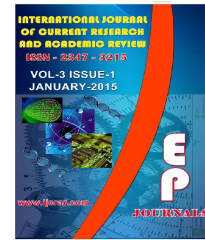




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### Correlation between Education and Effect on Increase Knowledge High Blood Pressure Patients Referral to Hospital

Hassan Reza Anbarlo<sup>1\*</sup> and Shagayeg Asl Irvanlo<sup>2</sup>

<sup>1</sup>Medical Surgical Nursing and Nursing Education , Supervision general operation room in the Mosavi Ayatollah Hospital Zanjān, Iran

<sup>2</sup>The CCU Nurse in Mosavi Ayatollah Hospital Zanjān Irralation with the University Medicine Zanjān , Iran

\*Corresponding author

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#### A B S T R A C T

High blood pressure is the most enormous chronic problem in the developmental industries countries world and it is the cause importance mortality due to cardio vascular disease, cerebral attack and end stage renal disease. Hypertension has had a problem for developmental countries, this is common problem whether, and it has without singe and symptoms. If it was not treatment that it can be mortality complication. Education is the basically process and without end for treat and cure that may need to frequently or alter with patient conditions. This study was for reasoning to need nearby correlation between patient and family at giver health intervention and continue so that study was complement for evolution correlation between education and effect on increase knowledge high blood pressure patients in town Zanjān. This clinical experimental study was conduct on 120 patients – male and female referral at wards C.C.U and heart emergency and specialist dispensaries in Mosavi ayatollah in 1390 that subjects elected by randomized and target available population stratified. Data are gathering by self maker questioner that validity was evaluated with pilot after those gathered data were analyzed using descriptive and t test and Mac Nemar and Velikakson. Finding this study show 29/5% of target population was female and 70/5% of patients were male that so more target population (79/5%) were 50–59 years old and at least 20/5% was more than 70 years old. The mean of age patients were 53/3years old with standard deviation 13/5. This finding reveals to mean level of awareness predication was 70/56 percent that post education level of awareness arrived to 75/57 percent and that mean effects education on awareness was %73 with standard deviation 13/02 percent. This present study revealed that relationship significant was between awareness level pre education and post education. So it could be educated to prevention of decade morbidity disease.

## **Introduction**

Training is a way of life based on defined patterns of behavior determined through the interaction between individual and social characteristics, economic, environmental and social life conditions (WHO, 2010) and an important factor in physical, psychological and emotional health, and social well-being of them and one of the ways to reduce the progression of chronic diseases such as cardiovascular disease and cancers. The control of cardiovascular diseases such as blood pressure needs to comply with a correct lifestyle and change the wrong lifestyle in lifetime through training (Shahram and Freidon, 2010). Learning is defined as the acquisition of knowledge, attitudes and skills, and training helps learning. The definitions indicate that training -learning process is an active task requiring cooperation and partnership between patient and nurse in the field of nursing in order to achieve the goals and pervasively change behavior and also, training is one aspect of care with an important role between patient's success and failure in preventing or coping with chronic conditions (Harrison Hall, 2011). Coronary artery disease is now the leading cause of morbidity and mortality resulted from cardiovascular diseases and its risk factors include obesity, high blood pressure, and high blood fat (Andreoli, 2008). Hypertension is one of those diseases which is usually diagnosed accidentally. The patient may have this problem for years, but unaware of his/her condition, this is why hypertension is called the "silent killer" (Smeltzer and Bare, 2011). People with hypertension may be asymptomatic and maintain this position for several years, but when certain signs and symptoms appear, they usually exhibit cardinal changes, specific symptoms and involvement of organs by affected vessels. Studies show

that the prevalence of hypertension in Black Americans is 37.4%, in White Spanishes 23.3% and in Mexican Americans 23.6%. The rate increases with age and the disease is more common in young men than women. In studies carried out in 2006, the rate of people suffered by hypertension was approximately 27% for individuals aged 45-69 years and about 42% for individuals over 70 (Khani and Ansari, 2003). It was 12% for people over 20 and 3.4% in people over 55 in 2002 in Zanjan (Blacky *et al.*, 2005). Stress, obesity, diet, tobacco use, alcohol use, high blood sugar, inactivity and long-term use of contraceptive pills are among the non-modifiable risk factors increasing blood pressure (Taylor, 2009). Balancing lifestyle and training about lifestyle factors can be effective in preventing and reducing blood pressure. One of the aims of training is to encourage patients to do some activities for lifestyle changes to protect and promote the health of themselves (Williams and Ray, 2007). Teaching patients on cardiovascular diseases includes coping with disease symptoms and modifying risk factors (Khani *et al.*, 2002). The results show that programs to increase patients' awareness regarding the cardiovascular diseases, including such as hypertension and Coronary artery disease during the early stages of patient admission should be included at the head of training programs (National Research Center of Medical Sciences, 2009). Therefore, the study aimed to examine the effect of training on blood pressure decrease in patients referred.

