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Narcotics Related Deaths in the Kabul Forensic Medicine Center in 2018 and 2019

Abdul Manan Paigham¹, Mohammad Taqi Anwari², Palwasha Seraj³

^{1,2,3} Forensic Medicine Department, Kabul university medical of science (KUMS)

dr. paigham2010@gmail.com, taqi.anwari1368@gmail.com

Abstract. Introduction: Narcotic drugs and psychotropic substances are substances that, even in small quantities, can lead to substantial changes in the body, mind, or both. These substances have the ability to cross the blood-brain barrier and disrupt mood and perception. Examples of such substances include opiates, alcohol, hashish, cocaine, and 3,4-Methylenedioxymethamphetamine (commonly known as ecstasy or the drug "K"). Deaths resulting from narcotic poisoning refer to cases in which one or more narcotics are found in the body. Objectives: obtaining the prevalence of death due to narcotic drugs and psychotropic in forensic cases Method: The research was conducted through descriptive cross sectional study in Kabul Forensic Medicine Center in the year 2019 and 2018. Results: Out of 2838 cases that were referred to the Kabul Forensic Medicine center in the year 2019 and 2018, (14%) were due to narcotic drugs and the rest were due to other causes of death. Deaths due to narcotic drugs in 2019, compared to 2018, showed an increase of 17.47%. The majority of cases were in the range of 21-40 years (an average of 30 years) which included 58.2 % of entire cases: 97% of the cases were males, 57.5% were single, most of them were unemployed (39.3%), low educated and illiterate cases were 53.39%, and the lowest cases were with higher education (8.98%). The highest incidence happened in the winter (51.69%), and the lowest in the summer (13.8%). The most common cause of narcotics-related death were opiates (75.7%) and a significant of the narcotics were MDMA (please mention the complete form at least once) (5.8%). Most cases occur in the first (17%), fifth (16%), eighth (15%) and third (11.65%) security districts of Kabul city Conclusion: narcotic -related death make up about one-seventh of all forensic cases, which are on the rise, mostly among young, male, single, illiterate, unemployed, and low-income people. Most of the causes of drug-related deaths are opium and addicts. The significant point of cases was MDMA (K tablet) (5.8%), which has become common among young people in recent years. Most incidents occur in the winter and from central and western parts of Kabul.

Keywords. Narcotics, Addicts, Dead body, Forensic Medicine

Introduction

Narcotics and psychotropic substances are substances whose small amounts cause significant changes in the body, mind or both. Narcotics pass through the blood brain barrier and cause disturbances in mood and perception. The spectrum of these substances are: opiates, alcohol, hashish, cocaine, 3,4-Methylenedioxymethamphetamine (ecstasy or tablet K) and so on. Deaths caused by narcotics drug poisoning are cases in which at least one or more narcotics

are detected in the body. Determination of narcotics in post-mortem samples can be a cause of intoxication and as a contributing factor leading to death by narcotics.¹ Meanwhile, the issue of natural and unnatural death in conflicts are one of the cases that increase the prevalence of this problem. And from the view point of forensic medicine, it is extremely important, and on the other hand, based on the results of numerous studies, it can be said that many injuries and social problems such as theft, prostitution, and murder. have their roots in narcotics^{1,2,4}

