VILNIUS UNIVERSITY MEDICAL FACULTY

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Parents with Alcohol Dependence Disorder and Children Health

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SUMMARY

Introduction: Excessive parental alcohol usage often causes tremendous harm to the children living in families in which one or both caregivers have substance abuse disorder. Parental alcoholism is a common problem that affects a great number of children worldwide.

Aim: To assess how substance abuse of parents affects their children's health. The aim was to collect data from already published papers to evaluate the effects of parental alcoholism on the development of somatic and mental health problems, academic performance, and personality. To assess protective factors and possible ways to reduce the harm of parental alcoholism. Lastly, to evaluate the system of support for families with parental alcoholism in Finland and the USA.

Methods: A literature review was made based on 54 reference studies. Studies were chosen from the PubMed database and included publications from the years 2000-to 2021.

Results: All studies collected found internalizing and externalizing symptoms to be more prevalent in children of alcoholics. Academic performance was negatively affected compared to children of non-alcoholics. Different personality traits were discovered ranging from externalizing impulsive personality to high functioning reward-sensitive children. Protective factors of adverse childhood experiences included active coping, activation of brain areas associated with increased resilience, family unity, and attachment model.

Conclusions: Parental alcoholism can interplay with a child's neuropsychological development and increase the risk for behavioral, somatic, and psychological disorders such as conduct disorders, depression, and alexithymia. Even though these problems are more prevalent in children of alcoholics, not all children are equally affected. Resilience and promoting the development of active coping can dampen the effects of parental alcoholism.

KEYWORDS

children, parents, alcoholism, substance abuse, addiction

INTRODUCTION

Children's health in the early years of their lives is highly determined by their parent's ability to nurture, look after, and provide a safe environment for normal development. This literature review is focused on how substance abuse of parents affects their children's health. It is argued that one-quarter of children in the United States are affected by their parent's substance abuse (1). A Norwegian cross-sectional retrospective study based on a public health survey for adults found that 15,6% of respondents retrospectively claimed their parents' alcohol usage was problematic during their childhood (2). Thus, it is of high importance to recognize the extent of the problem as well as the possible harmful consequences for the offspring.

Children of alcoholic parents often face neglect in their lives. It can be manifested by verbal or physical abuse, leaving children in unsupervised situations, and providing an unsafe environment where children have to witness conflicts and inappropriate behavior including drinking and domestic violence (3). These early experiences can lead to mental health or behavioral disorders such as mood disorders, disorders of psychological development, and problems in emotional expression in children and adolescents and typically manifest also later in adulthood (4). Higher prevalence of both externalizing (such as conduct disorder, and aggression) and internalizing symptoms (such as depression, and anxiety) have been found in children of alcoholic families (5).

Nelson, Zeanad, and Fox highlight in their study the dependence of children on their caregivers during the critical stages of development. They argue that psychosocial deprivation including caregiver's alcoholism can shape neural, biological, and behavioral development during childhood and also continue in adulthood. (6) Parental alcohol abuse is also among the risk factors for the development of alcoholism later in life, starting from early adolescence (7). The caregivers act as role models for the developing child and their behavior affects what kind of response and attitude their children will develop towards alcohol consumption. In families where children were exposed to parental drinking and the atmosphere in the family was pro-alcohol, the children were more likely to themselves begin drinking at an early age (8).

The study aimed to assess how substance abuse of parents affects their children's health and to evaluate the effects of parental alcoholism on the development of somatic and mental health problems, academic performance, and personality. Additionally, the systems of support for families with alcoholism in Finland and the US was compared.

LITERATURE SELECTION STRATEGY

The goal of this literature review is to provide a general overview of past studies and literature on the effects of parental alcoholism on their offspring. For this purpose, 51 reference studies were collected and analyzed. The studies were published between the years 2000-2021. The papers included were literature reviews (16), cross-sectional studies (18), cohort studies (8), and case-control studies (9). Additionally, 9 reference sources were used in the part "Treatment and prevention in Finland and in the United States of America" that included websites of different organizations involved in the management of parental alcoholism and national statistics. Materials for this review were mostly found in the PubMed database and Cochrane library. The collection of publications was restricted to studies published onwards from the year 2000.

Type of study reference	Number of studies belonging to the category
Literature review	16
Cross-sectional study	18
Cohort study	8
Case control	9
Total amount of studies	51

Table 1. Characteristics of chosen literature for the study.

