anxious and Depressed | 3.38         | 3.66 | 5.72           | 2.57 | 0.0004 * |
| Social problems       | 2.65         | 2.31 | 1.36           | 1.55 | 0.0014 * |

|                        |       |       |       |       |          |
|------------------------|-------|-------|-------|-------|----------|
| Thought problems       | 0.47  | 1.56  | 0.21  | 0.59  | 0.2328   |
| Attention problems     | 4.91  | 3.83  | 2.45  | 1.54  | 0.0001 * |
| Delinquent behavior    | 4.88  | 5.13  | 0.45  | 0.75  | 0.0001 * |
| Aggressive behavior    | 8.40  | 8.92  | 3.90  | 3.75  | 0.0006 * |
| Internalizing Behavior | 8.79  | 7.91  | 14    | 6.55  | 0.0008 * |
| Externalizing Behavior | 14.29 | 13.84 | 5.69  | 6.24  | 0.0001*  |
| Total Problem score    | 34.43 | 22.56 | 26.21 | 10.87 | 0.157    |

\*p value<0.05 is statistically significant

#### *Adolescent coping orientation for problem experiences (A-COPE)*

The coping strategies used in descending order were as follows:

*Study subjects:* Ventilating feelings, seeking diversions, engaging in demanding activity, relaxing, investing in close friends, seeking spiritual support, being humorous.

*Controls:* Solving family problems, developing social support, self-reliance and optimism, avoiding problems, investing in close friends, seeking professional support and being humorous.

Ventilating feelings was higher among subjects and the difference was statistically significant. In “Ventilating feelings” a person would cope with the stressful situation by expression of frustration and tension.

Developing social support and Seeking professional support was higher among controls and the difference was statistically significant. By developing social support, they stayed emotionally connected with other people through reciprocal problem solving and expression of affect. Seeking professional support is by getting help and advice from a professional counselor or teacher about difficult problems. This shows that subjects used more emotion focused coping while control sample used more problem focused coping strategies to deal with stress (table-6).

**Table-6: Comparison on coping domains (Study subjects and Controls)**

| Domain               | Subjects (n=100) |       | Controls (n=100) |       | p Value      |
|----------------------|------------------|-------|------------------|-------|--------------|
|                      | Mean             | SD    | Mean             | SD    |              |
| Overall              | 108.83           | 26.13 | 108.61           | 15.02 | 0.94         |
| Ventilating feelings | 16.97            | 6.91  | 11.95            | 5.15  | <0.0000001 * |

|                              |       |      |       |      |              |
|------------------------------|-------|------|-------|------|--------------|
| Seeking diversions           | 13.76 | 5.35 | 13.21 | 4.67 | 0.43         |
| Self-reliance and optimism   | 12.72 | 6.11 | 13.18 | 5.96 | 0.59         |
| Developing social support    | 10.5  | 5.8  | 13.44 | 6.07 | 0.0005 *     |
| Solving family problems      | 14.29 | 6.33 | 14.9  | 4.98 | 0.44         |
| Avoiding problems            | 8.19  | 4.97 | 8.78  | 5.25 | 0.41         |
| Seeking spiritual support    | 4.35  | 2.47 | 4.01  | 2.22 | 0.30         |
| Investing in close friends   | 4.98  | 2.66 | 4.98  | 2.66 | >0.99        |
| Seeking professional support | 2.77  | 1.76 | 4.91  | 2.83 | <0.0000001 * |
| Engage in demanding activity | 9.04  | 4.04 | 8.16  | 4.09 | 0.12         |
| Being humorous               | 3.74  | 2.83 | 3.74  | 2.83 | >0.99        |
| Relaxing                     | 7.5   | 4.35 | 7.35  | 4.34 | 0.80         |

\*p value<0.05 is statistically significant

The coping strategies used in descending order were as follows:

*Males:* Seeking diversions, self-reliance and optimism, avoiding problem, Relaxing and Being humorous.

*Females:* Ventilating feelings, solving family problems, developing social support, engaging in demanding activity, investing in close friends, seeking spiritual support and seeking professional support.

The three coping strategies (Avoiding problems, being humorous and relaxing) were used more by boys than girls and the difference was statistically significant. Avoiding problems had the highest mean score amongst the four coping domains which had statistically significant difference in study subjects and includes use of substance as a way to escape the situation or avoiding the person or issues which cause problems. Being humorous is not taking the situation too seriously by joking or making light of it and relaxing is by using ways to reduce tension by day dreaming, listening to music or riding in a car etc.

Seeking spiritual support was used more by girls among the subjects and the difference was statistically significant. Seeking spiritual support means coping by either praying or going to church/temples/mosques/talking to a clergy.

Male subjects were dealing with stress by “denial” while females were at least giving attention to the stress. Involving in spiritual activities would be either an emotion focused coping (calming down the stressful emotions with spiritual thoughts) or problem focused coping (discuss ways of handling stress with the religious person) (table-7).