According to the United Nations Office report on June 26, 2019 about Narcotics and Crime between 155 and 250 million people worldwide, 3.5% to 5.7% of the population has used illegal substances at least once between 15-64 years' old, and also based on the mentioned report, it is estimated that around 35 million people suffer from narcotic drugs use disorders in the world. The report also estimates the number of opiate users worldwide 53 million, which show 56 % increase from previous estimates, and that narcotics are responsible for two-thirds of the 585,000 people who died as a result of narcotic drugs use in the world in 2019.² Based on the findings of the Center for Monitoring Narcotics and Drug Addiction in Europe, which was published in 2019, it shows that the number of drug-related deaths in the European Union in 2019 were estimated 2388, and show a steady increase of 0.7% compared to 2016. The number of narcotic drug overdose deaths in Europe in 2019 was estimated 22.6 deaths per million populations. The number of narcotic drug overdose deaths in Europe in 2019 was estimated 22.6 deaths per million populations. People who use narcotics in Europe are mostly males, 35.8 cases per million males in the age group of 15-64 years, while in females it is 3.9 cases of females per million females in the age group of 15-64 years. In addition, it is estimated to account 4% of all deaths among people aged 15 to 39 years in Europe.³ In a research conducted in 2012 by k. Wies Simonsen and his colleagues in five countries (Denmark, Fland, Iceland, Norway and Sweden), In Denmark, according to the definition of the European Center for Drug Monitoring and Drug Addiction, The use of narcotics for every million population is 13,000 people and excess deaths for the last decade(657 cases (3.2%) with an average age 15-64 years)⁴. In Flanders, according to the report of the Monitoring Center for Narcotics and Drug Addiction in Europe, there are nearly 14,000 high-risk opiate users in age 15-64 years, 43 cases (2.4%) are drug-related deaths.⁴ In Iceland, the situation of narcotics is different compared to other countries, there are no statistics on deaths caused by narcotics.⁴ In Norway in addition to about 9,000 high-risk opiate users, excess deaths from narcotics during the last decade are 76 cases per million populations with an average age 15-64 years (9.3%), which All of it has been examined in forensic medicine. In Sweden, it is estimated that the number of drug users is about 29,500, and drug-related deaths are 101 cases per million (4.4%), although the cause of death is determined by a doctor, and in case of suspicion, it is referred to forensic medicine.⁴

In a research conducted in the neighboring country of Iran by Dr. Ghazizadeh on the files of all the bodies sent to the Provincial Forensic Medicine between 2014 and 2019, out of 123 cases under investigation, 93.5% were male and the rest were female (6.5%). In terms of age, the most bodies referred to forensic medicine are in the age group of 20-30 years old (37.4%), single people (54.5%), high educated (35.8%) and medium educated (32.5%), with freelance job (42.3%).and unemployed (26.0%). In terms of the type of drug use, opium (39.0%), methadone (27.6%) and tramadol (17.9%) were the most frequent. Most of the deceased people are young people with a low level of education, low income and unemployed.⁷ In another similar research in Qom Province of Iran from 2008 to 2012, which was conducted by Dr. Fatemeh Shahbazi. The information related to deaths caused by narcotics has been collected and analyzed based on the autopsy report and the characteristics of its demographic. During the five years, 388 drug poisoning deaths were recorded during the study, of which 264

(68%) were male and the rest were female. The results showed that the death rate in drug-related deaths decreased from 93 cases per million populations in 2008 to 49 cases in 2010 and then increased to 69 cases in 2012. the highest number of deaths in both sexes was accounted by Opium, Tramadol and antidepressants were the second cause of death in males and females, respectively. Most cases were in the age range of 20-30 years old. ⁸

In a study conducted by Mohammad Shakarzadeh et al. in 2013 in forensic medicine of Mazandaran Province of Iran, on the demographic characteristics of drug-related deaths from 2006 to 2011, out of 272 cases, the highest number of cases occurred in people with an average age of 27 years (42%) and had primary education up to diploma level and most of them had freelance job. ⁹

In this research, an attempt has been made to investigate the deaths that are directly or indirectly caused by narcotics and to use its results to fight effectively against this phenomenon, which is a serious threat to the health and life of people, especially the young generation, who are the real building force of society and country and causes serious damage to the social, economic, cultural and security system of the country.

Reasons and objectives

The increasing incidence of drug-related deaths in the country is the reason for choosing this research. Investigating the prevalence of death caused by drug addiction in the death cases of the Forensic Medicine center in terms of the type of event, type of drug, demographic characteristics, rate and graph of its occurrences, reducing the incidents of suicide and helping investigator and justice system to bring social regulation and justice are the key goals of this study.