RESULTS

Caregivers' excessive alcohol consumption can affect their offspring in various ways. This section aims to provide a literature review on the most researched effects that parental alcoholism can have on their children. The typical problems often noted can be classified into psychological, behavioral, and social problems, physical violence, abuse as well as difficulties in academic performance.

Rossow, Keating, and Felix in their review of cohort studies remind us that many of the children affected by excess alcohol usage come from families where alcoholism has not been diagnosed per se, but rather the usage could be described as binge drinking or episodic drinking. This makes the problem wider, and the exact numbers of children affected are difficult to estimate. The families having problems with substance abuse also tend to be more often affected by unemployment, poverty, unsatisfactory housing, and poor social network compared to a family where there is no substance abuse. (7) Thus, the excess use of alcohol often goes hand in hand with multiple other environmental factors that can all cause harm to the child's health as a cumulative effect. This leads

to the difficulty of separating the true effects of alcoholism on children from other etiological factors.

The risk for the child to develop negative outcomes is further increased in cases when there is psychiatric anamnesis already present in the family or in cases when both of the caregivers are active drinkers in comparison with one parent alone (9). Dube, Anda, Felitti, and others also concluded that the likelihood of adverse childhood effects such as abuse and neglect, and household dysfunction were significantly increased if the mother, father, or in worst cases, both parents were alcohol-abusing. They found the lowest likelihood of adverse childhood effects in cases where only the father was abusing alcohol and the highest in cases in which both parents had substance abuse. The highest risk was found for children of those parents who in addition to substance abuse problems also had other types of psychopathy such as depression or antisocial personality disorder. (10)

Hussong, Flora, Curran, and others confirmed the same results that having two alcoholic parents significantly increased the risk for internalizing symptoms (such as depression, and anxiety) and the risk was highest when one of the parents also had depression as comorbidity. They also took a wider perspective by analyzing the effect of gender and found that girls were more prone to have internalizing symptoms whereas for boys the incidence started decreasing in adolescence. With the female gender, the incidence stayed relatively stable over the observation period. (11)

Personality

Personality development is highly affected by our childhood experiences. Caregivers with substance abuse are more typically less present, showing their children less affection and poorer levels of physical and verbal engagement causing the formation of less secure attachment models compared to caregivers without substance abuse (12). Insecure attachment style in childhood can negatively influence cognitive and social development, and neurobiological functioning, cause difficulties in emotion control, and interfere with the development of coping mechanisms (13–15).

Hinrichs, DeFife, and Westen conducted a study focused on determining the personality types of children of alcoholic parents. They found five main patterns of personality, namely awkward/inhibited, high-functioning, angry/externalizing, emotionally dysregulated, and reactive/self-defeating that were seen to be repeated in these children. The most common personality trait noted was the externalizing type which was manifested by rebellious behavior,

impulsivity, and manipulative actions. The second most common type was high functioning, described as someone who sets goals, is highly responsible, and enjoys challenges. Inhibited personalities were characterized as passive, self-conscious, and isolating. A wide array of personalities was found, ranging from very high achieving goal-centered individuals to emotionally and socially inhibited children coming from similar backgrounds. The study highlights the importance of encountering children of alcoholics as individuals belonging to a heterogeneous group of children and does not generalize that all of them would have the same behavioral patterns, personalities, and difficulties. (16).

A small cohort study by Lyvers, Hayatbakhsh, and others was made to research personality traits observed in children of alcoholics by using questionnaires. The responses were then compared to those from non-substance-abusing families. The research found a significant elevation in the prevalence of alexithymia (difficulty describing and experiencing emotion), reward sensitivity, impulsivity, and the negative general mood in children of alcoholics. (17) They found similar results as colleagues Hinrichs, DeFife, and Westen, different personality types were manifested among the group. Alexithymia is one characteristic of inhibited personality type and impulsivity is typical for externalizing personalities.

Academic performance

In a series of studies, the academic performance of children of substance-abusing parents has been found to be lower than in the reference population. Also, lower grades, more often missed school days, and dropping out of school have been noted more often (18).