**Table-7: Comparison of scores on coping domains (Study subjects – Males and Females)**

| Domains                        | Males (n=67) |      | Females (n=33) |      | p-Value  |
|--------------------------------|--------------|------|----------------|------|----------|
|                                | Mean         | SD   | Mean           | SD   |          |
| Ventilating feelings           | 16.87        | 7.04 | 17.18          | 6.71 | 0.8314   |
| Seeking diversions             | 14.16        | 5.39 | 12.94          | 5.23 | 0.2816   |
| Self-reliance and optimism     | 13.07        | 6.44 | 12             | 5.39 | 0.3850   |
| Developing social support      | 10.37        | 5.93 | 10.75          | 5.60 | 0.7554   |
| Solving family problems        | 13.59        | 6.44 | 15.69          | 5.95 | 0.1110   |
| Avoiding problems              | 9.03         | 5.30 | 6.48           | 3.72 | 0.0066 * |
| Seeking spiritual support      | 3.97         | 2.05 | 5.12           | 3.05 | 0.0562*  |
| Investing in close friends     | 4.88         | 2.61 | 5.18           | 2.77 | 0.6057   |
| Seeking professional support   | 2.73         | 1.76 | 2.84           | 1.79 | 0.7724   |
| Engaging in demanding activity | 8.61         | 3.96 | 9.09           | 4.13 | 0.5817   |
| Being humorous                 | 4.13         | 2.99 | 2.94           | 2.31 | 0.0314 * |
| Relaxing                       | 8.18         | 4.57 | 6.12           | 3.53 | 0.0152 * |

\*p value<0.05 is statistically significant

We correlated the psychopathology with coping mechanisms using Pearson’s **correlation “r”**.

1] The Pearson’s correlation “r” for Total psychopathology score and avoiding problems coping in subjects was:  $r = 0.35$  (95% confidence interval: 0.16 to 0.51) i.e. positive association.

The two tailed p value is extremely significant.

2] The Pearson's correlation "r" for Externalizing behavior score and avoiding problems coping in subjects was:  $r = 0.26$  (95% confidence interval: 0.06 to 0.43) i.e. positive association.

The two tailed p value is significant.

This indicates that avoiding problems and the psychopathology (total psychopathology and externalizing behaviors) do influence each other.

## **Discussion**

A national survey on the extent and pattern of substance use in India (2019) found that alcohol use is significantly high in men (27.3%) as compared to women (1.6%) [4]. Drinking among women is stigmatized and generally not sought help in a country like India. We believe this gender difference as the main reason why all the subjects had a male parent with alcohol dependence. Financial burden arising due to loss of patient's income has been experienced by more than half of the caregivers [3,6,18]. Hence ongoing financial burden and the social situation leads to spouses and adolescent children engaging in work and children not able to attend schools.

In comparison with the control group, the study subjects belonged to the lower-income group, were engaged in jobs to earn money, and spent the majority time of the week with friends. Subjects going to school had academic difficulties and behavioral problems. Casas-Gil et al. in their study, found adolescent children of patients with alcohol dependence as a population at-risk commonly for poor academic performance, skipping school days, and school dropout. In our study, 2/3<sup>rd</sup> of the total subjects had academic problems as against only 18% in controls. Poor parent-child interaction, parental monitoring, parent-school involvement leading to lower levels of family cohesion, and higher levels of conflict have been found in families with parents with alcohol dependence. Hence, the economic burden in an already disturbed family environment

due to parental alcohol dependence can be a hurdle for proper schooling. The adolescent child would thereby engage in jobs or spare time with friends. These distractions can act as fertile soil for disturbances in academics and behavior [19,20].

The total problem score on CBCL (which includes internalizing and externalizing behavior scores) was higher among subjects as compared to controls. Male subjects had more aggression, delinquency, attention, and social problems (externalizing behaviors), while female subjects had more somatic complaints, anxiety & depression (internalizing behaviors). Rolf et al did a study on depressive symptom presentation in adolescent children of parents with and without alcohol dependence. It was a study with a small sample size and found that depressive symptoms were more in those with parental alcohol dependence [21]. Studies by Steinhausen and Barrow and his colleagues noted high externalizing symptoms, while Wong et al. noticed high internalizing symptoms in the adolescent children of parents with alcohol dependence [22,23,24].

A study in Denmark by Christensen et al. had opposite findings as that of our study. The sons of the father with alcohol dependence had higher internalizing and depression scores than daughters. This difference can be because of variations in coping mechanisms used and cultural differences [12,25-27]. Questions have been raised in previous studies if being a child of a parent with alcohol dependence acts as a resilient factor or increases vulnerability. Our study confirms the finding that adolescent children of parents with alcohol dependence are at risk of anxiety and depression [24,28,29]. This study hereby gives a clearer picture of the gender differences in the psychopathology of adolescent children of parents with alcohol dependence in an urban Indian population. We know that children mainly express their distress in the form of their behavior. Also, we need to go beyond just behavioral assessments and study the thought process and emotions in more detail to understand why an adolescent behaves in a particular way.

