

Effect of Education by Focus Group Discussion on Mothers' Performance and Awareness of Domestic Accidents in Children

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Abstract

Introduction: Accidents are a main health threatening factor and one of the major mortality factors. In Iran, the home is the most common place for accident occurrence. The most vulnerable group in terms of accidents are children. Using a focus group approach is a method for offering solutions to such problems. In health and care areas, focus group approach is a suitable approach for discovering beliefs related to risky behaviors and to search for general perceptions about reasons for diseases. Thus the current research aims at investigating effects of education by focus group discussion on mothers' performance and awareness of domestic accidents in children.

Methodology: This is a quasi-experimental before-after research. Sample size was calculated as 40 using the formula. Sampling was done randomly within multi stages. Two questionnaires including mothers' performance measurement and mothers' awareness measurement questionnaires were used for data collection. First, the questionnaires were completed by mothers. Then, educational intervention was done with 6 sessions, and mothers' awareness and performance was measured by completion of questionnaires after 2 months following the sessions, and the results were compared with the results before intervention. Pair-wise t-test was used for data analysis using SPSS 22 software.

Findings: According to the findings, awareness and performance of mothers before intervention was 5 ± 2.11 and 14 ± 3.42 , and it was 7 ± 1.17 and 22 ± 2.81 after intervention. Results showed that mothers' awareness and performance was increased significantly after intervention compared to before intervention, and pair-wise t test showed significant difference in this regard ($p < 0.0001$).

Conclusion: Research results showed that focus discussion approach as a comprehensive approach and an effective and practical nursing intervention is able to increase mothers' awareness and performance regarding prevention of children's domestic accidents.

Key words: Focus group discussion, awareness, performance, accidents

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Introduction

Accident which is also called negligence has been long recognized as a destructive and life-threatening factor for humans. With passing traditional living and the move toward steam machines, electricity, etc. accidents have taken various shapes along with other phenomena of the industry and technology era, and accidents especially have become crucially important in the world in the past decades because of significantly reduced rates of mortality due to infectious and nutritional diseases. Thus, today the accidents are raised as a widespread problem, not only on the roads, but also in the home, school, recreational centers, sport fields, workshops, etc. [1].

In the epidemiology dictionary, accident is defined to as an unexpected event which usually causes damage in traffic, work place, home, or recreational centers [2]. The World Health Organization also defines accident as unplanned event which may lead to creating damage and disturbing an activity or work [3, 4]. Willy and Wang considered accidents as a result of negligence, inattention, and unawareness of parents and curiosity of children [5].

Various factors are involved in the emergence of accidents. Accidents are the most important health threats and causes of mortality. So, according to available statistics, 16,000 people die every day in the world because of disastrous accidents. Also, after cardiovascular diseases, accidents and injuries are the second cause of death in all ages and the first cause of death in under 40 years of age, among which prevention of accidents in children is of particular importance due to the weak physical cortical of this class of society [1].

The study by Goel et al. (2004) in India showed that the road and home were the most risky places for accidents [6]. Children experience the first accidents usually at home [7]. In a study in the USA it was found that mortality resulting from domestic accidents is more than mortality resulting from work place accidents by 4 times [8], which suggests the importance of attention to domestic accidents. The most vulnerable group in terms of accidents is children and disability of this group is causing deep recession in social activities, and 5.8 million deaths annually in the world due accidents suggest this reality. According to the most recent statistics on mortality rate in children below 6 in the country in 2007, '8 percent of mortality was related to unintentional accidents, 48.7 percent of which was allocated to domestic (non-traffic) accidents and 36.9 percent was associated with traffic accident'.