Research Questions

1. What is the proportion of narcotic- related deaths with other causes of death?
2. What is the proportion of narcotic- related deaths in 2018 compared to 2019?
3. What is the incidence of poisoning in terms of demographic characteristics (age, sex, occupation, education level)?
4. What is the distribution of events in terms of seasons?
5. What is the proportion of narcotics incidents according to the type of narcotic?
6. What is the proportional distribution of narcotic- related deaths according to the security areas of Kabul city?

Research Method

This research is designed as a descriptive cross-sectional study on drug-related deaths referred to the of Forensic Medicine center in the year 2019 and 2018. The obtained information includes the demographic characteristics of the cases (age, sex, marital status, occupation and education level) based on the information of the register book of Forensic Medicine center and other characteristics such as the type of narcotics used in death cases based on the documents and opinions of Forensic Medicine center.

Study Site: Kabul Forensic Medicine Center

Results

Out of a total of 2838 deaths that were referred to the Forensic medicine service in 2019 (1300 deaths) and 2018 (1538 deaths), 412 deaths (14%) were caused by narcotics and the rest were caused by other causes of death (figure 1).

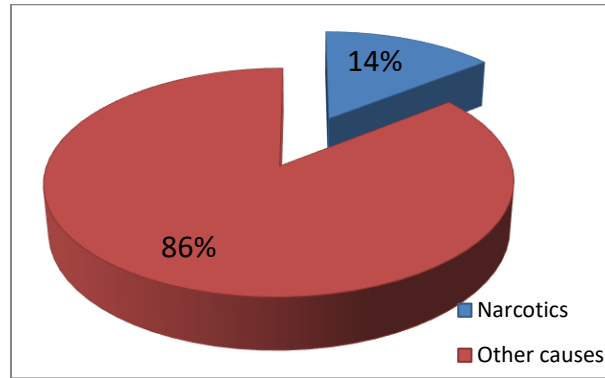


Figure 1 proportion of death due to narcotics and other causes

Out of 1300 deaths in 2019, 170 deaths (13%) were caused by narcotics and out of 1538 deaths in 2018, 242 deaths (15.7%) were caused by narcotics. Drug-related deaths in 2018 compared to 2019 show an increase of 17.47%, which is a significant difference (figure 2).

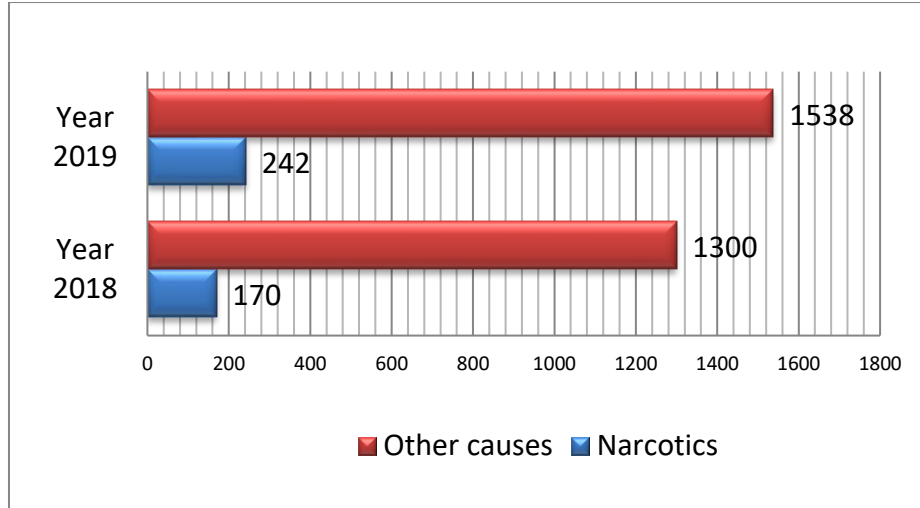


Figure 2 proportion of deaths caused by narcotics in 2018 compared to 2019

In terms of age, mostly young people between the age group of 21 to 40 years (with an average age of 30 years) are involved (figure 3).