The subjects indulged in substance use were boys (21 subjects), and alcohol was the commonest of all substances abused, followed by tobacco and drugs like opioids or cannabis. The substance "Whitener" (Toluene, present in white ink/eraser ink) was used in the dependence pattern (5 subjects) Dr. Rakesh Lal, in his study on substance use in adolescents in general, found alcohol as the commonest substance abused. Tobacco and inhalants are mentioned as "gateway drugs", which are easily available, and their use starts at a young age [8,30]. Our finding of subjects experimenting with opioids and cannabis is a point of great concern. These vulnerable children residing in urban areas are now able to get access to these harmful drugs at an early age. Johnson and Woodside et al. noted that sons of fathers with alcohol dependence and belonging to low socioeconomic strata are four times more likely than others to develop alcohol dependence in the future [14,31]. Literature mainly focuses on how avoidance coping leads to substance use. Our study replicates findings by Chassin et al. in his longitudinal study on children of parents with alcohol dependence where they state that young adult substance abuse or dependence is mediated through earlier externalizing problems [12]. Hence, we further comment that avoidance coping with externalizing behaviors is a risk factor for substance use among children of parents with alcohol dependence.

According to Steinhausen et al. adolescent children of patients with alcohol dependence have decreased interpersonal adaptability and unhealthy coping of stressful life situations [32,33]. Scores on A-COPE show that ventilating feelings of frustration and tension was the coping strategy mainly used by the subjects. Though it is good to ventilate, what approach follows afterward to deal with a stressful situation is important. The controls, on the contrary, "developed social support" and "sought professional help", thereby using more active ways of coping. Though not statistically significant, coping with 'optimism' and 'self-reliance' was more with the



controls probably because they felt secure in their family environment. Lack of attention and security must have led to more 'demanding activity' among study subjects.

On comparing the scores of A-COPE for boys' and girls' subjects, we found that 'avoiding problems' was used significantly more by the boys. Avoidance might be beneficial in preventing the stress from becoming too overwhelming at the start, but its persistence can be unhealthy as it takes one away from problem-solving [31]. Avoidance coping was also positively associated with higher total psychopathology scores in subjects. Vaughn and Roesch, in their description on coping, note that problem-focused and approach coping has positive outcomes while coping with denial has negative outcomes. The female subjects in our study used more approach based coping while male subjects used more denial coping mechanisms. The control group used more problem-focused strategies to cope with difficult situations. Hence, it can be stated that male adolescent children of parents with alcohol dependence of low socioeconomic status, with externalizing behaviors, already engaged in substance use i.e. abuse or dependence, and using avoidance coping are at risk of not only substance dependence but also psychopathology (anxiety and depression) in later life. Seeking spiritual support in female subjects can be explained as it is a culturally acceptable way of relieving stress mainly in a country like India. Absence of substance use in girls can be explained by the fact that substance use in women is not socially accepted in India. [14,15,34].

Cognitions, emotions, and behavior go hand in hand. The behavioral problems can be seen as a reflection of poor coping strategies used by adolescent children. Avoidance neglects a problem that indicates a lack of healthy cognition, which in turn may further exacerbate the emotional and behavioral problems. Werner observed that positive response to others, seeking social support, attention, and reflectiveness characterize the developmental course of resilient individuals [35].

The subjects in our study lacked these characteristics, which points towards poor resilience in adolescent children of patients with alcohol dependence.

Moos' model of context, coping, and adaptation (2002) emphasizes that it is necessary to understand the family and social context to understand how an adolescent cope with stress [35]. In our study, the subjects had a more disturbed family environment than controls. Hence applying this model to the lives of adolescents with parental alcohol dependence, it is clear that we should not only focus on improving coping in healthy ways, i.e. problem-focused coping in groups but also plan individualized care by considering the social context of the adolescent children of drinking parents. In addition, strategies that reinforce the environmental factors which promote healthy coping also need to be developed.

Our study has certain limitations. It is a cross-sectional study. A longitudinal study with a behavioral assessment on more than two occasions can give better findings. Secondly, this study was conducted at a tertiary hospital with a small sample size, which may not be representative of the general population.

The study did focus on some important aspects of adolescent children of patients with alcohol dependence. Screening for psychopathology in adolescents should be a routine part of the familial intervention of patients with alcohol dependence. Engaging them in support groups, teaching healthy coping strategies specifically handling the parental alcoholism, and following them till the end of this turbulent period should be part of guidelines in the treatment of patients with alcohol dependence. However, understanding the social context along with necessary changes in the environmental factors which will reinforce these coping also needs consideration. To conclude, the adolescent children of patients with alcohol dependence suffer from various problems that are significantly higher than children of parents without alcohol dependence.

These problems range from noticeable i.e. difficulty in schooling and academics, poor socializing skills, use of psychoactive substances, and behavioral problems to non-noticeable like the use of unhealthy coping strategies to deal with stress. There are gender differences in psychopathology and coping strategies that increase the risk of male children developing substance dependence in the future. Interventions in improving coping and giving individualized care as per the social context of the child are important.

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