Alcohol Misuse Prevention Campaign for Parents of Children Aged 3–7 in Kerman Province

Abstract

Background: Childhood is considered the most appropriate stage for behavioral interventions, as children have not yet established stable behavioral patterns. Implementing educational interventions at this age can instill healthy behaviors and prevent risky behaviors in adulthood. Accordingly, the present study was conducted with the aim of implementing a campaign to prevent alcohol misuse among parents of children aged 3–7 years in Kerman Province, Iran.

Methods: This study was carried out on 500 participants in the pretest and 497 participants in the posttest between November 2023 and January 2024 in Kerman. Sampling was conducted randomly. An educational package was uploaded for 10 days on the domestic messaging platform *Eitaa*. Data were collected before and after the campaign using a researcher-designed questionnaire on knowledge and attitudes. Statistical analyses were performed using SPSS software.

Results: Most parents were in the age group of 29–59 years. After the campaign, the mean knowledge score of parents regarding alcohol misuse in children showed a significant improvement ($P < 0.001$), whereas the attitude score did not show a significant change.

Conclusion: The intervention increased parental knowledge about alcohol and substance misuse, but did not significantly change their attitudes. These findings suggest that sustainable change requires more comprehensive, interactive, and long-term educational programs.

Keywords: Campaign, Substance misuse, Alcohol, Children, Parents

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Introduction

Alcohol (ethanol) is a psychoactive and addictive substance found in various alcoholic beverages such as beer, wine, and spirits. Its consumption can lead to both physical and psychological dependence, as well as adverse health, social, and legal consequences [1]. Despite its harmful effects on public health, alcohol consumption is legally unrestricted in many countries, and little control is exercised over its use [2]. Alcohol consumption patterns in each country are closely tied to cultural, religious, legal, and social contexts. In Muslim-majority countries, alcohol use is strongly influenced by religious beliefs and cultural values [3, 4]. Accordingly, in societies where alcohol consumption is considered unacceptable, the prevalence of alcohol use should be lower than in societies where it is perceived as normal and acceptable [5].

Globally, alcoholic beverages are the most widely consumed psychoactive substances, with an estimated 2.3 billion regular users worldwide [6]. According to the World Health Organization (WHO), the lowest prevalence of alcohol use is observed in the Eastern Mediterranean region, where alcohol-related disability-adjusted life years (DALYs) are also the lowest, likely due to the predominance of Muslim countries in this region [7]. Iran, as a Muslim country, prohibits the production, sale, and consumption of alcohol, making it available only through illicit channels. Consequently, alcohol consumption patterns in Iran differ from those in other countries [8]. A systematic review in Iran in 2020 reported lifetime and past-12-month prevalence rates of alcohol use in the general population as 13% and 12%, respectively; among youth, these figures were 13% and 15% [9] . Another study across five provinces of Iran found that 28% of adults over 18 years had consumed alcohol in their lifetime, with the highest prevalence in Tehran (37.1%) and Kerman (31.8%) [10].

Adolescents and young adults are considered high-risk groups for alcohol misuse. Factors contributing to their alcohol use include boosting self-confidence, reducing stress, alleviating psychological pressure, and enhancing social enjoyment [11]. In Islamic countries like Iran, due to religious and legal prohibitions, alcohol use is considered taboo and is likely underreported [5, 12]. The widespread belief that alcohol-related harms are minimal, combined with religious and legal restrictions, can contribute to denial or disregard of this risky behavior and its consequences [5] . Nevertheless, alcohol consumption remains a major public health challenge, causing substantial harm to physical, mental, and social health, as well as to quality of life [13].

Multiple factors influence health-related behaviors, as explained in various health education models. One important framework is the Knowledge, Attitude, and Practice (KAP) model [14]. Knowledge about the consequences of alcohol use can influence individuals' attitudes toward it. While knowledge alone is not sufficient to change behavior, it remains a crucial component of preventive interventions, particularly in relation to alcohol misuse [15].

