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**EVALUATION OF DIFFERENT ASPECTS OF MURDER OCCURRENCE IN FARS  
PROVINCE SINCE 2004 TO 2011**

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**ABSTRACT**

Murder as one of bad aspects of violence someone is killed and this matter has some underlying aspect that accurate determination of these agent leads to less occurrence of such events. In a cross sectional study, all of murders referred to legal Medicine Department of Fars Province since 2004 to 2011 were evaluated and some of the factors involved in its occurrence during this eight-year were investigated. Totally 1829 murder was reported to Department of forensic medicine of Fars province including 289 women and 1539 men. The greatest amount of murder was in 2004 and the lowest was in 2009. Mostly crimes had population age range of 20 to 30 years (35.4%) and after that in a population of 10 to 20 years old. About 800 bodies were single and 798 were married. The highest rate of homicides was occurred in Shiraz (n=775, 41.3%) followed by Kazeroun with 69.49 in 100,000 people and the lowest ratio of 2.12 in the 100000 crowd was observed in Gerash. Considering increasing the number of people with literacy in the country, the higher rate of murder was observed among the educated people. Totally 765 people

(41.8%) have been murdered with firearms, 674 people with a sharp object and 35 cases with burning. Motivation for 657 cases of murder has been unclear and alcohol consumption had led to kill 338 people. There are so many factors effective in the occurrence of murders that most of these factors are unknown. Targeted epidemiologic studies can be used to identify these factors and the importance of proper planning and the right by government to reduce of the outbreak of killing recorders.

**Keywords: Murder, Legal medicine, Fars province, Iran**

## **INTRODUCTION**

The murder is one of the aspects of violence and a person's life decrees by someone wise and mature (1). Personal, social and environmental factors are effective on motivation of creating several murders. Methods of murder occurrence are different and include mechanical methods such as beating, stabbing and suffocating and hot machines, physical methods such as caustic, chemical methods such as heat and electricity and poison and medicine; that most method used mechanical method (2). Target and high risk groups that are known and prevention programs advanced societies in the book of murder phenomenon have routine about the epidemiologic study to appropriate measures according to the changes you made, can reduce this crime to take place (3).

The World Health Organization's global burden of disease on research in the year 2000 makes such a review stating that 1.6 million (28.8 per 100,000) from around the world looking for their violence or else died

(4). A third of these deaths (compared to 8.8 per 100,000 population) was related to violence between individuals who were most related to the murder (5). Approximately 199000 (9.2 per 100,000) adult in the world to have murdered; in other words approximately 565 people per day in the world following the violence between people were died. In European countries the rate of 0.9 per 100,000, in Africa and in Latin America at 100,000 17.6 36.4 per 100,000 respectively (6). The most common cause of death in American States the murder was (27.5 per 100,000 population, people) that the three times European and Eastern Mediterranean four times and is about five times the Southeast Asia (5).

Murdered in recent years in the world and Iran is based on the news has been announced, for example, a study of the uptrend in Tehran during 1382-1383 has been done shows that the uptrend in the murder existed (7). Due to the uptrend and

this subject that any killing time imposed on the material and spiritual community and also that of the past years had numerous reasons, changes in the process used for crimes of murder in human societies has been different. Epidemiological study on the killer and the victim in advanced societies are conducted on a regular basis to changes in the process of crime has been known in a timely manner, the necessary measures for the prevention and reduction of crime be appearing either. Due to the failure to carry out such studies, especially in Shiraz in Iran and consistent vision on it that the frequency of Shiraz in 2004 to 2011 faction and some influencing factors such as age, gender, geographic location of the accident, the physical location of the accident, nationality and ethnicity, place of death, academic status, marital status, employment status, number of family members, history of drug addiction, history of the disease, criminal record, murder, the cause of death, killing the victim with the criminal association recommend, motivated. The overall goal of this study was to determine the frequency of murders referred to the Department of forensic medicine to Fars province in 2004 to 2011.

## **METHODS**

The present study is a cross-sectional analytic study is in order-the frequency of murder and referred to legal Medicine Department of Fars Province, and some of the factors involved in its occurrence during the eight-year period, of all murder cases approved and referred to the Department of forensic medicine in the Fars during 2004 to 2011 were evaluated.