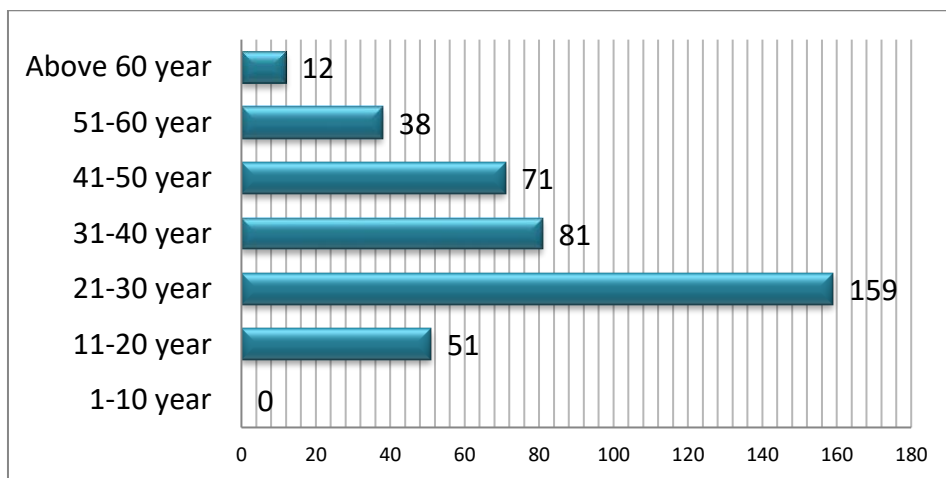


Figure 3 Distribution of narcotics related deaths in term of age

Incidents in terms of gender include 97% males and 3%. Females (figure 4).

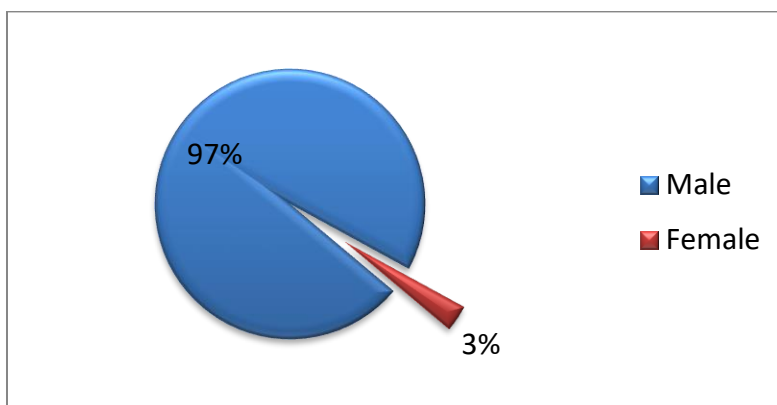


Figure 4 Distribution according sex

in terms of marital status, most deaths caused by narcotics are single people (Table 1).

Marital status	Number of cases	percentage
Single	237	57.5%
Married	115	27.9%
Unknown	60	14.5%

Table 1 Distribution of deaths in term of marital status

. In terms of seasons, the most deaths caused by narcotics were in winter and the least in summer (figure 5).

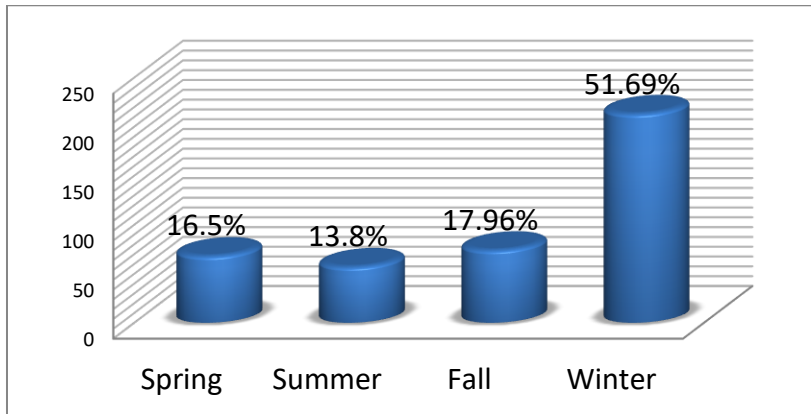


Figure 5. Seasonal distribution of death

According to the above table, in terms of education level deaths due to narcotics were mostly illiterate people and people with unknown education (figure 6).

