Awareness of Basic Cardiopulmonary Resuscitation (CPR) and Related Factors in Patients Referred to Shahidzadeh Hospital in Behbahan: A Study in Southwestern Iran

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ABSTRACT

Background: Given that the golden time to rescue a patient with cardiac arrest is only a few minutes, and since many deaths occur before the patient arrives at the medical center, if those present at the scene are familiar with basic resuscitation, they can perform resuscitation, Prevent the death of the person. Due to the importance of measuring the level of knowledge of individuals, this study was conducted to determine the level of knowledge about basal cardiopulmonary resuscitation in patients referred to Shahidzadeh Hospital in Behbahan in 2020.

Materials and Methods: This cross-sectional descriptive study was performed on patients referred to Shahidzadeh Hospital in Behbahan in the first quarter of 2020 by available sampling method. The data collection tool was a researcher-made questionnaire of basic cardiopulmonary resuscitation with face validity and reliability was 0.71. Data were analyzed using SPSS 20 software and independent t-test, ANOVA, and Pearson correlation coefficient.

Results: This study was performed on 169 patients with a mean age of 25/12±57/34 patients referred to the hospital. The mean knowledge of these people was 69/2±12/4 which indicates poor knowledge in the field of resuscitation. People with higher education and people who had obtained information in this regard during their studies, had a statistically significant better knowledge than others ($p < 0.05$). There was no statistically significant relationship between the mean scores of knowledge and gender, marital status, and place of residence ($p > 0.05$).

Conclusion: The results showed that the level of clients' awareness of cardiopulmonary resuscitation is low and special attention should be paid to increasing the awareness of these strata in the macro programs of the health network and the health care system. Also, using strategies such as using new classes and educational tools can be very effective and raise the level of awareness of these people. It is also suggested that this study be performed in the clients of health centers and other related factors be examined.

Keywords: Knowledge, Cardiopulmonary Resuscitation, Cardiac Arrest, Hospital Referrals.

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Introduction

In developed countries, after cancer and heart disease, sudden cardiac arrest is the third most common cause of out-of-hospital death.[1] If the rescue rate is less than 8%.[2] Many of these cardiac arrests occur outside the hospital and cause the person to die before reaching the hospital. In Europe, 350,000 people each lose a year of their lives due to a sudden out-of-hospital stop. This figure is estimated at 60,000 in the UK.[3] In the United States, out-of-hospital cardiac arrest occurs every year for 350,000 people. 9 out of 10 people do not survive this cardiac arrest.[4] After a sudden cardiac arrest, brain cells can only endure 3 to 5 minutes without oxygen. In almost all cases, this time is much less than the time required to reach the emergency services.[1]

Basic cardiopulmonary resuscitation is a life-giving technique used in a variety of situations, including cardiac arrest. It involves a combination of breathing and the cardiac massage that circulates oxygenated blood to the brain and other vital organs. Throws so that decisive medical treatment can restore the normal heart rate.[5] This operation is performed without the need for any additional equipment.

Despite medical advances, basic cardiopulmonary resuscitation is the most important factor in saving the lives of out-of-hospital cardiac arrest victims.[6] Research shows that early detection of cardiac arrest and cardiac resuscitation by those present at the scene improves rescue Forgive.[7] Immediate resuscitation by those present at the scene increases by 2 to 3 times the rate of rescue from cardiac arrest outside the hospital. The chance of survival from cardiac arrest decreases by 7-10% per minute if resuscitation is not started.[8] For every 24 to 36 people who are resuscitated by those present, one life will be saved. However, despite the life-saving benefits of performing resuscitation on an out-of-hospital cardiac arrest victim, the rate of surgery is low.[4]

Public resuscitation training is essential to increase the rate of resuscitation by those present at the scene. Cipsma et al. Have reported that resuscitation will be greater when people undergo resuscitation training within the past 5 years or more.[3] Therefore, awareness of cardiopulmonary resuscitation is very important, and not only should numerous valid and accessible courses be organized to increase public awareness, but also reminder courses should be planned.