Legal medicine organization has information and data provided by the families of the bodies is complete that include age and sex crimes information, marital status, education, the history of the disease, history of drug addiction, criminal history, employment status, nationality and ethnicity, the questionnaire was collected, was awarded the code and the identity of the bodies remained reserved. Some of the information available about how the murder of criminal crimes and type of the murder instrument and murder were extracted. Therefore, in order to obtain the necessary permits and then doing the coordination required, refer to the student of the Department of forensic medicine of Fars Province, all of the files and file number or items suspected to murder referred to legal Medicine Department of Fars province with full observance of ethics and the moral code in research of existing files were evaluated in the software and in the form of legal

medicine organization of collecting information that is provided to attach the Enter which, after entering the data about the statistical analysis.

All the victim's information includes age and gender and education, marital status, employment status, education level, ethnicity and nationality of the victim, a history of the disease, previous criminal record, a history of addiction, murder means, place( physical and geographic location of the murder) collected in a questionnaire, was awarded the code and the identity of the bodies remain reserved. The study population consists of all murder cases recorded in the Forensic medicine Department of Fars province in 2004 to 2011.

In this study, within the scope of the intended time of all cases referred to the Department of forensic medicine was included and sampling has not been done. Administrative problems and constraints governing the project includes proper collaboration lack of the personnel of the Department of forensic medicine before obtaining the necessary permissions and the lack of collaboration of the parents. To resolve this problem and perform the necessary coordination and permissions that were required to obtain, in particular because of the incomplete items unable to fix the defects, were excluded from

the study. In addition it has taken calls with the Organization to ensure that the researchers have been given the judicial nature of the case to ensure that information is almost full for one hundred percent.

### **STATISTICAL ANALYSIS**

The resulting data into more subsidies and SPSS statistical version 21.0 was used to analyze the data, in the end the results in the form of descriptive statistics were presented in the form of a chart or table.

### **RESULTS**

In this study, murder cases occurred during the April 2004 to March 2011 suspected to Department of forensic medicine of Fars province, were included. During the eight years, 1829 murder were reported to Department of forensic medicine of Fars province. Totally, 1539 murdered man (84.1%) and 289 female persons (15.8%) were evaluated. While male and female population is equal in the provinces. In fact, the rate of incidence of murder of women and men are 0.81 and 4.35 per 100,000 during the eight years respectively.

As you see in the figure No. 1 greatest amount of murder is in 2004 and the lowest is in 2009. In the course of 2004 to 2009 downtrend in the number of homicides, but in 2010 its increasing incidence was observed in 2010. However the overall trend of the

occurrence of suspicious cases of murder has been descending during the study.

With the passage of time the murder rate has fallen in both sexes but its rate in women is rising from 12.6% of the crimes in 2004 reached to 22.5% in 2011.

As can be observed in the figure 2, most crimes by population age range of 20 to 30 years with 35.4% incidence and after that in a population of 10 to 20 years old. Most of the population of the province and the highest proportion of crimes are also located in this age range and the lowest rate of homicides has been observed in a population less than 10 years with a rate of 2.3% of the bodies.

About 43.7% (800 people) of the bodies were single and 43.6% (n = 798) were married. Population distribution of the bodies on the basis of marital status is shown in the figure 3.

The highest rate of homicides was occurred in Shiraz with 775 cases (41.3%) and it has been the equivalent of a 44.39 per 100000 of population in this city. The city of Kazeroun with 69.49 in 100,000 people has the most incidences after Shiraz. And the lowest ratio of 2.12 in the 100000 crowd was observed in Gerash. The literacy rate of the bodies was examined and compared with the education level of population. With regard to increasing the number of people with literacy in the

country, the higher rate of murder was observed among the educated people.

Most of killed cases were self-employed with the bodies of 598 people and the lowest were the student and retired each with 2.2% proportion of the population. The most cases of the murder were occurred at home with an abundance of 568 people (31%).

Tools used to perform the murder also were studied and the most used instrument was firearms. Totally 765 people (41.8%) have been murdered with firearms and 674 people (36.8%) were murdered with a sharp object. The lowest ratio reported cause of death was to the burn with a rate of 1.9% (35).

For 657 (35.9%) of cases of murder the motivation has been unclear. Of the items that were murder motivated by a cause, the most rates were for unusual mode of alcohol consumption after the killer has been. That includes the murder of 338 crimes (18.5%).

