The impact of lecturing and video playing methods (lecturing and video playing) on the knowledge of third grade male students about prevention of accidents and injuries in Zahedan, 2008

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Abstract

Introduction: Accident and injuries are important risk factors of health, leading to death and disability in all countries. This study was conducted aiming at determining the efficacy of education through two methods (lecturing and video playing).

Material and Methods: The present study is a semi-experimental study on 104 third grade students. They were given a self-made questionnaire including 15 questions about their knowledge. They were then interviewed. The data were analyzed using paired t-test.

Results: The results showed that there is a significant relationship between the mean scores before and after training. The knowledge was more increased in video playing than lecturing methods (P<0.001). There was a significant relationship between the pupils’ knowledge of their parents’ literacy (P<0.001). There was no significant correlation between the level of knowledge of the pupils and their parents’ job.

Conclusion: Based on the results of this study, it seems necessary to prepare appropriate educational programs, using interesting and exciting methods about prevention of accidents and events for primary school children.

Keywords: Knowledge, Lecture, Students

Introduction: Accidents have been defined as unexpected and unplanned events that can cause damage (1). World Health Organization has defined accidents as events occurred without a corroborated history (2). Accidents and injuries are complex phenomena that are affected by many factors (1). Traumatic events achieved by human errors or lack of safety, are the manifestation of carelessness. Accident’s causes and factors in a community are related to host factors (such as age, sex, occupation, personal awareness and social activities), physical environment factors (such as roads, school, location, family situation and weather. 

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The impact of lecturing and video

conditions), Social factors (such as lack of safety culture and attitude, lack of respect or lack of control, poor compliance with laws and regulations and lack of proper design and type of care in homes and schools, roads and other places for instance(3). Present decade has been called the year of prevention of accidents. As well as personal habits, lack of community education especially in schools has an important role in reducing and controlling events and represents as part of a chain of causes and potential causes of accidents (3).

Children are the most vulnerable group regarding diseases and accidents (4). Several studies show that millions of children lose their lives following disaster every year and many of them suffer from disability lifetime. Accidents can be seen in children in different forms such as: poisoning, falling down, electric shock, suffocation, burns, injuries and accidents resulting from corporal punishment. Some accidents occur more than others in some of age groups (5). According to Forensics data in Iran, accidents are the second major cause of death in children. Results of a study show that accidents are the second major cause of death in children who are younger than 5 years old in Khoarsan. However, another study conducted in Kerman showed a negative relationship between age and accident (6).

Types of accidents are closely related to the child normal growth and developmental behavior. For example burns from boiling water, and events such as accidents, fall and poisoning are detected in young children. In children of school age car accidents are of major causes (7). According to data of Tehran forensics organization, at 1996, 1997, 1998 and first six months of 1999, 1071 death out of 1439 dead children (884 boys and 555 girls) that have been referred to this organization, are caused by accidents. But these two data cannot be compared because not all of children death cases are referred to this organization and just cases with death reasons such as accidents, burning, suicides and poisoning should be referred to this organization for autopsy by law.

These Data are as followed: car accidents 53.87%, burning 24.29%, Electric shock 3.91%, Drowning 4.19%, fallings 3.77%, poisoning 2.73%, foreign body swallowing 3%, Stabbing (knife)2.46%, gun Shot 0.18%, Hanging 0.45%, Others include falling debris and explosion 1.18%. The most frequent age was 7 to 12 years old (40.9%) and the most frequent gender was male 67.2% (8).

Accidents prevention includes knowledge of past events. It is through knowledge of the past that we can try to prevent making the same mistakes in the future. Creating favorable attitudes and behavior to prevent accidents is important. In this way a culture of safety is developed for the society. Training standards and principles of accident prevention is an integral part of each country's culture and education. This training should be considered for children in early years so that they can learn to develop their own health beliefs and behaviors (9).

Lecture is the most common and simplest form of verbal communication. Teachers use it to convey ideas, thoughts, information and skills to make changes in student’s attitude. In this method communicators or teachers actively teach and students have a passive role.

Regular and effective training is totally reliant on media training. Educational opportunity via comprehensive media changes skills or attitudes effectively (10) the media has an effect on the mind, deeper and more accurate of the same message presented through the written and spoken words. Using different methods of education can increase awareness thus provide a positive impact. By means of different
educational methods we can eventually improve behavior and performance in order to prevent accidents (10). TV has been known as the most effective and stimulating communicative tool of what the audience-by color moving pictures - can lead to emotional messages. Several studies showed that exposure to information and health behaviors through entertainment media, even briefly, can have a strong impact (11).

School has a central role as it’s the place where students, teachers and parents gather in a core of Knowledge transfer that creates favorable attitudes, and finally changes students’ behavior as a determining role in the evolution of health in the community.