Given the increasing prevalence of alcohol use among Iranian adolescents and youth, there is a growing need for effective preventive interventions [16]. In some countries, limiting availability and increasing prices have been shown to reduce alcohol-related harms [17]. One widely used strategy for prevention is the implementation of educational campaigns, which serve as community-based interventions that use multiple channels to deliver messages to a target population [18]. Health campaigns have been employed in diverse areas, including cardiovascular health, substance and alcohol abuse, cancer control, nutrition, family planning, vaccination, mental health, hypertension, and HIV/AIDS [19]. Among these, alcohol prevention campaigns have utilized various strategies such as raising awareness of harmful consequences, using fear-based imagery, and promoting refusal skills [20]. Mass media are commonly employed in these campaigns to deliver cost-effective messages, inform, motivate, and persuade large populations to influence health-related behaviors [21]. Although mass media campaigns have shown effectiveness in improving knowledge, attitudes, and beliefs about alcohol, evidence regarding their ability to reduce actual consumption is limited [17].

Several factors contribute to the limited effectiveness of such campaigns, including their short duration, ineffective messaging, competing media content, lack of diversity in communication channels, and insufficient integration with broader alcohol-control strategies [22]. Targeted campaigns that consider demographic differences among subgroups are generally more effective [20].

Considering the rise of alcohol misuse among Iranian youth and adolescents, community-based educational interventions aimed at improving awareness and attitudes toward alcohol are essential. Childhood is recognized as the most appropriate stage for behavioral interventions, as habits are not

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yet firmly established. Early interventions can instill healthy lifestyle behaviors and prevent risky behaviors later in life. To the best of our knowledge, no campaign on this issue has been conducted in Kerman Province. Therefore, the present study was designed to evaluate the implementation of a preventive campaign against alcohol misuse among parents of children aged 3–7 years in Kerman.

Methods

Study Design and Campaign Implementation

This study employed a quasi-experimental pretest–posttest design without a control group to evaluate the effectiveness of an alcohol and substance misuse prevention campaign targeting parents of young children. The campaign was implemented over a two-week period, from November 22, 2024, to January 5, 2025, across Kerman Province, Iran. The target population comprised all parents of children aged 3–7 years, representing approximately 550,780 children in the province. Parents were eligible to participate if they had the ability to read and write, owned a smartphone, and expressed willingness to participate in the study. Participation was voluntary, and informed consent was obtained electronically prior to data collection.

Intervention Development

The intervention was initiated through the development of an educational booklet entitled *"How to Vaccinate Our Children Against Substance and Alcohol Use Before Entering School."* The content was developed based on evidence-based principles of substance misuse prevention and parental education. To increase accessibility, the materials were produced in both written and audio formats. The educational content was reviewed and evaluated by a joint expert committee consisting of specialists from Kerman University of Medical Sciences and representatives of the Kerman Department of Education. Following expert review and revision, the booklet was officially approved as the standard educational material for the target population.

Campaign Organization and Delivery

At the provincial level, a multi-stage implementation strategy was employed. Initially, focus group discussions were conducted with experts in health education and social sciences to ensure cultural appropriateness and effectiveness of the campaign strategy. Subsequently, the finalized educational booklet was converted into a 28-minute audio file for dissemination through digital platforms. To facilitate coordination, four briefing sessions were held with officials from the provincial Department of Education, during which target populations across 33 educational districts were identified. Parents' contact information was obtained from selected preschools and kindergartens, and communication groups were established using the domestic messaging application Eitaa. For each district, one liaison officer was appointed and trained through online and in-person sessions. Based on the compiled lists of educational centers, separate Eitaa groups were created for the parents of each school, resulting in a total of 109 communication groups.

Intervention Procedure

Within each communication group, the intervention was delivered in a structured and sequential manner. First, an introductory file explaining the objectives and importance of alcohol and substance misuse prevention was shared with participants. The pretest questionnaire link was then distributed via the Porsline online survey platform and remained accessible for three days. Educational materials were uploaded gradually over a ten-day period, accompanied by reminder messages encouraging parents to review both the written and audio content. Upon completion of the educational phase, the posttest questionnaire link was shared and remained open for three days. Overall, 500 parents were randomly selected and included in the pretest and posttest analyses.