In terms of mental illness and medical bodies were examined, 1273 people (69.5%) were not patient; 5% had a medical disease and 1.3% (24 cases) had a mental illness.

About 69.8% of the bodies (1276 people) had no addiction; 202 had addiction to cigarette, 134 to drugs, and 10 to alcohol. In terms of the history of the war, the majority of the

bodies (n = 1436, 78.4%) had no history of previous registration.

The nationality of the bodies included 1634 n (89.2%) were Iranian and 140 people were Afghanis. Of this amount, 14 Afghan people have been murdered in 2011 that is equivalent with the incidence rate of 13.33% of the Afghan population of that years lived in the province; 1475 people (80.6%) were Fares.

At total of eight years, the highest rate of murder was occurred in July by 10.3% (n = 188) after that in April, June and August, and the lowest with 6.1% (111 items) has been observed in February. Within 24 hours of a day, 546 bodies (28.31%) occurred in the hours between 6 and 9 a.m. and 394(43% ) people between were killed the hours of 6- 9 pm.About 1168 Killers (63.8%) were Men and 129 cases (7%) were female.

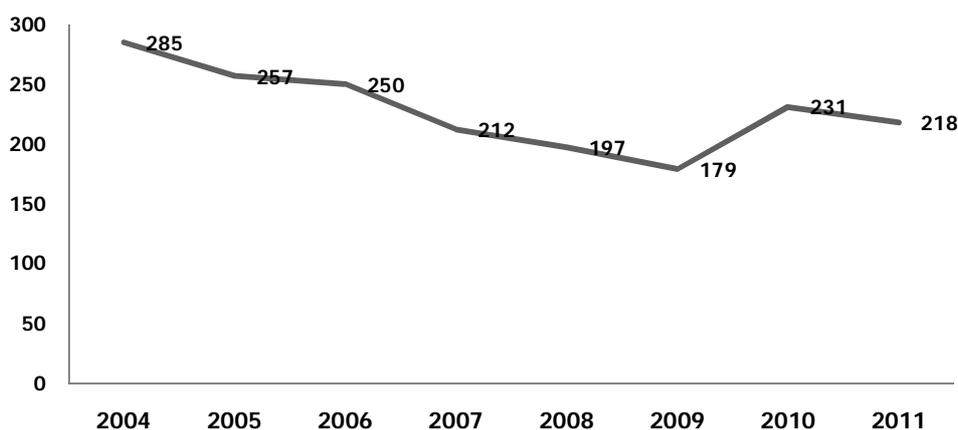


Figure 1- Frequency of murder occurrence since 2004 to 2011 in Fars province

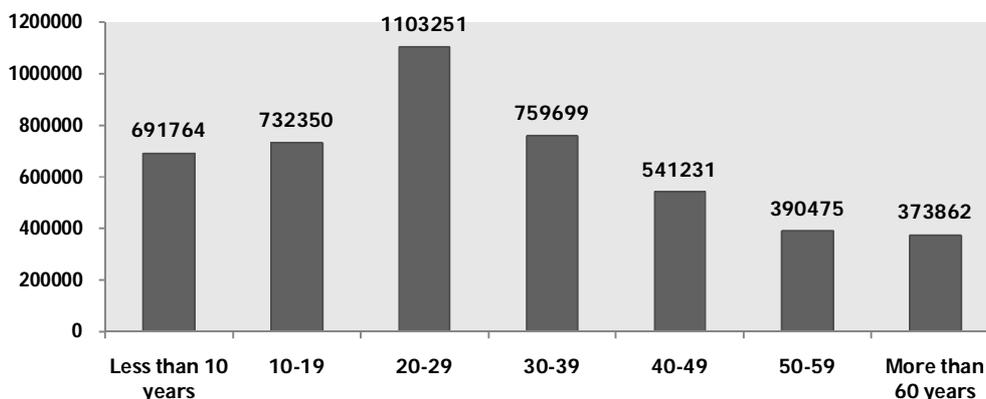


Figure 2- Age range of the killed individuals in Fars province (2004-2011)