In these ages there is lesser resistance to learning concepts and behavior patterns. Changes remain stable and can affect the lives of children in the future. In our country each year, disasters affect large numbers of children, It seems lack of an organized program of accidents prevention in each region can be an important factor in successful prevention (12). This study compares the impact of lecturing and video playing methods (lecturing and video playing) on the knowledge of third grade male students of accident and injuries prevention in Zahedan, 2008.

Material and Methods:
The present study is a semi-experimental study that determines the effect of education through lectures and video playing on knowledge of the students of the third grade of elementary school who learnt about preventing accidents in. The study population was male students of the third grade of elementary schools in Zahedan city, 2008-2009. 52 patients were selected for each groups Cluster sampling was used. The researchers presented their subjects and aim of their study, responding to the questionnaire was explained and questionnaires were presented to them. Students who had mental retardation or physical problems or those who were stepchild or who did not live with their parents and those who were not willing to take part in the study were excluded. Participants were allocated into two groups: The first group with 20 minutes lecturing about the prevention of accidents described, and the second group with 20 minutes of video playing learning methods of preventing accidents. The film was produced by experts responsible for the incidents in Sistan-Baluchestan province health center using scientific and educational resources. Educational content in video playing and lectures included falling, burning, cutting, electrical shock, drowning and suffocation, drug intoxication, accidents, traffic accidents and school sports ground, deep cuts, severe bleeding. In each method after pre-test, educational materials was presented for 20 minutes and then question and answer session was conducted between researchers and students. Results of the two groups was performed using descriptive statistics were analyzed with SPSS software. Age and low levels of education of students, ring tones sports recreation made some problems in filling the questionnaire. We collected information from a self-made questionnaire, which measured knowledge about the prevention of accidents. This tool was created and designed based on available scientific information about the prevention of accidents. Multiple choice questions rose in this instrument with 15 questions and each correct response 1 score and 1 negative score was assigned for each wrong answer. Finally, the knowledge to good grades (11 to 15), moderate (6 to 10) and weak (1 to 5) was divided. B: in the original questionnaire, five questions were raised about the demographic information of students. Validity of instruments used in this study was measured by using content validity. By applying the available professors who
possessed board certification), original instrument was adjusted and presented to 5 Nursing and Midwifery faculty members of Zahedan University of Medical Sciences. After collecting the opinions and actions, the tool was presented to the Research Council for final review and approval. The reliability of the questionnaire was measured by using the Krunbach Alfa calculated versus 0.85 respectively.

**Results:**
52 students participated in lecturing group that 75% their father jobs were office staff (employee), 21.1% free job and 3.8 percent of their father were jobless. Video playing group of 52 students 59.6 percent employees 30.9 percent free job and 9.5 percent were jobless. In the lecturing group, from total 52 students 66.9 percent of their mothers jobs were housewives and 33.2% of mothers were employed, and the video playing group 73.4% of mothers were housewives and 26.6% of mothers were employed. In terms of parent education in lecturing 4.7 percent of the fathers were under graduates, 36.7 percent Education Diploma and 58.6 percent had university education. 11% of fathers in video playing group were undergraduates, 45.3% and 43.7% had Diploma. Mother’s education in lecturing was: 13.1% undergraduates, 38.2% Education Diploma and 48.7% had university education. In video playing group 21.4% undergraduates, 57.1% diploma education and 21.5% were university educated. Knowledge difference before and after the intervention of lecturing training group was statistically significant (p=0.00). Before the lecture method of teaching 11.6% of students had poor knowledge, but the poor knowledge was not found after training. And before the lecture method of teaching 24.3% had a good awareness, while after lecture 85.7% had a good knowledge (table 1).

<table>
<thead>
<tr>
<th>Training method</th>
<th>Awareness frequency</th>
<th>Lecturing Before training</th>
<th>Lecturing After training</th>
<th>Video playing Before training</th>
<th>Video playing After training</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Poor</td>
<td>(11.6) 6</td>
<td>(0) 0</td>
<td>(11.5) 6</td>
<td>(0) 0</td>
</tr>
<tr>
<td></td>
<td>Moderate</td>
<td>(64.1) 33</td>
<td>(14.3) 7</td>
<td>(69.3) 36</td>
<td>(1.3) 1</td>
</tr>
<tr>
<td></td>
<td>Good</td>
<td>(24.3) 13</td>
<td>(85.7) 45</td>
<td>(19.2) 10</td>
<td>(98.7) 51</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>(100) 52</td>
<td>(100) 52</td>
<td>(100) 52</td>
<td>(100) 52</td>
</tr>
<tr>
<td>Result</td>
<td></td>
<td></td>
<td></td>
<td>P &lt; 0.000</td>
<td>P &lt; 0.001</td>
</tr>
</tbody>
</table>