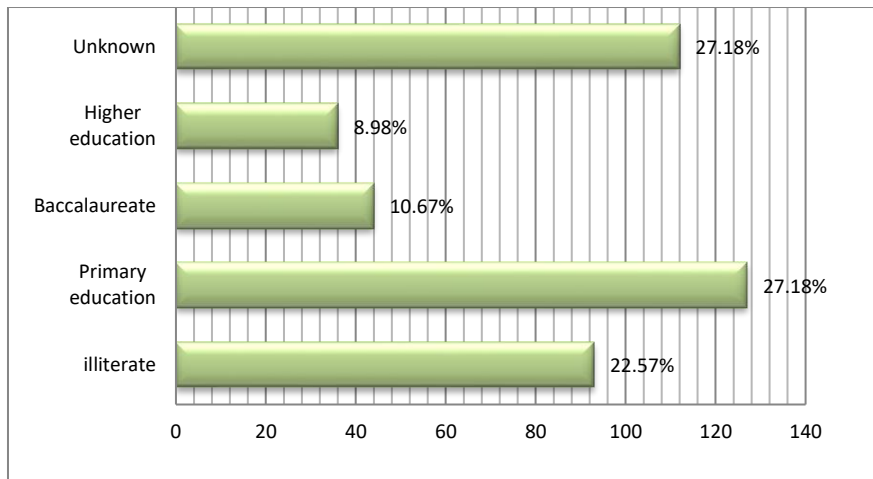


Figure 6. Distribution according to education level

In terms of occupation, most of the drug-related deceased people were unemployed, which indicates a close relationship between drug addiction and work and income (figure 7).

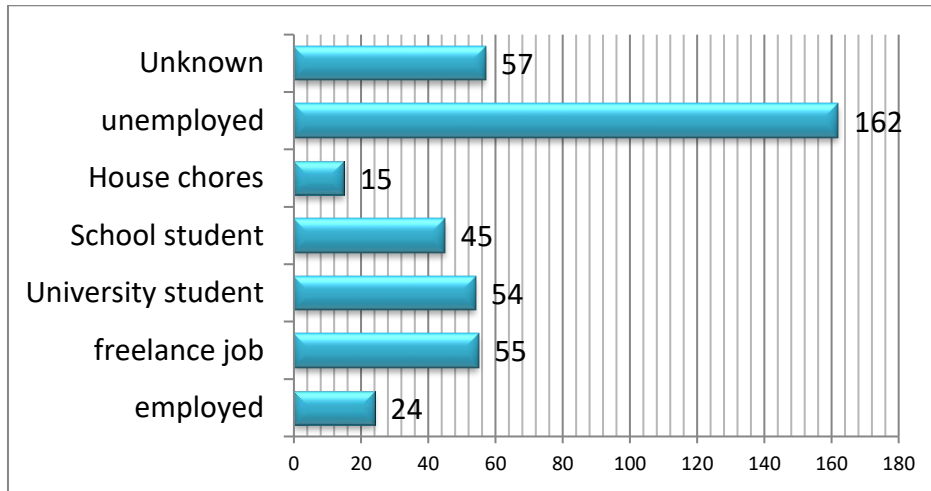


Figure 7 Distribution according to occupation

In terms of determining the type of drug, as seen in the above chart, the most incidents are related to opiates (figure 8).

