

Comparison of Differences Between the Two Groups of Patients in Orthopedic and Cardiac Wards of Hospital in the Terms of High-risk Life Factors

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Abnormal social behaviours and unfavorable *conditions of life* can be considered as risk factors for disease incidence for each individual. Many studies have been already done on family circumstances, psychic stresses, drug and alcohol consumption, individual's or family's criminal history and etc. and their relationship with various diseases. For example, significant relationships have been found between drug and alcohol consumption with diseases and unfavorable environmental conditions with disease incidence. The study aims to find the relationship between cardiac and orthopedic diseases with three variables of patient's general information, individual and family risk factors for violence and crime commitment. This study is an analytical survey with examining 283 patients in cardiac and orthopaedic wards accompanied by completing the questionnaire by patient. Polygraph test was also performed to validate the results. Finally, the data obtained was statistically analyzed with SPSS software. The results represent a significant association between the disease and variables including age, marital status, education, smoking, tattoos and parents decease. The results showed the relationship between the patient's disease and some family and personal circumstances, which can be correlated with individual or environment.

Key words: Cardiac, Risk factors, Violence, Orthopedic.

Social norms are certain behavioural methods that are common in society. Everyone who lives in society, learns them, applies them, and expects the other members of society to do them. Thus, norms and behaviours are a rule, criterion and scale by which individual's social behaviour is measured in society. Any behaviour, which is consistent with it, is a normal behaviour, and if it is inconsistent, it is called an abnormal behaviour^{1,2}. We must recognize that norms are based on value. All laws and regulations that exist in every society

are based on values and social norms. It means that firstly, the society feels the need for it, then it becomes a law³. Abnormal social behaviours of society people are as one of the social problems on which different studies has not yet been done. One of the very important types of these studies is to study the relationship with different diseases. Mental illness is among the diseases devoted the largest proportion of these studies to itself^{4,5}. The investigations have shown that these diseases and abnormal social behaviours are associated with each other. For example, van dorn *et al.* (2012)⁶ examined the relationship between mental illness and violence and Abnormal social behaviours. They proved a strong relationship between such diseases and abnormal behaviours in the study lasted 4 years. The results were consistent with

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the results of other investigations. Also, body's physiological reactions during an abnormal behaviour of wrangle were investigated in another study. During this study, it was shown that abnormal behaviours have a significant negative impact on heart function which can lead to heart diseases. Other type of studies on this topic is the study of Richard Hamersley and colleagues. They interviewed with 151 prisoners and non-prisoners affected by substance abuse and classified them into groups of consumers of alcohol, cannabis and alcohol derivatives, other drugs except opium derivatives, moderate consumers of opium derivatives and finally heavy consumers of opium and its derivatives. By collecting data on the rate of consumption and crime commitment, they concluded that the severity of addiction disease, by itself, is not sufficient and necessary factor for the incidence of abnormal social behaviour. However these two factors can affect each other, the rate of crime commitment and abnormal social behaviour associates with individual circumstances and background, rather than the amount of addiction disease. It is noteworthy that an extensive study has been done on these factors with almost similar results reported⁷. Beatrix A Golomb and colleagues examined over 79,777 samples in Sweden in the terms of health and history of being arrested by the police, between 24 to 70 year old men and women and the effect of cholesterol level on crime commitment and inappropriate social behaviour. In this study, the group indicated that low levels of cholesterol and the rate of abnormal behaviour and crime commitment along with other factors have a significant correlation with each other⁸. According to studies and lack of information concerning the rate of relationship between cardiac and orthopedic diseases with people's criminal and abnormal behaviours, in this study, we tried to examine the relationship between these two groups of patients with high-risk life factors and risk factors of crime commitment (criminal history, parents' literacy, culture and economic status, smoking, etc.).

METHODS

This study is a descriptive analytical survey, in which 283 patients were studied, 52 patients in cardiac ward and 231 patients in

orthopedic ward. In this study, each patient is asked to respond to a questionnaire, including questions on general characteristics including gender, age, income and education, disease records and type of accident resulting in hospitalization, history of crime commitment and some abnormal social behaviours and crime-committing risk factors. The patients' satisfaction with staff performance was also examined. Polygraph test introduced by John P. Clarck and Larry I. Tiffet in 1996 was also performed to validate the results^[9]. Raw data obtained from questionnaires was collected and statistically analyzed after classification and finally reported.