Zanoti-Jeronymo and Carvalho in their study investigated the academic performance of children of alcoholics compared to a control group in which substance abuse was not taking place. They recorded lower levels of academic performance in the group of children of alcoholics, namely in reading and arithmetic tasks. (19)

Garcia, Urchaga-Litago et al also concluded in their cross-sectional study that children with lower levels of parental support had worse academic performance (20). Poor education was also found to be one of the risk factors for developing problems with substance abuse later in life. However, Mangiavacchi and Piccoli in their study of Russian children followed from childhood to adulthood found that moderate parental drinking was not related to academic performance, but each regular glass of strong spirit above the healthy weekly limit reduced years spent in educational institutions

by almost one year (21). A Norwegian study was conducted to investigate the percentage of adults that remembered to have suffered from parental alcohol abuse in a pool of 28 047 adults. They found that 15,6% of them answered positively and those people were more likely to have a lower degree of education and receive social welfare benefits as adults. (22) The child's IQ was noted to be the lowest in groups in which the parent also had antisocial personality traits together with alcoholism (23).

Somatic and mental health problems

In general, children that have been neglected or emotionally or physically abused have been found to have a higher risk for mental health disorders, such as depression and anxiety as well as substance abuse in repeated studies (24). Chapman, Whitfield, and others investigated the correlation between adverse childhood experiences (ACE) including parental alcoholism, and the risk for depression. With household substance abuse the lifetime prevalence for depression (adjusted odds ratio) for women was 1,7 and for men 1,3. Cumulative adverse experiences such as substance abuse combined with emotional or physical abuse significantly increased the risk for depressive disorder. With one reported ACE the lifetime prevalence for depression was 25,8% and with three reported ACEs prevalence was 44,7%. The study found that even the presence of one ACE, such as household substance abuse, increases the risk for depressive disorder by 7,3% compared to the reference population. (25)

Interestingly Gau, Farmer, and others in their study of parental alcohol use disorders' effect on a child's behavioral (internalizing or externalizing) problems found that during the first 2 years of a child's life the risk for the abovementioned behavioral problems was not increased (26). Similar results were found by Husky, Keyes, and others as they only found a correlation of mental health problems with maternal alcoholism in age group 8-11, but not in a younger group consisting of girls aged 6-8 (5). A cross-sectional study conducted in India evaluated the prevalence of different psychiatric diseases in children of alcoholic parents compared to the control group. They found a statistically significant correlation between parental alcoholism with children's depression and anxiety. However, they did not find a correlation either between behavioral or emotional problems or intelligence level. This study was however limited to the specific age group of 8-11 years so one could argue that the sampling was too saturated and follow-up was not sufficient to be able to evaluate IQ or behavioral problems. (27)

Both internalizing and externalizing psychiatric disorders have been found to be significantly augmented by harmful parental alcohol usage (28). Internalizing disorders are disorders that can be conceptualized as inhibited and internally focused symptoms such as depression, anxiety, and social withdrawal. External disorders include disinhibited forms of symptoms such as hyperactivity, aggression, attention deficits, and conduct disorders. (29) Children of alcoholic parents are shown to receive less warmth from their parents, which in turn is associated with lower self-regulation, commonly connected with displaying behavioral problems (30). The manifestation of externalizing symptoms was found to be higher during periods when parents were actively using alcohol and impacted the severity of symptoms the child displayed (31). Anxiety disorders were also noted to be more prevalent in children of alcoholics, not only due to alcoholism itself but also due to marital aggression that often followed alcoholism in the families. (30)

Similar results were found by Christensen and Bilenberg already in 2000. They compared children of non-alcoholic and alcoholic parents in terms of manifestation of behavioral and emotional symptoms. They found that parental alcoholism was significantly associated with an increased risk for behavioral and emotional disturbances and the risk was higher for daughters than sons. The group also found a linkage between internalizing symptoms such as depression and anti-social personality with parental alcoholism. It is also worthwhile to mention that half of the children belonging to the alcoholic parental group were not found to have any symptoms. This is an important implication that some protective factors are playing a role in which children are more resilient toward their parent's alcohol usage and show fewer psychological and behavioral symptoms. (32)

Diaz, Gual, Garcia, et al conducted a multisite epidemiological study in Spain to gather epidemiological data about the prevalence of mental or somatic diseases in children of alcoholic parents. They found that the risk for attention deficit disorder, depression, phobias, enuresis and tics, and generalized anxiety disorder were significantly higher in the group compared to controls. The affected children were also found to be more prone to suffer from abuse causing physical, emotional, and psychological trauma. (33)

In the Netherlands, a cross-sectional study was performed based on Danish National Youth Study (2014) to investigate the problems that children with parental alcohol problems face compared to the control group. They concluded that in the affected group the caregiver-child relationship was of poorer quality and these children more often reported suffering from emotional symptoms, low self-

esteem, loneliness, and depression. (34) A separate study was made from the same population to investigate if there was an effect of a socioeconomic class of the family belonged to in addition to parental drinking to cause depression and emotional symptoms (low mood, anxiety, irritability). In all socioeconomic classes, a higher prevalence of the abovementioned consequences was noted compared to children of non-alcoholic parents. There was no difference between different socioeconomic classes. (35) Interestingly in a small study of Native American children by Wall, Garcia-Andrade, and others, it was found that especially sons of alcoholic parents had significantly increased risk for behavioral problems as well as for internalizing and externalizing disorders (36).