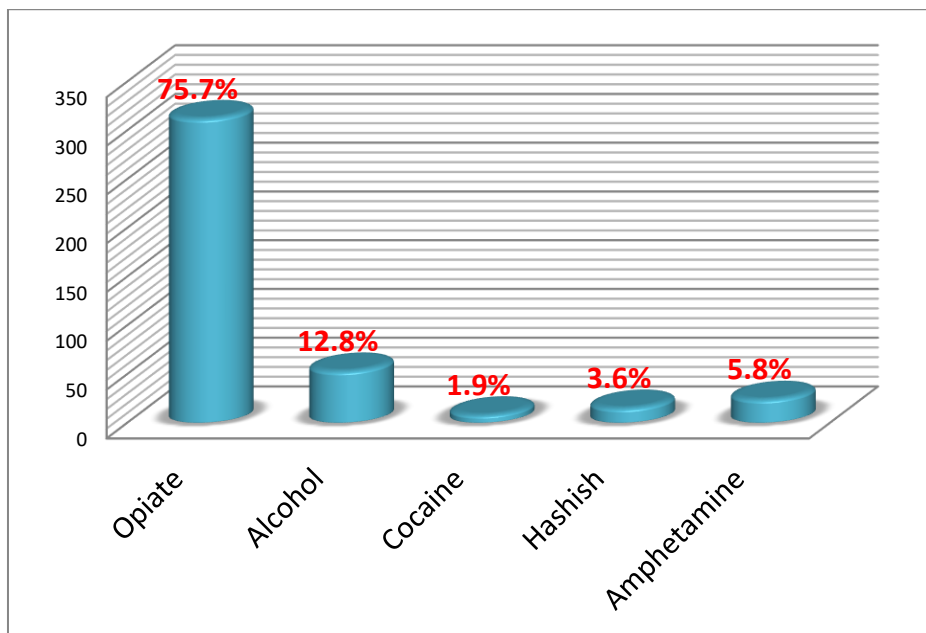


Figure 8 Distribution in term of type

According to the security districts of Kabul city, no event has been sent from the 14th and 18th districts (figure 9).