Saving lives is usually done by medical personnel, so many studies have been done on the awareness of medical staff such as doctors and nurses in the field of awareness of cardiopulmonary resuscitation. This stratum of society should be limited. In different countries, there is more emphasis on public awareness. In many countries, learning first aid and cardiopulmonary resuscitation is part of the requirements for obtaining a driver's license and also part of the educational curriculum for students. Primary resuscitation training (since January 2005), as well as driving licenses (since October 2006), have been part of public planning.[10] More than half of students in the United States undergo cardiac resuscitation. In Norway, 89% of high school students have

taken cardiopulmonary resuscitation training. 70% of Japanese people have also taken cardiopulmonary resuscitation.[2]

Given that many cardiac arrests occur outside the hospital, where there is likely to be neither the skilled force nor the equipment to rescue the person, and that it will take some time for the emergency services to arrive. Medicine, so because of the vital importance of time to save a person, the presence of people trained in cardiac resuscitation can be very effective in saving the lives of many victims. If resuscitation is performed quickly, in 40 to 60% of cases, it saves lives, but the success of resuscitation depends on the skill and proper performance of the resuscitator and his level of awareness.[11] Therefore, this study was performed to determine the level of public awareness about basic cardiopulmonary resuscitation (CPR) in patients referred to Shahidzadeh Hospital in Behbahan.

Materials and Methods

This descriptive cross-sectional study was performed on 169 patients referred to this hospital in the first quarter of 2020 with the permission of the esteemed head of the health network, director, and metron of Behbahan Shahidzadeh Hospital. The data collection tool was a researcher-made questionnaire of knowledge of basal cardiopulmonary resuscitation with face validity and reliability of 0.71. The questionnaire consisted of two parts including demographic information (6 questions) and the part related to awareness of resuscitation measures included 16 questions. The questions were in five options, 4 of which were related to resuscitation information, and the last option was that if the person was not completely sure of the correct action or did not know the correct answer in general, he would choose the "I do not know" option. Questionnaires were available to people on different days during the first quarter of 2020. First, each person was given explanations about the questionnaire and then, if they were satisfied and filled out a written consent form, the questionnaire was given to them. The names of the people were not included in the questionnaire. This study was performed in different wards of the hospital, including the emergency department, clinic, and internal medicine department. The patients' companions and in some cases, if possible, the patients themselves participated in the study if they wished. Then the questionnaires were collected and counted. At first, 230 questionnaires were collected, among which the questionnaires that had incomplete information or the questions were not completely answered, were separated and at the end, 169 questionnaires were collected.