Data Collection Instrument

Data were collected using a researcher-developed questionnaire consisting of two sections. The first section assessed demographic characteristics, including gender, age, marital status, educational level, and the child's gender. The second section measured parents' knowledge and attitudes toward alcohol and substance misuse prevention. The knowledge subscale comprised 8 items, with scores ranging from 0 to 8, while the attitude subscale included 7 items, with scores ranging from 0 to 7. The total questionnaire score ranged from 0 to 15, with higher scores indicating greater knowledge and more favorable attitudes toward prevention.

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Validity and Reliability

Content validity was assessed using both qualitative and quantitative approaches. Initially, the questionnaire was reviewed by 10 experts in health education and promotion, social medicine, and psychology. Based on expert feedback, ambiguous or irrelevant items were removed or revised. Quantitative content validity was evaluated using the Content Validity Ratio (CVR) and Content Validity Index (CVI). According to Lawshe's table, the minimum acceptable CVR value for 10 experts was 0.62, and all items exceeded this criterion. Additionally, all CVI values were greater than 0.79, confirming acceptable content validity. Reliability was examined using Cronbach's alpha coefficient, calculated from a pilot study conducted with 30 parents. The resulting alpha value was 0.85, indicating good internal consistency.

Statistical Analysis

Data analysis was performed using SPSS software (version 22). Descriptive statistics were used to summarize demographic variables. To compare demographic characteristics between the pretest and posttest groups (Table 1), the Chi-square test was applied for categorical variables. This analysis confirmed the homogeneity of the two groups prior to the intervention. To assess the effect of the intervention on parents' knowledge, attitude, and total scores (Table 2), paired-samples t-test was used to compare mean scores before and after the intervention, as the data were approximately normally distributed. A P-value of less than 0.05 was considered statistically significant.

Results

The study included 500 participants in the pretest and 497 in the posttest. The study included participants who completed both the pretest and posttest assessments. No statistically significant differences were observed between the pretest and posttest groups in terms of demographic characteristics, indicating that the two groups were homogeneous at baseline (Table 1).

Table 1. Demographic characteristics of participants in pretest and posttest

Variable	Pretest N (%)	Posttest N (%)	P-value
Total sample size	500 (100)	497 (100)	
Gender			0.568
Male	72 (14.4)	78 (15.7)	
Female	428 (85.6)	419 (84.3)	
Nationality			0.687
Iranian	496 (99.2)	495 (99.6)	
Foreign	4 (0.8)	2 (0.4)	
Child's gender			<0.001
Boy	299 (59.8)	232 (46.7)	
Girl	201 (40.2)	265 (53.3)	
Marital status			0.273
Married	459 (91.8)	457 (92.0)	
Divorced/Widowed	41 (8.2)	40 (8.0)	
Age (years)			0.215
18–29	141 (28.2)	126 (25.4)	
29–59	356 (71.2)	370 (74.4)	
>59	3 (0.6)	1 (0.2)	
Education			0.220
Illiterate	6 (1.2)	10 (2.0)	
Below diploma	74 (14.8)	59 (11.9)	
Diploma	235 (47.0)	223 (44.9)	
Bachelor	163 (32.6)	171 (34.4)	

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Variable	Pretest N (%)	Posttest N (%)	P-value
Postgraduate	22 (4.4)	34 (6.8)	

As presented in Table 2, parents' knowledge scores significantly increased following the intervention, demonstrating an improvement in awareness related to alcohol and substance misuse prevention. In contrast, the attitude scores showed only a minimal change after the intervention and did not reach statistical significance. The total combined score significantly increased after the intervention, indicating an overall positive effect of the campaign.
As shown in Table 2, the knowledge subscore significantly increased following the intervention, whereas the attitude subscore did not change significantly.

Table 2. Impact of the intervention on parents' knowledge, attitudes, and total score

Variable	Pretest Mean (SD)	Posttest Mean (SD)	P-value
Knowledge score	5.45 (1.48)	5.80 (1.49)	<0.001
Attitude score	5.78 (1.25)	5.86 (1.19)	0.317
Total score	11.24 (2.13)	11.66 (2.23)	0.002

Item-level results for parents' knowledge and attitudes are presented in Table ۳, showing the mean and standard deviation for each item before and after the intervention.