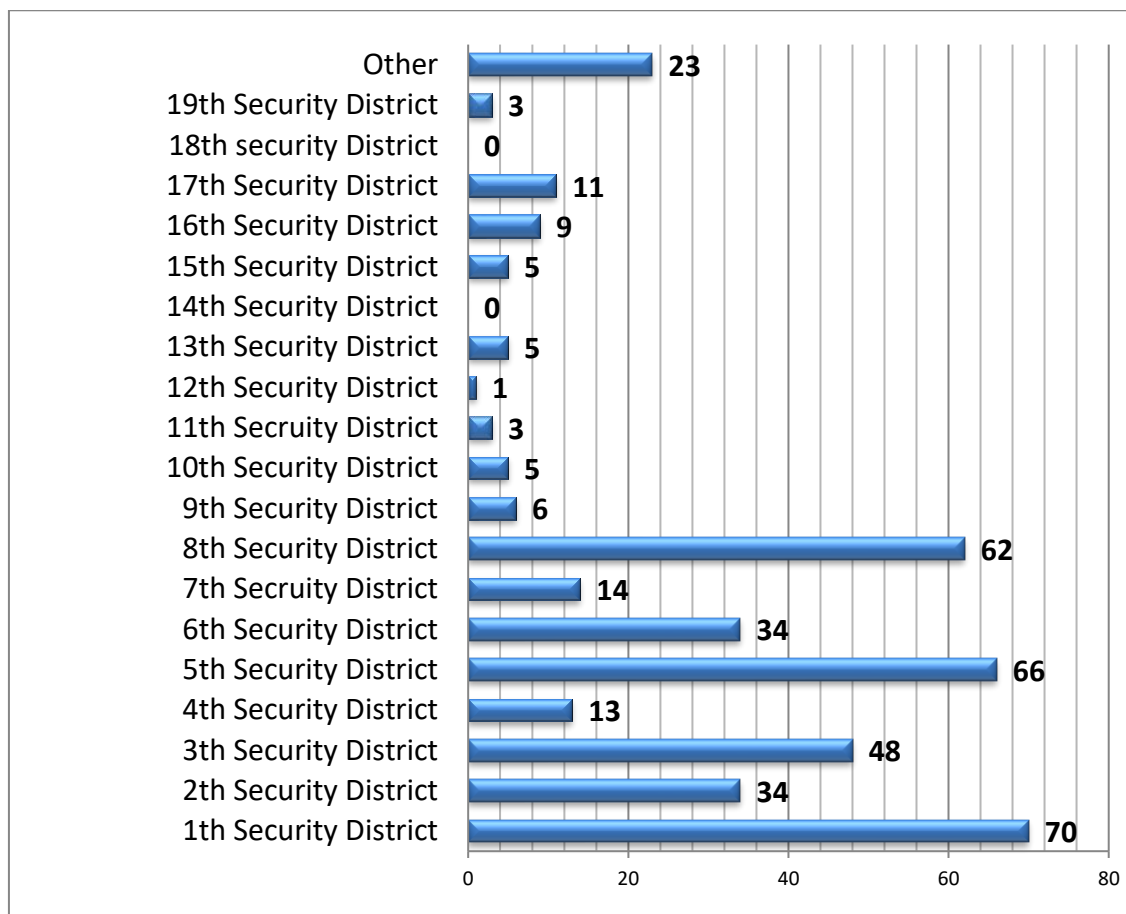


Figure 9. Distribution of drug related death according Kabul security district

Discussion

Findings in this research shows that narcotics are one of the main causes of death in cases referred to the Forensic Medicine center. Based on the collected information, out of 2838 deaths that were referred to the Forensic Medicine center during 2019 and 2018, 412 deaths (14%) were caused by narcotics and the rest were caused by other causes of death. It constitutes a significant number of drug-related deaths, while according to the European Center for Monitoring Narcotics and Drug Addiction published in 2019, drug-related deaths constitute 4% of total deaths in Europe were caused by narcotics. the results of similar studies in Northern European countries such as: Denmark (3.2%), Finland (2.4%), Norway (9.3%) and Sweden (4.4%), shows a significant difference with the findings of this research, which may be due to people's access to narcotics (wide cultivation of opium) and failure to address the health needs of addicts and other social factors caused by the continuation of war (depression).^{2,3,4} .The number of Deaths caused by narcotics in 2018 (242 deaths) compared to 2019 (170 deaths), shows an increase of 72 cases which is a significant increase (17.47%). The reason for this can be the increasing number of people in the society turning to narcotics for various reasons, including the continuation of the war and the lack of control of drug cultivation and traffic, and other social causes (psychological, economic, cultural, such as the high rate of depression, unemployment rate, and lack of healthy employment among community members, especially young people). In terms of age, the most cases among young people were between the age group of 21 to 40 years (with an average age of 30 years) which form a total of 240 cases (58.2%). In

comparison to the study conducted in the country of Iran in the province of Kohgiluyeh, Boyer Ahmad, 37.4% were in the age group of 20-30 year and other similar studies conducted in Northern European and Asian countries, which show the highest incidence in the age group between 20 and 30 years.^{2,4,7}