In Iran, the most common place of occurrence of accidents is at home (43%), and traffic places (39%) is in the second place as the most important locations of accidents [9]. Over the past decade, unlike the decreasing number of domestic and traffic accidents in many developed industrial countries, the trend has been increasing in developing countries and in our country. So that more than 90% of deaths from accidents occur today in low or middle income countries [10]. For example, in 2003, the first cause of the disease

burden in our country was accidents and incidents, with a resulting burden of 4,008 years per 100,000, which was a total of 2.3 times that in the United States [11]. Based on the descriptive analysis on accidents in 2007, 83 percent of the accidents occurred in the village and 16 percent in the city, and 1% were unknown. The most common reason for accidents in the home was strike, fall and poisoning [12]. Health and medical damage scores resulting from accidents is not covered by immediate outcomes related to accidents, and scope of its consequences seems wider. Death in the age group below 5 years old compared to death of people above 60 causes more increase in Years of Life Lost (YLL) in the community. Years of Life Lost in the whole community is reduced by reducing children's deaths. 20 percent of Years of Life Lost due to non-intentional accidents is related to children below 5 [13]. Damage and disabilities resulting from accidents, including death, hospitalization and reference to emergency unit, may denote the severity of the damage. In the data provided by the global childhood unintentional injury surveillance (GCUIS), which was obtained based on studies about damage to children below 12 in four specific cities, it was found that about 50 percent of victims, who had to refer to the hospital after the accident, were discharged with various types of disabilities. Also in the classification of the global burden of diseases, unintentional accidents and violence are the main causes of children's deaths, and unintentional accidents account for 90 percent of these mortalities. In a study conducted in Vietnam, the cost for compensating accidents in poor families was calculated as averaging 11 months of their income. The risk of falling below the poverty line in poor families caused by accidents is 21% higher than other poor families. Therefore, effective measures should be taken to reduce costs and damages and to eliminate the safety problems, and educational programs can serve as a precautionary approach to accident prevention and the basis for many other solutions [14].

Using focus group discussion is an approach for providing solutions and data collection and a valuable method for qualitative researchers. Focus group is a semi-structured group session which is directed by the group leader, and aims at providing solutions and collecting data about specific subjects in informal conditions [15]. In this approach, the people are able to describe their emotions and behaviors [16]. In the focus group, the emphasis should be on the interaction among group members and instead of the facilitator asking questions, group members are encouraged to communicate with each other and express their experiences [17]. The main distinctive feature of a focus group is the awareness and information which is developed through interaction among the participants. It is believed that participants not only answer questions raised by interviewer, but also answer ideas of other participants. In group interview, dynamics of the group add the information quality and quantity [16]. In health and care areas, a focus group is a suitable method for discovering beliefs related to high risk behaviors and searching general understanding of the disease reasons [17]. To this end, the research team attempted to conduct a study

aiming at investigating impact of education by focus group discussion on mothers' performance and awareness about domestic accidents in children.

Methodology

This is a quasi-experimental before-after research work. The population included all families with children 6 months – 6 years under coverage of medical center of Zabol city. Sample size was determined as 80 based on a pilot study on 10 individuals and using a formula of comparing averages given confidence coefficient of 95 percent and test power of 80. Sample size was calculated as 40 with 10 percent probable sample drop out. Multi-stage random sampling was done and samples were selected based on inclusion criteria. Entry criteria included: 1- Mothers who have children from 6 months to 6 years of age. 2. Not having diagnosed physical disabilities in children. 3. Not having mental disabilities diagnosed in children. 4. Providing written consent of parents of children 6 months to 6 years for visit and attendance in sessions. Exclusion criteria included: 1. Reluctance to continue cooperation at the study stages. 2- Absence of more than once in focus group discussions. 3- Occurrence of incidents for the person so that she was unable to continue cooperation, such as death, accident, immigration. 4- Parents' inaccessibility when completing the checklist and post-test questionnaire. 5- Incomplete filling out of the checklist. Three types of questionnaires were used in order to collect data. Mother demographic data questionnaire included information such as age, education level, occupation, and number of children. Mothers' awareness measurement questionnaire measured awareness of mothers regarding domestic accidents in the children, and it was first used by Ali Nejad et al., and its content validity was supported by 8 experts in health education. In addition, its reliability was obtained using Cronbach alpha as 0.83. This questionnaire includes 8 double-choice items as Yes and No selections. Every Yes choice is scored as 1 and No choice is scored as 0. In order to interpret the questionnaire, scores of all items are summed. 0-2 score denotes poor awareness, score 3-5 denotes average awareness, and score 6-8 denotes optimal awareness of mothers [32]. Mothers' performance measurement questionnaires were used for measuring performance of mothers related to accident occurrence. Ali Nejad et al. confirmed its content validity by sending it to 8 experts of health education. Its reliability was obtained using Cronbach alpha as 0.81, which suggests optimal reliability of the questionnaire. This tool contains 6 items which are measured by *always* (4), *mostly* (3), *sometimes* (2), *rarely* (1), and *never* (0) scores. In order to interpret the questionnaire, scores of all items were summed. Score 0-4 denotes very poor performance, 5-9 denotes poor performance, 10-14 denotes moderate performance, 15- 19 denotes good performance, and 20 -24 denotes excellent performance [32].