## **Methods**

This study was a clinical trial conducted on 120 subjects referred to specialized clinics, hospitalization wards (CCU and heart) and heart emergency of Ayatollah Mousavi Hospital in 2011 and the sampling was done with an objective-based, simple random

method. Data were collected through a researcher-made questionnaire and personal interviews. Test - retest method was used to determine the reliability of the questionnaire. In this case, the questionnaires were given to ten patients with considered conditions for research units in two stages with interval of ten days. The correlation between the results of two stages was then determined, and used after the approval of professors. It should be noted that they were excluded from the main sample. Then, the correlation between the results of two phases was determined and approved by statistics advisor ( $r=0.82$ ). The internal consistency of the questionnaire was confirmed with Cronbach's alpha 0.71. All subjects completed the questionnaire before training. Training about lifestyle was then presented as lecture and using training aids and booklets for research units as a group and appropriate with patients' literacy level during three 30-min sessions. After a month of training, they gain responded to the questionnaire. The maximum score was 25 and the minimum zero, which was turned into base 100 and knowledge levels were categorized into three levels of good, average and poor based on the scores obtained, so that the highest score was considered good and the lowest was weak. Data collected was analyzed using SPSS software, descriptive statistics methods, chi-square test, McNemar's test and Wilcoxon signed-rank test.

## **Results and Discussion**

The results show that the most percentage of research subjects (79.5%) was placed in the age group of 50-59 and the lowest percentage (20.5%) was included in the age group of 70 and over. The mean age of the subjects was 53.3 (SD=13.5) and mean body mass index was 28.6 kg with SD=3.72. The research units consist of 40 (29.5%) females and 80 (70.5%) males, 44.2% are illiterate,

and 0.19% at different levels and 44.29% with university education. 72 (75%) individuals were married and 48 25% unsupervised. Most of the subjects (51.6%) had 1-4 year history of hypertension and 49.4% had 10 year and over. The mean duration of treatment was 5.5 years with SD=4.11. The mean history of hypertension was 5.96 years with SD=4.00, so that 54.7% of research units had information on hypertension and its treatment. 36.8% of research units were informed about the disease by medical personnel. These findings suggested that the average awareness was 70.56% with SD=16.82 before training and 75.57% with SD=13.52 after teaching. McNemar's test results showed that there was a significant relationship between the mean level of knowledge before and after teaching ( $p = 0/000$ ) (Table 1).

Table 1 shows that the most of the subjects had a moderate awareness level (46.3%) before training and obtained a good awareness level after training (49.5%). The mean pre- and post-training scores were 70.56% with SD=16.8 and 75.5% with SD=13.5, respectively. McNemar test showed a statistically significant relationship between the mean pre- and post-training awareness level ( $p=0.000$ ).

Teaching is one of the most important factors in improving manpower. In general, manpower improvement includes some programs and in the other word, different teaching methods including inductive training, justification teaching, and continuing teaching and etc. Teaching is an important part of nurse's role in lifetime and providing health services and learning is also a process continuing throughout the life and humans are constantly learning, so that they are constantly acquiring new knowledge and developing skills and

applying them in accordance with the new conditions of life (Vandermause *et al.*, 2014). The basic principles for effective teaching are to determine and analyze teaching needs, plan and implement regular and systematic teaching programs and evaluate teaching effects (Abdallah *et al.*, 2014). The study of learning needs is the first step in teaching process by which information, skills and programs needed for individuals should be determined. Also, a comprehensive teaching program emphasizes on individuals' learning needs and reduces health care costs and enhances the quality of care and helps them. One of the basic goals of teaching lifestyle and health is to inform people and communities in the field of lifestyle, determine health and risks threatening their lives. World Health Organization defines teaching patients as a remedy increasing patients' active participation in the process of disease control and enhancing the use of rehabilitation and secondary prevention and believes that the first objective in medical education is to improve the quality of life and increase patients' satisfaction with healthcare services. To achieve this objective, we should increase the awareness and understanding of lifestyle interventions with expertise in implementing these changes and obeying care plans. And the second objective is to expand the face of

cardiac rehabilitation programs and secondary prevention through partnerships with other professionals, create motivation, implement and support these programs at all levels of care. The findings are consistent with the results from a semi-experimental study conducted by Williams *et al.* in 2008-2010 entitled "To teach lifestyle to patients hospitalized in emergency department and increase their awareness of risk factors for cardiovascular disease" in USA. The results of the present study are also consistent with the a study assessed patient's awareness over a period of 5 years in northern India and showed the increased awareness of patients with high blood pressure, that it indicates the importance of teaching patients in the community. The result regarding the relationship between teaching and its impact on increasing patients' awareness is almost the same as the result from a study conducted in 2010 in Nigeria.

**Conclusion**

This study shows that we can prevent chronic diseases such as high blood pressure with proper teaching and raising awareness. One of the goals of teaching patient conducted in the study is to inform and encourage patients to observe therapeutic regimens and help them change lifestyle in order to maintain and promote their health.

**Table.1** Comparison of awareness before and after training in research units

Stage/ Awareness Level	Before		After	
	Number	Percentage	Number	Percentage
Good (75-100)	39	41.1	47	49.5
Moderate (50-74)	44	46.3	46	48.4
Weak (0-49)	12	12.6	2	½
Total	95	100.0	95	100.0
Mean	70.56		75.5	
SD	16.8		13.5	
McNemar's Test Result	T=33/4 df=94		p= value=0/000	

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