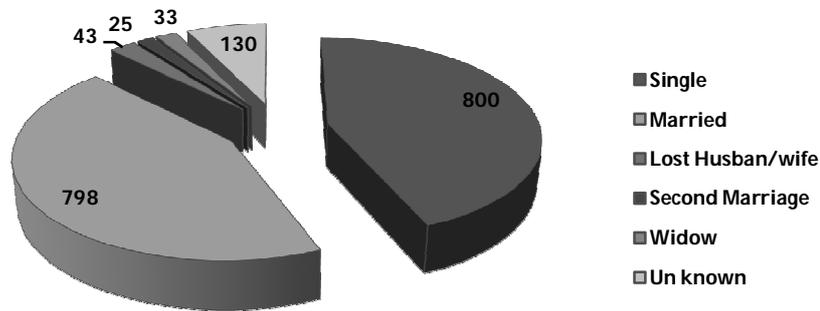


Figure 3- Marital status of the killed individuals in Fars province since 2004 to 2011

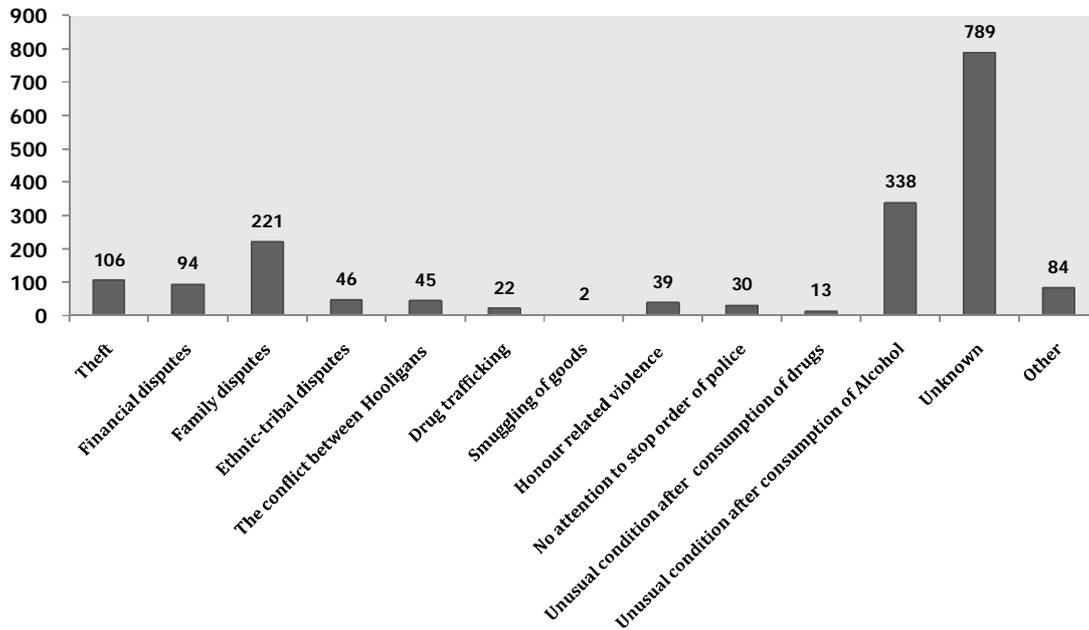


Figure 4- Different causes of Murder occurrence in Fars province (2004-2011)

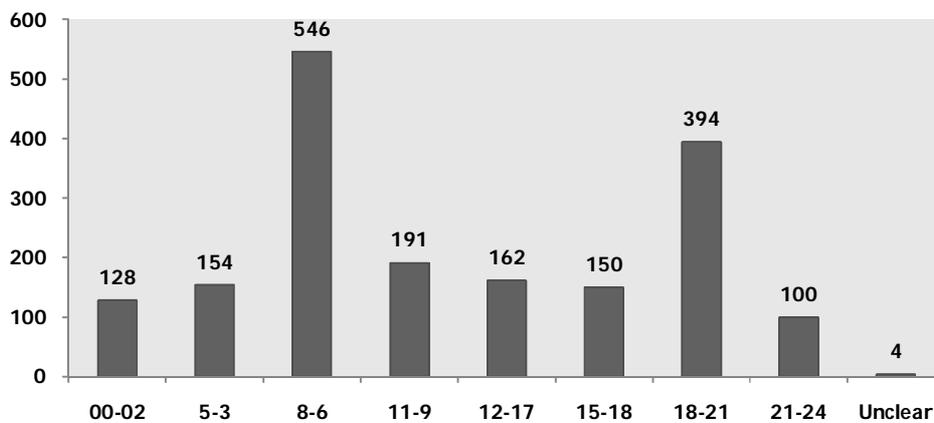


Figure 5- Frequency of murder occurrence at different hours of the day in Fars province since 2004 to 2011