Table ۳. Item-level comparison of parents' knowledge and attitude before and after the intervention"

Variable	Item statement	Pretest Mean (SD)	Posttest Mean (SD)
Knowledge	1.The best age to start preventing substance and alcohol use is before 8 years old.	0.58 (0.49)	0.7 (0.45)
	2. Genetic factors can influence the tendency toward substance and alcohol use.	0.38 (0.48)	0.50 (0.50)
	3. Severe marital conflicts and a chaotic family environment can increase the risk of early substance use in children.	0.92 (0.27)	0.91 (0.28)
	4. Showing affection to children during infancy and breastfeeding has no effect on preventing impulsive behaviors in adolescence.	0.89 (0.31)	0.86 (0.34)
	5. Watching scenes of alcohol consumption on TV or mobile devices does not predispose children to alcohol use.	0.80 (0.39)	0.80 (0.39)
	6. The risk of substance use is lower between the ages of 10 and 21.	0.86 (0.34)	0.89 (0.30)
	7. Early deprivation of maternal care is a predisposing factor for substance use in adolescence and young adulthood.	0.41 (0.49)	0.44 (0.49)
	8. Children should be informed about the harms of substances and alcohol before the age of 8.	0.59 (0.49)	0.66 (0.47)
Attitude	1.Patient and affectionate caregiving protects children against substance and alcohol use.	0.92 (0.26)	0.93 (0.24)
	2.Low control combined with high affection is an appropriate parenting style.	0.65 (0.47)	0.69 (0.46)
	3.Warm parent–child relationships along with supervision protect against substance use.	0.96 (0.17)	0.96 (0.18)
	4.Children who become discouraged after failure or cannot express their opinions usually have low self-esteem.	0.71 (0.45)	0.69 (0.46)
	5.Knowing a child's friends is sufficient, and there is no need to know their parents.	0.83 (0.37)	0.83 (0.36)

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	6.Family rules do not need to be firm and consistent.	0.69 (0.45)	0.73 (0.44)
	7.Affection, hugging, physical closeness, and spending time with children form the foundation of their future mental health.	0.99 (0.063)	0.99 (0.7)

Discussion

The present study examined the impact of an educational campaign on the prevention of substance and alcohol misuse among parents of children aged 3–7 years. The findings demonstrated that the intervention significantly increased parents' knowledge but did not produce a significant change in their attitudes. These results are consistent with international studies, which suggest that raising awareness is often the first step toward behavior change [٢٤ ,٢٣].

The significant increase in knowledge scores after the intervention highlights the potential of short-term educational programs to improve parental awareness. Parental knowledge plays a vital role in shaping children's understanding of substance use. Children learn and internalize behaviors within the family environment, and when lacking guidance, they are influenced by broader social contexts. Nur [٢٥] also emphasized parents' roles as observers, role models, and guides in preventing substance misuse. Other studies have confirmed that higher levels of parental and child knowledge function as protective factors against substance misuse [٢٧ ,٢٦].

Research such as studies [28] and [24] has also shown that parental education can directly reduce the likelihood of children's involvement in substance use. However, when it comes to high-risk behaviors, knowledge alone does not necessarily lead to behavioral change [٣٠ ,٢٩]. Parents who are well-informed but lack the practical skills to implement this knowledge may be unable to meaningfully influence their children's behaviors [٣١ ,٢٤]. Therefore, future programs should not only increase parental knowledge but also strengthen their practical skills in managing children's behaviors.

The present study found that parents' attitudes toward substance misuse did not change significantly after the campaign. One possible explanation is the influence of cultural and social beliefs. Many parents may already hold established views on substance use, and altering these beliefs requires deeper and longer-term interventions. Tael-Öeren et al. [٣٢]. highlighted the role of parental attitudes, noting that children of parents with more permissive attitudes toward alcohol use are more likely to start drinking and engage in frequent intoxication.