Parental alcohol usage was shown to be associated with difficulties in the development of coping mechanisms at the delicate turning point from adolescence to adulthood. Children of alcoholic parents were showing in general less active coping, difficulties in planful coping, and more cognitive-avoidant comping mechanisms compared to the control group. (37) A New York-based study of 197 families found that a father's substance abuse disorder was associated with lower levels of effortful control in early adolescence (38). Effortful control is defined by Morris, John, and others as ''the capability to employ attentional resources and to inhibit behavioral responses to regulate emotions and related behaviors'' (39). Thus, lower levels of effortful control interfere with a child's self-regulation abilities and can cause both behavioral and emotional problems in children of alcoholic parents.

Resilience and protective factors

Not all children of alcoholics seem to be affected by their parent's substance abuse, as the child's protective factors can help to adapt and navigate the stressful environment. These children are often called 'resilient'. Resilience is defined by VanMeter and Cicchetti in their publication as 'a dynamic process at any level of functioning that encompasses the capacity by which these individuals adapt positively following adversity (40)'. Job, Dalkowski, Hahlweg, et al in their cross-sectional study investigated the protective factors in the development of resilience in stressful childhood and found some of those factors to be an active temperament, higher intelligence, and self-control (41).

Wlodarczyk, Schwarze Rumpf, and others identified 13 different factors in their literature review that were shown to increase resilience in substance-using environments. They classified those factors as child-related, family and parent-related, or environmental factors. Child-related factors were further divided into psychological and biological factors. Psychological factors included the

capability to adapt and use coping mechanisms and the ability to engage with adults. Biological protective factors included activation of the orbital frontal gyrus and left insula or decreased Nucleus accumbens response. The abovementioned areas of the brain have been found to monitor behavioral responses and increased activation of those brain areas is associated with increased flexibility and resilience. Family-related factors included the unity of the family and a secure parent-child attachment model. Parental support, the presence of two caregivers, and a lower amount of parental stress were also found to be protective factors. Social factors included the presence of social support for the family. (42)

The predisposition to excessive alcohol usage in childhood also increases the probability of early-onset drinking and substance use in adolescence which in turn is a risk factor for developing alcoholism later in life (8). Thus, it is important to intervene to prevent the cross-generational effects and burden of alcohol usage. A study conducted in Sweden researched the correlation between alcohol usage in the family and heavy episodic drinking in Swedish upper secondary school students. They found that children coming from families where drinking was excessive, had themselves increased incidence of heavy drinking in adolescence. (43)

Prevention and treatment

The World Health Organization (WHO) has initiated a global strategy to raise attention to the harms of alcohol and its effect not only on the drinker but on others suffering from it (44). Rossow, Keating, and Felix in their article about ways to prevent parental alcoholism refers to tobacco campaigns that were launched in the early 2000 aiming to remind the public about the harms of smoking not only to the individual themselves but also to their families and children. This caused the change from the perspective of an individual's choice to protect other people, especially children, and can be considered as one of the factors in declining tobacco consumption. (7) In the case of alcohol, similar tactics have been suggested by many authors as an effective way to reduce the prevalence of alcohol abuse and thus harm to others including children.

The deliberate public expression of second-hand effects is also noted as the main tool to prevent alcohol consumption and harmful effects on others by Giesbrecht, Cukier, and Steeves in their publication in the ''Addiction Journal'' in 2010. They recommend consciously promoting and introducing the importance of highlighting secondary effects to those in charge of managing substance policies. Moreover, they highlight the importance of the continuation of research and gathering evidence from secondary effects. Finally, they recommend emphasizing population-level

policies rather than individual-focused interventions. (45) The abovementioned factors are examples that could be implemented as primary prevention to prevent possible harm to children by reducing the general alcohol consumption of their caregivers.