Statistical Analysis

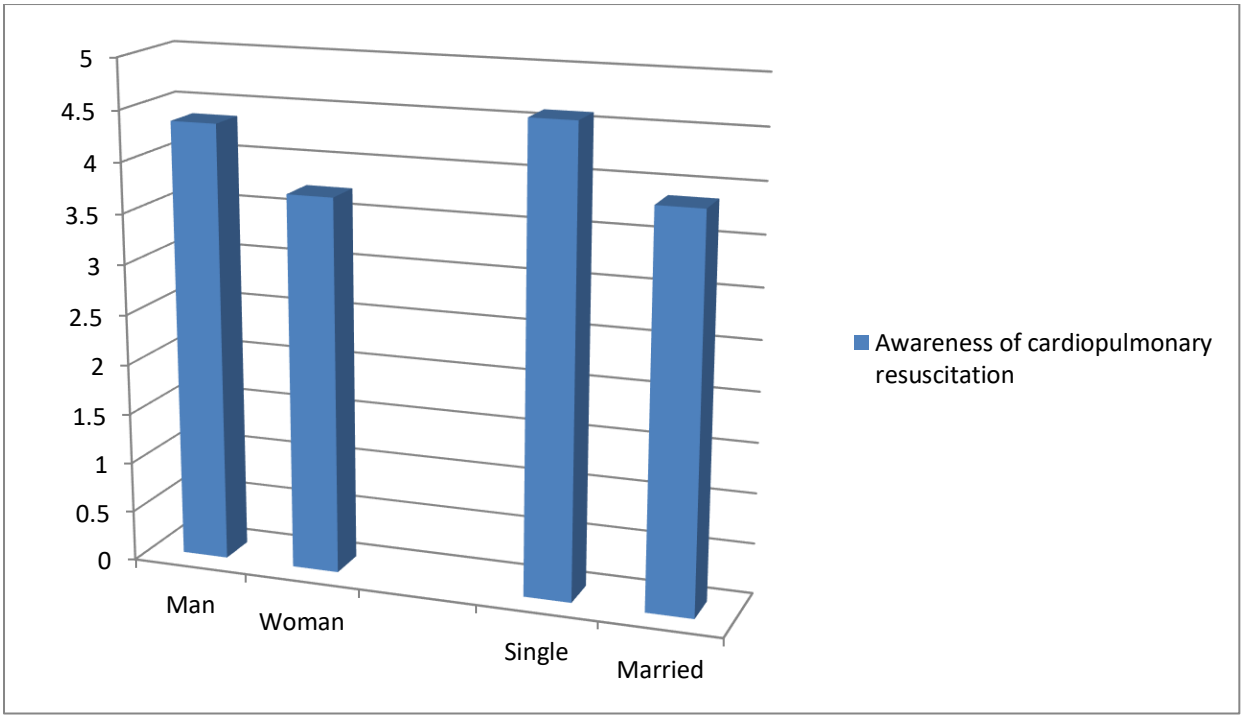
The variables examined in the study included age, sex, marriage, residence status, level of education, and source of information about resuscitation. The scoring of the questions was such that the correct option got a score of 1 and the incorrect options got a score of 0. The level of awareness was considered based on the number of questions related to resuscitation from 16 points and then the level of awareness was divided into three periods of low (0 to 5), moderate (5 to 11), and high (11 to 16). Data were analyzed using SPSS 20 software and independent t-test, ANOVA, and Pearson correlation coefficient.

Results

The subjects in this study had a mean age of 34/57±12/25. 62.1% of the target population were male and 37.9% were female, of which 36.7% were single and 63.3% were married. 97.6% lived in the city and 2.4% lived in the

villages of Behbahan. Also, 39.6% had a diploma and 33.1% a sub-diploma, and the rest had a master's degree, bachelor's degree, or higher. According to the information source, 8.9% of their information about cardiopulmonary resuscitation was obtained from training courses and 19.5% were obtained from cyberspace and 10.1% were obtained during information education. Also, 61.5% had not yet received information in this regard.

The mean score of these individuals was 69/2±12/4, which indicates poor awareness about resuscitation. 68.6% of the subjects had poor knowledge and 98.8% had poor and moderate knowledge. Individuals with higher education and those who had obtained information in this regard during their studies had statistically significantly better knowledge than others ($p < 0.05$). There was no statistically significant relationship between the mean scores of knowledge and gender, marital status, and place of residence ($p > 0.05$). (Figures No. 1)
There was a negative and statistically significant correlation between age and awareness about resuscitation ($p = 0.35$) ($r = -0.07$).



Figures 1: Mean scores of knowledge about cardiopulmonary resuscitation by gender and marriage in patients referred to Shahidzadeh Hospital in Behbahan

Discussion: Basic cardiopulmonary resuscitation is one of the most important skills that any person can acquire in life. Today, due to the high prevalence of heart disease in society, gaining knowledge and skills in this field is an essential need. However, the results of this study showed that the level of awareness of basic cardiopulmonary resuscitation among clients as a part of the general public is very low.

Due to the great importance of this issue, many studies on public awareness of cardiopulmonary resuscitation in It has been done in different countries, which gives different results.