Contrary to our findings, Sarialioğlu et al. [٣٣]. demonstrated that educational interventions can improve parental attitudes toward rational drug use. Similarly, another study showed that an educational module significantly enhanced both knowledge and attitudes of parents toward substance use prevention [٢٦]. Differences in findings may be attributed to variations in the target population (e.g., focusing only on mothers), intervention design, sample size, and assessment methods. Structured educational modules used in other studies may also have contributed to stronger attitude changes, underscoring the importance of tailored and comprehensive intervention design.

Hurley et al. [34] suggested that in societies where substance use is considered deviant behavior, shifting parental attitudes requires long-term educational strategies. The short duration of this intervention may explain the lack of significant attitude change. Gilligan et al. [35] similarly found that family-based alcohol prevention programs for adolescents were more effective when conducted over longer durations compared to short-term efforts.

Overall, long-term and sustained educational programs appear to be more effective in shifting parental attitudes and behaviors. Therefore, future interventions should include continuous training sessions designed not only to increase knowledge but also to foster attitudinal and behavioral changes.

Various strategies have been recommended in the literature to enhance the effectiveness of parental interventions. For instance, Rodríguez et al. [36] found that parents who consistently communicate with their children about substance misuse play a more effective preventive role. Enhancing parents' knowledge of effective parenting strategies and self-regulation skills can serve as a key component

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of prevention programs. Greater emphasis on parent–child communication skills is thus necessary in future interventions. Schools can also play an important role by providing resources and staff to implement preventive actions, and emerging technologies such as artificial intelligence may offer additional support [۳۷]. Based on these findings, several recommendations can be made:

- Incorporating interactive educational approaches (e.g., role-playing, educational games, and parent discussion groups) to positively influence attitudes.
- Delivering prevention programs continuously over time to ensure lasting effects.
- Promoting collaboration among schools, counseling centers, and health organizations to provide ongoing support.
- Utilizing digital tools and social media to expand the reach and impact of campaigns.

Strengths of the Study

This study has several noteworthy strengths. First, focusing on parents of children aged 3–7 years is highly valuable, as this developmental stage is particularly sensitive to parental influence. Early interventions can therefore play a critical preventive role. Second, employing a public health–based educational campaign as the intervention method offers advantages such as scalability, accessibility, and adaptability to real-world settings. Third, the relatively large sample size (500 participants) enhances the statistical power of the study and increases the generalizability of findings within the cultural context of the region. Fourth, the pretest–posttest design allowed for direct evaluation of the intervention's effects. Finally, the use of standardized and validated tools to assess knowledge and attitudes strengthened the internal validity of the results.

Limitations of the Study

Despite its strengths, the study also faced several limitations. The short duration of the intervention may have been insufficient to produce sustainable changes in parental attitudes, especially those shaped by deep-rooted cultural and social beliefs. The absence of follow-up assessments limited the ability to evaluate the long-term sustainability of the observed changes. Although an increase in knowledge was observed, the study did not examine whether this translated into behavioral changes among parents or reduced risky behaviors among children. Additionally, statistical imbalance in the gender distribution of children between the pretest and posttest phases may have introduced unwanted variance into the results. The restriction of the study to a single province with a specific cultural background also limits the generalizability of findings to other regions. Finally, the absence of a randomized control group reduced the ability to draw causal inferences from the results.

Conclusion

The findings of this study demonstrated that a short-term educational campaign successfully improved parents' knowledge regarding substance and alcohol misuse, but did not significantly affect their attitudes. These results are consistent with international evidence indicating that while increased knowledge is an essential first step in behavior change, it is not sufficient on its own to modify parental attitudes and behaviors.

The most effective prevention programs are those that employ comprehensive, long-term, interactive, and multi-level approaches. Such programs should not only focus on knowledge dissemination but also emphasize communication skills, behavioral management strategies, and enhanced parent–child interaction. Furthermore, cultural considerations, social beliefs, and parenting styles must be integrated into intervention design.

Future programs should utilize technological tools, social media platforms, active parental participation, and cross-sectoral collaboration among schools, healthcare institutions, and social organizations to create more targeted, sustainable, and culturally adaptable interventions. Only through such approaches can effective prevention of substance misuse among children and adolescents be achieved.

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