Secondary and tertiary prevention include recognizing those affected efficiently and preventing further complications in children who have been affected by substance abuse in their families. All those factors mentioned in the ''Resilience and protective factors'' section should be enhanced in the children affected by parental alcoholism. This could be offered via therapy sessions, either individual or family-centered to create coping mechanisms and promote family unity and attachment. Raitasalo, Ostergaard, and Andrade in their research about educational attainment found that children of alcoholics are more likely to drop out of school at an earlier age compared to the reference population. They remind us of the importance of the educational sector's role to identify those children and provide additional support for them to enhance educational attainments. (46)

A systematic review by Marie-Mitchell and Kostolansky reports that multicomponent interventions are needed for substance-abusing families in which parenting education, mental health counseling, social service referrals, or social support are provided to reduce the incidence of behavioral or psychological problems and to improve family relations (47). Similar results were also found by McGovern, Nyholm, and others highlighting the importance of integrated psychosocial interventions in reducing parental alcohol abusing behavior (48). It is suggested that questionnaires about harmful substance abuse should be included in regular health appointments of children to ensure timely interventions (49).

Prevention and treatment in Finland and the United States of America

I familiarized myself with a few institutions in Finland that act to help families affected by substance abuse disorders and to prevent the harmful effects of alcoholism on their children. In Finland, it is estimated that every fifth child experiences their parent/s alcohol usage as ''disturbing'' in their lives and causes them anxiety (50).

The families that might have problems with substance abuse are recognized early in pregnancy during prenatal care visits in the best-case scenario. These ''high-risk families'' are supported throughout the pregnancy by additional therapy sessions, family meetings, and scheduled appointments aiming to intervene with substance abuse and secure healthy childhood for the

newborn baby. The interventions always first are targeted at the family level and the aim is for the child to be able to live at home with his/her birth parents. Only in the most severe cases in which children's health is seen to be neglected in a way where safe upbringing cannot be provided, the social services and Child welfare are noted. The strictest way to act is by denying custody from the birth parents and placing the child in a foster family. However, this method is extreme and reserved only for the most severe cases. A Finnish study was conducted to investigate how many children of alcohol and/or substance-abusing mothers end up in out-of-home care. They found that 50% were at one point placed in out-of-home facilities and 38% of those placements were made by the age of 2 years. (51)

Most often support is provided locally to the family in their everyday life if it is evaluated that it is still safe for the child to be raised at home. The services offered are tailored to each child depending on their exact situation. It could be placing the child in safe child-caring institutions part-time, for example, for the weekends. Offering therapy sessions is common practice, including sessions on practicing emotional skills and emotional expression, and enhancing the development of coping mechanisms. For older children peer support groups are widely used. Family therapies benefit both the parents and the child.

It was found in a Finnish study by Itäpuisto (2013) that the children of adults entering substance abuse treatment programs are often not directly recognized and even minimal information is obtained about the substance abuser's children during visits (52). Although, according to the Finnish law of addiction care, the municipality should be responsible for the appropriate care of the substance abuser and his/her family. Addiction care has been divided into many different sectors including the health care sector, social security, and self-help/ support groups that either act as private or communal players (53). With the interplay of all the above-mentioned sectors, the children of the people receiving care can easily be dismissed and forgotten when the treatment is solely focused on the abuser itself. 12-step programs, such as Minnesota treatment for alcoholics, are gaining more and more popularity and the families of substance abusers are integrated into the treatment program (54).

According to the National Center for Drug Abuse Statistics, in the USA, it is estimated that 12,1% of children under the age of 17 come from families in which there is parental alcoholism affecting at least one parent (55). In exact numbers, it is estimated that 18 million US children suffer from their parent's alcoholism. (56) In comparison to the Finnish healthcare system, the system in the

USA is very different with no universal healthcare coverage. Lipari and Van Horn in their report highlight the need for intervention both for the adult with a substance abuse problem and for supportive treatment of the child. According to the report, only 7,6% of adults with substance abuse had received any kind of treatment for their problem. They suggest financial reasons as one of the barriers why parents with substance abuse disorder get so little help as most treatments and services need to be self-paid. (57) The US National Center on Substance Abuse and Child Welfare (NCSACW) highlights the importance of the stigma the parents face and thus won't get access to treatment. Many are also worried about legal consequences, placement of their child in foster care units, and involvement in child welfare. (58) A Multilevel family-centered approach is recommended by the NCSACW, similar to the Finnish approach (59). Compared to Finland, the US system leans much on the same providers for recognition and intervention including the education sector, primary care providers, social services, child welfare as well as the justice system. One key difference is the help received from the faith community and churches, which are very often the first contacts of the families. They can further lead the families towards support, substance interventions, and social services. (60)