## DISCUSSION

Fars province is located in the South of the Iran country. According to the population census of October 2011 Fars province population has been a 4596658 and it is one of the most densely populated provinces of Iran; 2315914 of the population of the province equal to 50.4% were male and 49.6% equivalent 2280744 people have been female. The province has 29 cities. The city of Shiraz, Kazerun, Jahrom and Marvdasht and Larestan are most densely populated and the lowest populated city of the province is Pasargad. The provincial capital, Shiraz is the most populous town of the province.

Most of the populations of the bodies are in the age range 20-29 years with 8.06 in 100.000 people and the least are in the age range of less than 10 years with the rate of 1.01 per hundred thousand. As in the similar research that took place in Tehran during the 2003-2004 similar results were obtained: more than half of the bodies were in the age category of 20-39 years and more than one a third in the range of 20-29 years (8). Considering this issue that young people are more active in terms of the community's economic and social policies and the crowd is mostly young crowd these results will not be far from the mind. Probably the unemployment and economic problems,

addiction and ambition, being unmarried, corrupt gangs engaging in social and religious beliefs as well as narration on this issue have major impacts.

In total of this 8 years, the most amount of the murder 28% is occurred in the summer most of the month July with a rate of 10.3% in 2004 and the least was in the winter with a rate of 21.1% (in February with 6.1%). It can be the cause of this increase in the distribution of heat and temperature and its effect on reducing the overwhelming people, at the same time being with schools and universities vacation and the lack of recreational facilities – perfect for all ages and cultural youth. In similar research in Tehran during a year to investigate this topic is dealt with the most murders (30.5%) in the spring (May) and the lowest (15.9%) in the autumn (November)(8). In one study carried out in 1999-2006, murder in children five years or younger in India, Ohio, Missouri, Oklahoma, Washington and its relation to the occurrence of murders investigated murder and communication, no correlation between its occurrence and the season was found. It seems clear that the relationship does not exist between the subject of the murder and its season of occurrence; however some of psychologists believe that. As in the study performed since 1975 to 2003 in Colombia a

clear correlation was found between murder and season of its occurrence that in December it has been increased clearly (9).

Of these murders, 84.1% were male and 15.8% were female. In fact, the ratio of women to men in the murder has been the equivalent of five times. In one study, 79.5 % of the bodies were male and women were 20.5%; in men it was 4 times more than the women (10).

In one study in prisoners of Kerman in September 2008 on people of 18-35 years, the most of the bodies (94.31%) and were male (11). The ratio of male to female murder was 6 to 1 in Pakistan (3). The rate of suicide in Middle East countries men has more victims (12). This ratio in America is 3.4 to one and one in India to 3.47 to 1 (10). The results of the study and the results of the Sanders also confirms that there is a greater prevalence of murder in men (11). It seems that in the world greater prevalence of murder is for men.

In our study, more than 63.8% of the killers were male and 22.7% were female with a ratio of male to female 9 to 1. In one study in Kerman in prisoners, the most of the offenders were male (94.31%)(2). In the study of Rodway, the majority of the offenders were also male. The cause of this

occurrence may be the more presence of men in the society and being more violence (13).

Among all murders, 89.2% were Iranian and Afghan bodies were 7.6%. According to the Iranian population that is dominant and the number of Afghan refugees in Iran is at the top, such result would not be far from the mind. In similar study, 83% of the bodies were Iranian and Afghan bodies were 16.4 % (10). In another study in 2004-2006 in Fars, Iranian and Afghani were 89.2% and 7.6% respectively and Pakistani people were 0.1% (14).

Among Iranian victims, 80.6% of the bodies were Fars. The lowest amount was related to Baloch with 0.4% of prevalence. In the same year research in Shiraz, 80.6% belonging to the ethnic group of Fars and the lowest percentage was for Baloch(0.4%) (14). According to the prevailing nature of the fares in this land such incident will be ordinary. While in one study in South Australia during the 40 years (1969-2008) 90 indigenous victims were in front of the 599 victim's expatriates (15). The dominant culture of the society may cause the difference is results achieved.