In terms of gender, there are 399 incidents in males, 97%, and 13 incidents in females, 3%, which is slightly different from a research conducted in Kohgiluyeh Province, Boyer Ahmad of Iran (93.5%) of males⁷. While in Qom province of Iran, study shows the difference to (68%) in males and (32%) in females⁸. which itself goes back to cultural and social issues and the presence of women outside the home and their way of life, Since in Afghanistan, compared to other countries, the unnecessary presence of women outside the home is limited, and at the same time, the limitation of financial independence and the lack of familiarity and the uncommonness of the free use of tobacco and narcotics by the female, on the other hand based on traditional and ruling values In the society, if there is an addict, the female is not pushed to the society by the family So that the vital event or death is reported and recorded to the judicial authorities, so the above mentioned points are the reasons that justify the discrepancy in the deaths of drug addicts in terms of gender compared to other countries. In terms of civil status, the number of deaths caused by narcotics is 237 cases (57.5%) single, 115 cases (27.9%) married, and the remaining 60 cases (27.9%) are unknown. Although the information related to their civil status was not recorded in almost a third of the cases due to the fact that the bodies were unidentified, but most of the cases happened to single people, which is consistent with the results of other similar studies⁷. The reasons for young people to turn to narcotics are issues such as unemployment, poverty, psychological problems caused by it, and issues such as not achieving emotional desires and wishes such as love failure and similar. In terms of educational level, the deceased people who died due to narcotics were mostly illiterate and poorly educated, with a total of 320 cases (53.39%), which constituted more than half of the cases, and the least number of victims had higher education, 36 cases (8.98%). which is similar to studies conducted in Asian countries such as Iran^{7,9}. in terms of occupation, 24 cases (5.8%) were employees, 55 cases (13.34%) were self-employed, 54 cases (10.92%) were educated, 15 cases (3.64 %) household affairs, and the remaining 24 cases (13.8%) include unexplained deaths and cases whose information is not recorded in relation to their employment status. In terms of the occupation, 162 cases (39.3%) were unemployed, which represents a close relationship between drug addiction with work and income, and it is consistent with the literature^{7,12}. in another study, the cases were mostly among people who have a freelance job with low income, findings in this research shows that most of the incidents happened to low-income and unemployed people, maybe the unemployment rate in the country compared to other countries is the reason for the difference^{12,9}. In terms of seasons, the most deaths occurred in the winter season, 213 cases (51.69%) and the least cases in the summer season, 57 cases (13.8%) occurred in the summer, which was caused by taking an excessive amount of narcotics, being exposed to the cold, the possible reason could be lack of access to suitable livelihoods and health services. In terms of establishing the type of narcotics based on data, 312 cases (75.7%) of opiates, 32 cases (12.86%) of alcohol, 8 cases of cocaine (1.94%), 15 cases of hashish (3.64%), 24 cases of 3,4-methylenedioxy-methamphetamine (5.8 %). Most of the incidents are related to opiates (opium and its preparations, especially heroin). These findings are similar to the results of the research conducted in the forensic medicine of Kermanshah province in Iran (55.59%), while in European countries, along with the deaths caused by opiates and their preparations, alcohol is also significantly high^{3,4,6,7,9,12}. The difference in Afghanistan is mostly related to easy access to narcotics (cultivation and large traffic of opium and heroin)

and social issues like lack of monitoring of the ban on the use of opium and its preparations in proportion to alcohol in the society. Of course, the turning point in this research is the finding a significant amount of the narcotics were 3,4-Methylenedioxymethamphetamine (5.8%), which has become common among young people in recent years, which requires the study of the reasons for access to it by people in the society. In relation to the last question of the research in terms of sending incidents to the security areas of Kabul city, the most incidents among the 18 security areas are 70 incidents (17%) from the first area, 66 incidents (16%) from the fifth area, 62 incidents (15%) from the eighth precinct, 48 cases (11.65%) from the third precinct have been referred to the Department of Forensic Services, while no cases have been sent from the fourteenth precinct and the eighteenth precinct. According to the findings, most of the cases were referred from the first (city center), fifth, eighth, sixth and third districts (west of Kabul) of Kabul city, and most of the reasons are related to the special nature of commercial areas and population density, which is a suitable place for waste collection. (Employment of the majority of addicts) and the return of a number of residents of these neighborhoods from emigration, especially from Iran.

Conclusion

Deaths caused by narcotics and psychotropic constitute approximately one-seventh of all deaths referred to forensic medicine, which is a worrying amount, compared to 2019, the number of deaths shows a significant increase in 2018, the highest number of deaths caused by narcotics and psychotropic consists of young, male, single, illiterate or low-educated and unemployed people with low income, which The main causes are easy access to narcotics, low level of education, unemployment and lack of healthy activities for young people. In terms of the seasons, the most deaths occurred in winter, which shows a direct relationship with the environmental temperature, living conditions and access to health care. Most of death caused by narcotics are opium and its preparations, which is due to easy access to narcotics (cultivation and wide traffic of opium and heroin) and social issues like, lack of supervision on the prohibition use of opium and its preparations in proportion to alcohol in the society. According to the security districts of Kabul city, no event has been sent from the 14th and 18th districts. the turning point in this research is the finding of a significant amount of the narcotics (5.8%) were 3,4-Methylenedioxymethamphetamine (K), which has become common among young people in recent years, which requires studying the reasons for access to it by people in the society.

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