DISCUSSION

Based on the findings presented above, there are several ways parental alcoholism can affect children worldwide. In most of the research papers chosen for this literature review, the difficulty to separate the true effects of alcoholism from other secondary effects, such as poverty and inappropriate housing, was noted as a limiting issue. In many of the studies, children belonging strictly to the parental alcoholism group were not separated from children coming from families in which additional problems coexisted. As noted, another psychiatric disease in the family highly increases the risk for negative outcomes and adverse childhood experiences. Since parental alcoholism, especially in the severe form, often goes hand in hand with other socioeconomic and mental health problems, more research is needed in the field.

All the studies chosen for the review found internalizing and externalizing symptoms to be more prevalent in children of alcoholic parents. The most common symptoms were depression, anxiety, and aggression. Especially the risk for depression was highlighted with adverse childhood effects. However, a limited number of the studies had a longer follow-up period than a few years, so the long-term effects of parental alcoholism still warrant more research with long-term follow-ups.

Interestingly, symptom manifestation depended on the child's age. Gau and Farmer and others did not find any symptoms or behavioral traits related to parental alcoholism in young children under the age of 2 (26). Husky and Keyes found a correlation in the age group from 8 to 11 but not in the younger age group (5). The findings highlight the importance of timely recognition and intervention during early childhood to prevent damage to children's health. The studies evaluated also found girls to be more prone to develop symptoms because of parental alcoholism. Christensen and Bilenberg found a higher risk for emotional disturbances in girls than boys (32). Hussong, Flora, and Curran concluded similar results with girls suffering from internalizing symptoms more often than boys (11). Based on these results girls in the early childhood and pre-teenage years would be the most prone to symptom manifestation. Having two substance-abusing parents further increased the risk for adverse childhood experiences. With at least one parent without substance abuse, the likelihood decreased possibly illustrating the development of at least one secure attachment with a reliable adult. Even with both caregivers having substance abuse, a strong social support network was found as a protective factor.

In all selected studies the academic performance of children of alcoholics was noted to be worse compared to children from families without substance abuse. It manifested as lower grades, reaching a lower level of education in adulthood, and dropping out of school at an early age. However moderate drinking did not seem to have an effect, but it was highlighted with an excessive drinking problem.

Only a few studies were found on resilience in a parental substance abuse setting from the children's point of view. Half of the children in the Christensen and Bilenberg study that belonged to the 'children of alcoholics' group did not manifest any symptoms (32). The finding highlights the importance of protective factors, the development of coping mechanisms, and resilience. To provide adequate and targeted intervention and prevention for children of alcoholics again more studies are needed.

CONCLUSIONS

In conclusion, parental alcoholism can affect a child's life in various ways from early childhood to adulthood. Parental alcoholism is a common problem in many societies and the children in need of support are often not recognized in health care facilities. Substance abuse by the parents shapes the child's biopsychosocial development and can interfere with emotional and behavioral regulation.

Both internalizing (such as depression and anxiety, low mood) and externalizing symptoms (such as attention deficits, impulsivity, and anger) have been found in repeated studies to be more prevalent in children of alcoholic parents. The symptoms go hand in hand with various personality types found in children of alcoholics. The risk of developing symptoms due to parental substance abuse is further increased if psychiatric anamnesis is present in the family in addition to the addiction. Children of alcoholic parents also demonstrated poorer academic performance, increased incidence of dropping out of school, and lower levels of education. Behavioral and emotional problems such as alexithymia and lower self-esteem were found to be associated with parental alcoholism.

Other social adversities such as poverty, and lower educational status often go hand in hand with alcoholism and must be remembered when evaluating the results of the studies. Children of substance-abusing families should be encountered as individuals as the effects of parental alcoholism can be displayed in different forms. Some children are found to be more resilient to their parent's alcohol consumption and show no symptoms. The protective factors include having only one parent affected by alcoholism, being surrounded by a caring social circle, having a secure child-parent attachment, and the capability to adapt and use coping mechanisms. The ways to reduce harm to the child of substance-abusing parents contain methods of primary, secondary, and tertiary prevention including highlighting the second-hand effects of excessive substance use in the community and providing timely interventions on a family level. Integrated multicomponent interventions on the family level are the mainstay of preventing long-term consequences for the affected children. Timely recognition with the active and conscious investigation of possible parental substance abuse during regular health care checkups is recommended.

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