In terms of marital status unmarried and 43.7% of crimes were single and 43.6% were married. In one research in October 2003 carried out in Tehran 46.1% have been

married and 42.9% unmarried (10). In fact, cannot imagine a correlation between marital status and the murder.

Only 15.4% of cases were illiterate and most cases were literate, but only 2.5% had higher education, Bachelor's degree and graduate population compared with that seen in the province population with more education, the amount of the tips was clearly dropped. In fact, by increasing the knowledge, level of conflict and violence in individuals and people looking is reduced. In one study most of the bodies (66.8%) were literate, but only 3.7% had higher education (10). Further education levels lead to less social and financial pressures and social understanding will be higher so the field of conflict and incidence of murder will be reduced. This point should also be considered that the total illiterate population in province is very low.

Among murders, 32.7% were self-employed, 19.3% worker and the lowest amount is related to the student and retired each with 2.2% rate; corresponding to one study more than one-third of the self-employed, 11.5% unemployed and 6.1% of the bodies had Government jobs (10). In this study, the unemployed bodies' rate was 4.6% and for employees was 2.5%.

In this study, the bodies mostly (68.3%) did not have any kind of drug addiction; 10.9%

had cigarette addiction and opium addiction was 6.6%. In one study, more than half of the crimes had addiction by cigarette and alcohol and had the highest addiction to drug substance has been cigarette (34.3%) and the most opium is a narcotic substance (7).

In terms of the location of the murder mostly occurred at home and with a lesser extent 29.8% on the street. With regard to the issue that most of the bodies were murdered by someone familiar; probably the person killed in the outdoors will be harder and the entrance to the home of the victim and to kill him has been easier. In Tehran 83% of the murders taken place within the city and killing, more than half of it happened outdoors (16).

In terms of disease, the patient's 69.5% were healthy 5% had a medical disease and 1.3% had mental illness. Such a view would be that the majority of the bodies do not have the disease, and if these people were probably still alive were useful for the community.

In terms of the history of previous offences 78.4% had no history of criminal. Unfortunately, most innocent bodies are involved. According to the results of this study, in many cases the killing of innocent people is occurred.

Totally 41.8% of crimes were happened with firearms and 36.8%, with a sharp object. Less

than 1.9% of murder causes of death are related to the burn.

In the same research mostly cold weapons had been used. On the research of Kerman it was knife. In a study by Rodway mostly from one used sharp and cutting things (13). In one study in Argentina death caused by firearms (16.6 %) 59339 of deaths has been by firearms (17).

The ratio of firearms and close-but less cutting object are used, most have been the dominant cause, but being the provincial of the firearms in this country that the dominant research cold weapon knows there is a need to further review and attention; unauthorized weapons carry in the province may be high.

For 35.9% of the cases the motivation was unclear. Most specified incentive cause was due to consumption of alcoholic beverages (18.3%). The most common motivation in Tehran has been strife (35.2%) and murder motives are variable according to the terms of economic, social, cultural, ethical and religious and political. In Kerman, most of the reasons for the occurrence of murder was mass drunkenness, defend family and honor, clan disputes and financial and sudden events have been the most causes (11). In the United States, the most common cause women's murder is sexual motivation and conflict is the lowest, while men's conflict has been the

most cause and sexual motivation the least (18). All of these differences can be related to economic, social and cultural differences in various parts of the country and the moral and religious or non-Islamic countries, such as in America.

The highest rate of homicides in 2004 with a rate of 285 (15.6%) and the lowest rate was in 2009 with 179 cases (9.8%). During the 2004 to 2009 in Fars province there is a descending pattern in occurrence of murder but during the 2011 and 2012 increased incidence of murder has been found again. This increase can be related to economic inflation in this year. Brown and Males the correlate amount of murder and poverty together. It also stated that any studies that economic factors have the most impact on the amount of murder in young men, while the impact on women is lower and the highest correlation between murder and economic issues in men aged 20-24 years (19). In one study by Sadeghi of the impact of economic factors on the rate of murder in 26 provinces of the country they found that the rate of income inequality, and inequality and poor income has the most impact on the murder rate (20).

There are so many factors effective in the occurrence of murders that most of these factors are unknown. Targeted epidemiologic

studies can be used to identify these factors and the importance of proper planning and the right by government to reduce of the outbreak of killing recorders.