Numerous studies in this field indicate that public awareness in this area is not good. A study on public awareness of cardiopulmonary resuscitation in Oman showed that 54.8% of people did not know how to perform cardiopulmonary resuscitation.[12] which is consistent with the results of the present study. A study by Míguez-Navarro et al. On awareness of resuscitation and first aid among parents also showed that 41.7% of them had no awareness in this area, 6.9% had poor awareness and 3.7% had very poor awareness. The study by Hung et al. In Hong Kong also found that out of 1,013 participants, only 214 (21%) reported receiving resuscitation training.[14] In a study conducted by Salehi et al. On the companions of patients with cardiovascular disease on the effect of resuscitation training, the results before the training showed that most people (60.4%) were not aware of cardiopulmonary resuscitation. The rate increased after training.[15]

In contrast, research has been conducted that shows high public awareness in the field of resuscitation. A study by Dobbie et al. Of 1,027 people in Scotland found that more than half of the population (about 52%) was trained in cardiopulmonary resuscitation.[16] Another survey across Taiwan found that out of 1,073 people, 456 (42.5%) did not know how to perform resuscitation, while 617 (57.5%) did not know how to perform resuscitation correctly.[17] which is inconsistent with the results of the current study.

Numerous studies have shown that knowledge of resuscitation measures alone will not guarantee its implementation in urgent situations. Rather, this awareness must be integrated with practical skills in this area to ensure that individuals are able to perform it. In this regard, the study of Meng Chen et al. In China on 1841 non-professionals showed that only 25.6% of people have participated in cardiopulmonary resuscitation training, of which almost half (50.8%) of these people have been trained in They knew the standard of cardiopulmonary resuscitation and believed they could perform resuscitation. In contrast, 49.2% of those trained said they knew resuscitation but believed they could not do it on the victim.[2] In the study by Mpotos et al., Among 4273 teachers, it was found that 58% had received training in cardiac resuscitation, of which only 47% felt that they had the ability to stop resuscitation in one position. Do the heart and the remaining 53%, despite being aware of it, stated that they are not capable of performing the operation in a real situation.[18]

As mentioned earlier, in other countries, resuscitation education is part of the curriculum for students in schools, and special attention has been paid to educating this segment of society about resuscitation. However, research shows that awareness remains low. A study by Zhi-Qiao Chen et al. Among Chinese students shows that a small percentage of them have heard (28%) or read (27%) about cardiopulmonary resuscitation and only 3% of them have taken a cardiopulmonary resuscitation course. Similarly, a study by Alanazi et al. On 575 high school students in Riyadh showed that 58% of them had no prior knowledge of cardiopulmonary resuscitation.[20]

Research on public awareness of cardiopulmonary resuscitation well illustrates other factors affecting this awareness. A study by Al Enizi et al. On high school teachers in the field of cardiopulmonary resuscitation, awareness shows that only 36.7% of them have already participated in a cardiopulmonary resuscitation training course. To people who were not trained.[21] One potential reason for this was that teachers had received the training about two years before the study was conducted. This suggests that, as with any other learning, the likelihood of forgetting resuscitation skills and training is likely to be forgotten. Over time, there are courses that require retraining and recall of these skills. On the other hand, it is necessary to be informed of the latest changes in the guideline of resuscitation measures, which can be achieved with the help of these courses.

In general, the results indicate that awareness of cardiopulmonary resuscitation, even in developed countries, requires more and better programs in this area, and reliance on education alone can not guarantee resuscitation, but people should be encouraged in addition to gain knowledge, apply what they have learned in real situations.

Conclusion: Based on the obtained results, it can be concluded that the level of knowledge about basic cardiopulmonary resuscitation is very low among those referred to the hospital. Considering that Behbahan is a city with a limited population, this result can be generalized to the general public. . This lack of awareness can cost many lives. One of the main reasons for the lack of this knowledge is the lack of valid and regular training courses on resuscitation measures. Therefore, to reduce the human casualties that can be done with simple training, it is recommended to arrange basic resuscitation training classes with modern training methods. And reminder courses should be included in plans of the healthcare network. Considering the educational degree at the end of these courses and the efficiency of this degree is a reward to encourage people to participate in these courses. Placing short training in this regard in the mass media also increases the level of awareness. People will add.

This study was conducted only in the field of awareness of resuscitation measures and its results can not be used to assess the level of performance and attitude towards resuscitation. Therefore, it is recommended to conduct research in this field and examine these factors. Doing this research in other health centers with a higher statistical population will give much clearer results.

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