Substance abuse in Iraq, Quantifying the Picture
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ABSTRACT
Background: Substance abuse is a worldwide problem that faces governments, including health ones. In Iraq, the problem is relatively recent and it seems that it is growing very fast. This has motivated all the relevant parties in the Iraqi community, officially and non-officially, to raise voices and conduct tasks to try to control the problem through primordial prevention (via mass education), primary (via taking measures to reduce drug smuggling), secondary (via treating the abusers), and tertiary (via rehabilitating the recovered abusers).

Aim: This study was conducted, as a part of the efforts above, to try to scientifically quantify the problem in the country.

Method: This retrospective cross-sectional study by reviewing the available data of the Iraqi Community Epidemiological Workgroup for the years 2016 to 2021, which includes abuse relevant data from the Ministry of Health, the Iraqi Judicial System, Ministry of Interior, and other sources. Precisely, the data in this study were extracted from health and judicial authorities' records.

Results: It was very clear that the numbers of victims of substance abuse have been increasing, when the patients treated by the health institutions increased steadily from 2979 in 2017 to 6101 in 2021; and the numbers of persons who appeared in front of a judge in the Iraqi courts more than doubled from 6393 persons to 14391 persons during the same period. More than half of the burden (50.1%) had been put on the health institutions in Baghdad. Generally, the highest addiction substance abused by the treated patients were alcohol (37.8%) and medication (22.6%); hence, the most frequent court cases were those of substance abuse (65.65%) rather than substance smuggling. Some Iraqi governorates showed a statistically significant increase in their share of abuser patients treated during the study period, like Al-Muthanna, and Thi-Qar (p= 0.0001). During the study period, there has been a statistically significant (p= 0.0001) increase in the number of patients treated because of amphetamines abuse and marked decrease in opioids abuse. Regarding sex, the number of abuser female patients is much less during the study period and minors were less than adults. The findings necessitate more serious efforts to confront the phenomenon of substance abuse in Iraq.

Keywords: Substance abuse, Addiction, Iraq, Situational analysis
INTRODUCTION
Addiction is an inability to stop abusing a substance or engaging in a behavior even though it is causing psychological and physical harm[1]. Types of abuse include tobacco, drugs, videogame, Internet, food, shopping, alcoholism, sex, and gambling abuse[2]. Although, all types of addiction have their own negative impacts on human life[3], it documented that drug abuse is the worst[4]. According to the report of the United Nations Office on Substance and Crime for the year 2021, 275 million people around the world abuse substance, of whom 36 million people suffer from substance abuse disorders[5]. The report also indicated that the percentage of young people who are aware of the dangers of substance on their lives is decreasing, and thus the weakness of this knowledge will lead to increase the percentage of young people who abuse substance[6]. During the years 2010-2019, the number of substance abusers had increased by 22%. It is estimated that about 5.5% of the world's population aged 15-64 years have abused a substance. The report also indicated that half of the injection abusers were infected with the hepatitis C virus[7].

Worldwide the harmful use of alcohol results in 2.5 million deaths each year. About 320,000 young people between the age of 15 and 29 years die from alcohol-related causes, resulting in 9% of all deaths in that age group[8].

During last years, Iraq has witnessed a noticeable increase in substance abuse, and this phenomenon has become a major threat to the health, security and economic system of the community[9]. In Iraq, there is very little published research on substance abuse, and there is no clear and accurate perception of the size of the problem, its spread, the types of substance abused, and the age groups who abuse the most substance[10]. In this study, we tried to shed light on the phenomenon of substance abuse in Iraq and explore the widespread types and the rate of this abuse according to geographical location, as well as the age groups of substance abusers and their gender, to help develop a clear and accurate picture that helps decision makers in finding solutions to this growing health problem.