First, the questionnaires were completed by mothers. Following primary data analysis and determining educational needs of mothers, educational intervention was done in 6 sessions based on the specified planning,

and then 2 months after focus group discussions, mothers' awareness and performance was measured again by the questionnaires, and its results were compared with the results before intervention. Educational intervention was done during 45-90 minutes of focus group discussion method.

Following data collection, data were analyzed using a central index and index of dispersion and pair-wise t-test by SPSS software version 22. The significance level was considered less than 0.05.

Findings

40 mothers were evaluated in this study. The average age of these people was 30.22. Most mothers (70%) were over the age of 35, were housewives (87.5%), had educational level below high school diploma (55%) and had 3-4 children (50%). Data analysis showed that 17.5 percent of the mothers had poor awareness, 52.5 percent had moderate awareness and 30 percent had optimal level of awareness about domestic accidents in children before the intervention. Also, before the intervention, 10 percent of mothers had very poor performance, 25 percent had poor performance, 45 percent had moderate performance, 15 percent had good performance and 30 percent had excellent performance in case of domestic accidents in children. Findings showed that 35 percent of mothers had moderate awareness and 65 percent had optimal awareness about domestic accidents in children after intervention. 5 percent of mothers had poor performance, 25 percent moderate performance, 20 percent good performance, and 50 percent excellent performance about domestic accidents in children.

According to the findings, mothers' awareness and performance was significantly increased after intervention compared to before intervention, and pair-wise t-test also shows significant difference in this regards ($p < 0.0001$). Findings in the table indicate that average awareness and performance of mothers before intervention was 14 ± 3.42 and 5 ± 2.11 , respectively. Considering interpretation of total score of awareness and performance, the mothers under study in this work had moderate level of awareness and performance regarding domestic accidents. In addition, findings showed that average awareness and performance of mothers after intervention was 7 ± 1.17 and 22 ± 2.81 , respectively. Considering interpretation of total score of performance and awareness, the mothers under study showed an optimal level of excellent awareness and performance regarding domestic accidents after intervention (Table 1).

Discussion

Mothers' readiness for acting properly in order to avoid domestic accidents in children requires shaping their behavior, and increasing awareness of mothers is the primary step for developing correct behavior. Increasing mothers' awareness regarding domestic accidents and training about its risk factors is crucially important.

Table 1: Comparison of mothers' awareness and performance about domestic accidents in children before and after intervention

Variable	Before intervention	After intervention	Test result	P-Value
	Mean ± SD	Mean ± SD		
Awareness	5±2.11	7±1.17	10.13	<0.0001
Performance	14±3.42	22±2.81	4.87	< 0.0001

Research findings showed that mothers' awareness was at a moderate level before intervention. The reason for the lack of general awareness in this regard before the intervention can be due to lack of promotion by mass media, lack of relevant meetings by the health care staff and negligence in prevention and focus on treatment, but after education, the mean score of mothers' awareness was significantly increased. These findings are similar to those of other studies, including Kerbi [18], Mazlumi [19], Ghaffari [20] and Gamig [21]. In these studies, most of the research samples had a low or moderate level of awareness before training, but awareness increased after training and most of the trained people enjoyed a high degree of awareness and these results were consistent with the results of our intervention.