Educational practices in people and the significant impact of life are on the right track. One of the factors in the murder is the fray after accidents and driving-related events that eventually led to the murder. The right education and training of individuals, training of parents and their awareness is necessary. So, they can educate their children life and anger management skills, such as behavioral, cognitive and psychological aspects of their training fit in various situations. Perhaps these practices help to reduce murder resulting from strife. Social pressures, economic, and cultural problems are also factors that have a prominent role in the murder.

#### REFERENCES

1. Eliot TS. *Murder in the Cathedral*: Houghton Mifflin Harcourt; 2014.
2. Papachristos AV. Murder by Structure: Dominance Relations and the Social Structure of Gang Homicide. *American Journal of Sociology*. 2009;115(1):74-128.
3. Marri MZ, Bashir MZ. An epidemiology of homicidal deaths due to rifled firearms in Peshawar Pakistan. *Journal of the College of Physicians and Surgeons--Pakistan: JCPSP*. 2010;20(2):87-9.
4. Merrick J, Kandel I, Omar HA. Adolescence, violence, and public health. *Frontiers in public health*. 2013;1.
5. Briceño-León R, Villaveces A, Concha-Eastman A. Understanding the uneven distribution of the incidence of homicide in Latin America. *International Journal of Epidemiology*. 2008;37(4):751-7.
6. Reza A, Mercy JA, Krug E. Epidemiology of violent deaths in the world. *Injury Prevention*. 2001;7(2):104-11.
7. Akbari M, Naghavi M, Soori H. Epidemiology of deaths from injuries in the Islamic Republic of Iran. 2006.
8. Sheikhezadi A, Gharehdaghi J. Survey of sudden death from aneurysmal subarachnoid hemorrhage in cadavers referred to Legal Medicine Organization of Tehran, 2001–2005. *The American journal of forensic medicine and pathology*. 2009;30(4):358-61.
9. Laskey AL, Thackeray JD, Grant SR, Schnitzer PG. Seasonality of child

- homicide. *The Journal of pediatrics*. 2010;157(1):144-7. e1.
10. Gharedaghi J, Ghorbani M, Akhlaghi M, Yousefinejad V, Paezi M. Epidemiology of Homicide by Sharp Force in Tehran, Iran between 2010 and 2011. *Indian Journal of Forensic Medicine & Toxicology*. 2013;7(2):51-6.
  11. ARAB NF, YAZDANPANA L. Paper: FACTORS RELATED TO VIOLENCE AMONG YOUTHS AGED BETWEEN 18-35 IN KERMAN PRISON.
  12. Rezaeian M. Suicide/homicide ratios in countries of the Eastern Mediterranean Region. *East Mediterr Health J*. 2008;14(6):1459-65.
  13. Rodway C, Norrington-Moore V, While D, Hunt IM, Flynn S, Swinson N, et al. A population-based study of juvenile perpetrators of homicide in England and Wales. *Journal of adolescence*. 2011;34(1):19-28.
  14. SAVAGHEB J. Paper: REVIEW OF THE CAUSES AND CONSEQUENCES OF THE MURDER OF IMAM QOLI KHAN, THE RULER OF FARS IN THE ERA OF SHAH SAFI (1632).
  15. Temlett J, Byard RW. Homicide among Indigenous South Australians: A forty-year study (1969–2008). *Journal of forensic and legal medicine*. 2012;19(8):445-7.
  16. Khosravi A, Taylor R, Naghavi M, Lopez AD. Mortality in the Islamic Republic of Iran, 1964-2004. *Bulletin of the World Health Organization*. 2007;85(8):607-14.
  17. Zunino MG, Souza ERd. Firearm mortality in Argentina, 1990-2008. *Cadernos de Saúde Pública*. 2012;28(4):665-77.
  18. Kellermann AL, Mercy JA. Men, women, and murder: gender-specific differences in rates of fatal violence and victimization. *Journal of Trauma and Acute Care Surgery*. 1992;33(1):1-5.
  19. Stretesky PB, Lynch MJ. The relationship between lead exposure and homicide. *Archives of pediatrics & adolescent medicine*. 2001;155(5):579-82.
  20. Maddah M, Kheir KI. Paper: Analysis of the impact of economic motivations in crime commitment (Case study: prisoners in semnan prison).