METHOD
The research was a cross-sectional study conducted retrospectively. It relied mainly on the official statistics of the Ministry of Health, the Ministry of Interior, the judicial authorities and other sources. The data reviewed have been available at the Iraqi Community Epidemiological Workgroup for the years 2016 to 2021 which has a copy of data from all of the relevant authorities in Iraq. The researchers received an electronic version and paper printout of the database. Only the data that could be processed, were used. After studying them, they were fed into an electronic statistical package and analyzed in percentages. For that purpose, data were classified, coded processed and analysed by the SPSS software- version 26 and graphs were made on Excel application of Microsoft Office version 2016. The study process extended from 3 January to 16 April 2022. The researchers followed the honest recording of data principle. Moreover, The Research Ethics Committee at the Iraqi Association for Medical Research and Studies has reviewed, examined, and approved the research protocol.

RESULTS
Figure (1) shows that the numbers of patients, whom had been treated by the institutions of the Iraqi Ministry of Health increased steadily for the years 2017, 2018, 2020, and 2021.
According to Figure (2), it is obvious that the numbers of persons who appeared in front of a judge in the Iraqi courts more than doubled in 2020 as compared to 2016.

Considering sex, it is clear from Figure (3) that the number of woman patients was much less during the study period. Although, the total number of patients increased with time, the number of women decreased during that period.
FIGURE 3: The numbers of substance abuse patients whom had been treated by the institutions of the Iraqi Ministry of Health for the years 2017, 2018, 2020, and 2021 distributed according to sex.

It can be seen that in spite of the increase in the numbers of total persons who appeared in front of a judge in the Iraqi courts for the years 2017, 2018, 2020, and 2021, there had been marked decrease in the numbers of minors (Table (4)).

FIGURE 4: The numbers of persons who appeared in front of a judge in the Iraqi courts because of substance abuse for the years 2016, 2017, 2018, and 2020, distributed according to age.

In Figure (5), it is clear that the share of treated patients in Baghdad Governorate was the highest, while Ninawa, Al-Anbar and Diyala were the least.
FIGURE 5: The percentages of substance abuse patients whom had been treated by the institutions of the Iraqi Ministry of Health for the years 2017, 2018, 2020, and 2021 distributed according to governorates. The highest number of persons, appeared in front of a judge, was in Baghdad, while the lowest was in Diyala governorates (Figure (6)).

FIGURE 6: The numbers of persons who appeared in front of a judge in the Iraqi courts because of substance abuse for the years 2016, 2017, 2018, and 2020 distributed according to the Iraqi governorates. The highest addiction material among the treated patients were alcohol and drugs, and the lowest were hallucinogens and Cannabis (Figure (7)).
FIGURE 7: The percentages of substance abuse patients whom had been treated by the institutions of the Iraqi Ministry of Health for the years 2017, 2018, 2020, and 2021 distributed according to type of addicted material.

Figure (8) illustrates that the most frequent court cases were those of substance abuse.

FIGURE 8: The percentages of persons who appeared in front of a judge in the Iraqi courts because of substance abuse for the years 2016, 2017, 2018, and 2020, distributed according to the type of their cases.

Governorates like Al-Muthanna, Meesan, Ninawa, and Thi-Qar showed an increase in their share of patients treated during the study period. However, Baghdad, Basra, Holy Karbala, Wasit, and An-Najaf Al-Ashraf showed a decrease in their shares (Figure (9)). These changes were found statistically significant.
FIGURE 9: A comparison between percentages of substance abuse patients whom had been treated by the institutions of the Iraqi Ministry of Health for the years 2017, 2018, 2020, and 2021 distributed according to governorates.

From Figure (10), it can be noticed that the share of each governorate, from the total number of cases treated by the courts, has been varied from year to year during the study period, with no clear trend. The differences between the governorates over the study years were found to be statistically significant (p< 0.0001).

FIGURE 10: A comparison of type substance abuse cases that were seen by a judge in the courts for the years 2016, 2017, 2018, and 2020, distributed according to the Iraqi governorates.

During the study period, it is clear that there has been a marked increase in the number of patients treated because of amphetamine addiction and marked decrease in opioids addiction. Addiction on other substances has been fluctuating (Figure (11)). The differences between the years were found to be statistically significant (p < 0.0001).
FIGURE 11: The percentages of substance abuse patients whom had been treated by the institutions of the Iraqi Ministry of Health for the years 2017, 2018, 2020, and 2021 distributed according to the type of the addicted material.