Awareness before and after Video playing was significantly different (p=0.001). Before training in this group 11.5 percent of students had a poor knowledge, while zero percent of weak knowledge was found after training. Also before training 19.2 percent had a good awareness, while after 98.7 percent were in a good knowledge (table 1). T-test shows that the mean initial knowledge in both groups, was not significantly different (Table 2). Independent T test showed that the difference between knowledge scores before and after training was different between two groups (p=0.001).
T-test shows significant differences in mean knowledge score of the video playing to raise awareness through lectures there, 4.16 ± 1.4 in lecturing group compare to video playing group 5.2 ± 1.7, p=0.001).

**Discussion:**
This study showed that there is significant difference in raising awareness between video playing and lectures group (p=0.001) is consistent with Sadrzadeh, Farhadi, and Safari’s studies (13-15). According to the results of this study we find that training via video playing at this age is more useful than traditional lectures. In video playing method child's imagination is encouraged to develop theories and he is practically involved in the training. A kind of passivity in students are seen who were undergone speaking courses. However, in video-playing group, children were happier, excited Training was well performed in both groups and both groups of students were good listeners. Azeredo and colleagues in September 2003 demonstrated the very same results [16]. In 2008 Awopetu also showed that the media due to the addition of color animations main factor in the effectiveness, excitation and transmit messages in terms of emotional health (11). Our study showed that most accidents occur in families with low parental awareness. This is in agreement with Farhadi’s study (14). Low levels of parental knowledge, carelessness and lack of parental supervision are associated with significant increase in incidents. Children in low socioeconomic families are more susceptible to danger (14). Tabibi tells that education level of parents is also a related factor in to children’s accidents. Safety educations to children through schools, parents, books and television programs are provided. The most important source of safety training to children are parents, while they consider that media is the best source of education for their children's (12).

Regarding Questions in the survey questionnaire, the least knowledge score was for the questions below: “What should be done when you bite?” “How can we help people who got electric shock?” “What is the best action in Fracture?” The best results were achieved for the question “what should be observed during play at school?” assessing students’ knowledge to knowledge questions revealed that they had poor knowledge on bite, electric shock and Fracture. On contrast they had adequate knowledge on what to observe out for school playing.

Knowing these facts, we can concentrate on topics which students lacked knowledge Esmaili and colleagues in a survey in 1999-2000 studied patterns of injuries in children under 15 years in Mazandaran province. They also obtained these result [7]. Our first step in educating pupils could target those subjects which students had poorer knowledge of. Also understanding the most common injury patterns, we can develop programs that provide regular and timely warnings toward these possible events. These programs should be developed based on individual characteristics, family characteristics, and cultural facts in order to

**Table 2: Mean knowledge scores about the prevention of accidents in the two groups, lectures and screenings before and after the city of Zahedan, 2008**

<table>
<thead>
<tr>
<th>group</th>
<th>number</th>
<th>Mean and SD of scores before training</th>
<th>Test Results</th>
<th>Number</th>
<th>Mean and SD of scores after training</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecturing</td>
<td>52</td>
<td>8.1 ± 2.04</td>
<td>t = 0.504</td>
<td>52</td>
<td>12.27 ± 1.4</td>
<td>t = 5.6</td>
</tr>
<tr>
<td>Video playing</td>
<td>52</td>
<td>8 ± 1.6</td>
<td>P &lt; 0.6</td>
<td>52</td>
<td>13.21 ± 0.8</td>
<td>P &lt; 0.001</td>
</tr>
</tbody>
</table>
reduce mortality and its possible complications. If we ignore preventing possible future events, events that have left little physical damage and has been considered unimportant, could become a disaster with greater damage in the future. So after each incident, even small, providing an immediate solution is necessary (9). Active training methods such as video playing has a big impact on people, especially elementary school age students because students’ curiosity and strength increase this way, and on the other hand students would be able to experience the story of others and build the results it in their mind. Nonetheless preventive methods and trainings are not be possible without any structural organization. These findings are consistent with the results of Farhadi’s study (14).aren’s educational level as a factor in preventing accidents in children is associated (14). Because the most important source of children’s safety training children are parents who are aware of the facts, thus educating parents on child safety is included in books.

**Conclusion:** Overall, there is not a comprehensive children training program to improve safety levels in Iran. It should be pointed out that the issue of child safety in the scientific community and in community planning and policy has been neglected by policy makers [11]. We recommend planning and designing an appropriate age-based curriculum including safety principles in order to prevent accidents and maintain. This curriculum should be applied in basic students’ education

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