RESULTS

Data were examined after collecting from questionnaires. The resulting data can be classified into three general groups; 1) Preliminary data suggesting age, gender, marital status, education and income, 2) Individual risk factors associated with violence and crime, such as the use of alcohol, tobacco and opium, illicit sex, history of criminal and prison record and etc; 3) Family risk factors associated with violence and crime including parents' education, relatives' decease, family discord and divorce. In the study, 283 patients hospitalized in cardiac and orthopedic wards, including 52 (18.4%) patients in cardiac ward and 231 (18.6%) patients in orthopedic ward, were studied in terms of high-risk life factors and known risk factors of crime commitment. Cardiac ward patients included 42 males and 10 females with the mean age of 59.10 ± 12.39 years old. The mean age of orthopedic ward patients was 32.72 ± 11.03 years old and a significant difference was observed in patients' age in the two wards ($P = 0.0001$). Patients' marital status was classified as single, married and divorced and there was a significant difference in marital distribution in both wards' patients ($P = 0.0001$). Patients' education level were also studied and the results showed that there is a significant difference in the education level distribution of both wards' patients with classification of illiteracy, primary education, high school education, diploma, bachelor and higher ($P = 0.0001$). Since the number of over 25% of table cells was less than 5, chi-square test was not done

for income. Several cases were investigated in association with individual risk factors for violence and crime and their relationship with individual's

disease was studied. The results are summarized in the table.

P-Value	Variable	P-Value	Variable
0.777	Conflict	0.321	Alcohol
0.777	Use of Cold Weapons	0.0001	Smoking
0.812	Judicial Conviction	0.545	Opium
0.787	History of Prison	0.102	Illicit Sex
0.033	Tattoo	0.140	History of Burglary

According to the results of the table, it is clear that two types of individual risk factors and abnormal behaviours of smoking and tattoos significantly associate with hospitalization in these

two wards. In addition, family risk factors for violence and crime were studied considering the variables in the study and the results can be seen in the table below.

P-value	Variable	P-Value	Variable
0.002	Death of Mother	0.006	Death of Father
0.06	Mother's education level	0.058	Father's education level
0.408	Parents' Location	0.361	Birth Rank
0.326	Family Dispute	0.362	House Status
0.174	Death of Close Relatives	0.098	Parent's Divorce

In these parameters, parents' education level was classified as illiteracy, primary school, guidance school, diploma and bachelor. Location is also classified as living in province center, in other cities of province, and in village. Finally, house status was classified as owner, tenant and living in organizational home.

DISCUSSION

This statistical study aimed to examine the effects of three parameters on disease and hospitalization in cardiac and orthopedic wards. The parameters included individual raw data, individual risk factors for violence, abnormal behaviour and crime commitment, and finally, family risk factors of violence, abnormal behaviours and crime commitment. The variables studied in individual raw data were gender, age, marital status, education and income of patients. The results from collection and analysis of data showed that there is a significant association between the disease and the patient's age, which is consistent with the results presented by Wannamethee *et al.* (2011)¹⁰. The results also indicated a significant relationship

between marital status and education of patients with the disease. The result was consistent with the results of other researchers. For example, this relationship was determined in a study on twins by Vermeirin *et al.* in 2012¹¹. Some items were studied and analytically analyzed regarding family risk factors, such as the death of parents or close relatives, parents' education, birth rank, parents' location, family dispute and parents' divorce. Among them, the significant impact of parents' death was shown on hospitalization and disease development. For example, the effect of parent's death on Alzheimer's disease had been already studied, representing a significant impact of the risk factor on Alzheimer^{12, 13}. Finally, individual risk factors with variables of using alcohol, tobacco and opium, as well as illicit sex, dispute, use of cold weapons, history of burglary, judicial conviction, tattoos and prison were reviewed. The results of this study showed no significant relationship between criminal records and stealing and carrying cold weapons and the same results were obtained in association with using alcohol¹⁴⁻¹⁶ and opium^{17, 18}. However, the relationship between alcohol and opium consumption and disease had

been already shown, no significant relationship was shown between these factors and disease. The lack of a significant relationship is likely due to high legal restrictions and prohibitions on the sale of these substances, which reduces their availability for people. Many extensive studies have been done on the relationship between various diseases and smoking and it has been shown that smoking has a great effect on various diseases such as cardiovascular and lung diseases¹⁹⁻²¹. The study showed a significant relationship between tattooing and disease. Gitleson and colleagues had already examined 513 patients requesting various operations and compared patients with and without tattoos and showed the relationship between tattoos and disease. They finally concluded that tattoos are more associated with patients' personality²².

CONCLUSION

During the investigation of different factors examined in this study, it was shown that variables of age, marital status and education from individual data variables and parents' death from family risk factors affect the disease. Finally, it was shown that two variables of smoking and tattoos, in a series of individual risk factors, are significantly associated with disease and hospitalization.

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