Findings by Park on cervical cancer showed that significant difference was developed between intervention and control group in terms of awareness after educational intervention [22]. The intervention group showed significant increase in awareness after educational intervention. In the study by Clear, which was conducted using Health Belief Model on status of Jamaican and Haitian men about prostate cancer, results indicated that awareness of Haitian men was at a low to moderate level without education, which is consistent with results obtained from intervention in this work. Measuring mothers' performance regarding domestic accidents in children before and after intervention was the other goal in this research. Results showed that mothers' performance in this regard was 14 ±3.42 before intervention which suggests a moderate level of performance in mothers. But it reached to 22 ±2.81 after intervention, which implied that educational information promoted mothers' performance from moderate to excellent.

Concerning mothers' performance, results showed that mothers' performance score regarding prevention and control of domestic accidents in children as well as the way of dealing with injured children improved after education. Overall, mothers' performance after intervention was significantly promoted. In the study by Mazlumi, average performance score increased to 19.36 from 15.11 after intervention and it was indicated that inadequate performance of mothers before intervention was probably low awareness level and ignorance about its necessity [19]. No significant difference was observed in terms of performance before intervention in the two groups in the studies by Ghaffari [20] and Sharifirad [24], and performance of both groups was at a similar level before intervention, but average performance scores were significantly increased in the intervention group compared to the control group. Findings by Park [25], Karimi et al. and Rahimi Kian et al. are also consistent

with the findings in the current work, and imply effect of education on adopting expected behavior or performance. The study of Rahimi Kian et al. about using education by Health Belief Model in selection of delivery type (normal or cesarean section) indicated that there was significant difference in performance both in the intervention and control groups after intervention, but mean scores of the intervention group were higher than the control group, and this difference was significant [26, 27].

The findings by Tabeshian and Farokh were inconsistent with findings of the current study [28], so that mean awareness and attitude scores before and after educational intervention showed significant difference, but mean performance scores before and after intervention showed no significant difference. No change was observed in their performance probably due to lack of pursuing the educated material and high preoccupation of the research subjects. Based on the results, it was found that the higher the number of children, the greater the awareness and performance of mothers in domestic accidents, which could be due to the increased experience of mothers with children. Also, the results showed that the higher the level of maternal education, the awareness and performance of mothers about domestic accidents in children increases. A study by Eldosoky et al. found that educated mothers and mothers with high socioeconomic status had a high level of home-safety for domestic incidents that was consistent with the current study [29]. However, in a study by Hatamabadi et al., it was found that level of education is not directly correlated with safety measures of mother [30]. This difference is likely to be related to the varying sample size, research environment or culture and customs of the research population.

In the current study, a statistically significant relationship was observed between occupational status of mothers and their awareness and performance about domestic accidents in children, which may be due to such factors as higher literacy, better economic status, and better living facilities. While in a study by Hatamabadi et al. it was found that occupational status is not directly correlated with safety measures of mothers [30]. This difference is likely to be related to the varying sample size, research environment or culture and customs of the research population.

Conclusion

Research findings suggested that focus group discussion as a comprehensive approach and an effective and practical nursing intervention is capable of increasing mothers' performance and awareness regarding prevention of

domestic accidents in children. Implementing education as focus group discussion leads to more effective outcomes, especially in the safety area. Considering research findings on application of focus group discussion as an educational method for preventing domestic accidents in children, effective outcomes of this approach can be used in this sensitive and important issue. Given significance of education role in promoting accident preventive behaviors and considering the fact that unsafe houses have widespread consequences for children such as hospitalization, disability, and death in some cases, necessity for education in a wider range using various means in the community is needed more than ever, and it should be considered as a health priority in the community. Therefore, this approach can be recommended as a guide for progress of educational programs beside other health care, especially for families with children under 6 years old.

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