The percentages of the types of criminal cases remained, almost, in the same trend during the study period (Table (12)). The differences between the years were found to be statistically non-significant (p> 0.05).

FIGURE 12: A comparison of substance abuse cases percentages that were seen by a judge in the courts for the years 2016, 2017, 2018, and 2020, distributed according to the type of case.

Figure (13) clarifies that the percentage of the addicted substances per governorate differs significantly (p< 0.0001) among the Iraqi governorates. Opioids and hallucinogens were more in Baghdad, amphetamines were more in Basra, medicines addiction was more in Diyala, Cannabis was more in holy Karbala, Alcohol and Cannabis were more in Al-Muthanna, alcohol was more in Wasit and Babil, hallucinogens were more in Al-Diwaniya, hallucinogens and medicines addiction were more in An-Najaf Al-Ashraf, amphetamines and medicines addiction were more in Maysan, alcohol was more in Karkook, opioids and medicines addiction were more in Ninawa, Cannabis was more in Al-Anbar, and finally medicines addiction was more in Thi-Qar.
FIGURE 13: A comparison between addicted substances by patients whom had been treated by the institutions of the Iraqi Ministry of Health for the years 2017, 2018, 2020, and 2021 distributed according to governorates.

It seems that the types of criminal cases during the study period were variable in their percentages from governorate to another (Figure 14). The differences between the governorates over the study years were found to be statistically significant (p < 0.0001).

FIGURE 14: A comparison among persons who appeared in front of a judge in the Iraqi courts because of substance abuse for the years 2017, 2018, 2020, and 2021, distributed according to governorates.
DISCUSSION

The study shows increasing percentage of persons treated by the Ministry of Health institutions because of substance abuse mainly in 2020 and 2021. This is consistent with the 2021 World Drug Report that provided a global overview of the supply and demand of opiates, cocaine, cannabis, amphetamine-type stimulants, as well as their impact on health, taking into account the possible effects of the COVID-19 pandemic[7].

The current analysis found that the numbers of persons who appeared in front of a judge in the Iraqi courts more than doubled in 2020 as compared to 2016, which highlights the effect of the pandemic and goes with the worldwide analysis which suggests that the pandemic has brought increasing economic hardship that is likely to make illicit drug cultivation more appealing to fragile rural communities. The social impact of the pandemic – driving a rise in inequality, poverty, and mental health conditions particularly among already vulnerable populations – represent factors that could push more people into substance abuse and drug trading[7].

The analysis found that the highest addiction material among the treated patients were alcohol and drugs, followed by amphetamine-type substance and the lowest were hallucination substances and cannabis. This finding is also present in a previous analysis in which the most widely used psychoactive substances in Iraq was found to be alcohol and the following were prescription drugs. However, there was near universal agreement that the use of cannabis, tramadol (an opioid-type analgesic), and amphetamine-type substances (ATS) is increasing rapidly in some areas and that the drug and alcohol abuse overall is increasing[1].

Men are more likely than women to use almost all types of illicit drugs. This finding is similar to another study conducted to estimate the result from the 2016 national survey on substance abuse and health[11]. Substance abuse disorders may progress differently for women than for men. Women often have a shorter history of using certain substances. However, they typically enter substance abuse disorder treatment with more severe medical, behavioural, psychological, and social problems. This is because women show a quicker progression from first abusing the substance to developing abuse disorder[12].

The share of treated patients in Baghdad Governorate was the highest, followed by Basra governorate while Ninawa, Al-Anbar and Diyala were the least. That could be explained by the fact that Baghdad and Basra have a specialized treating centres for substance use. However, the significantly increased percentage of patients in some governorates during the targeted period can be an alarm that the problem is expanding geographically in Iraq and may end with an epidemic. This is powered by the fact of the significant rise in the numbers of cases managed by the courts in some governorates, which have put a burden on the health and judicial institutions.

In spite of the increase in the numbers of total persons who appeared in front of a judge in the Iraqi courts for the years 2017, 2018, 2020, and 2021, there had been marked decrease in the numbers of minors. A similar finding suggests that substance abuse and serious offending decrease in late adolescence. Understanding the factors that enable minors to desist from these behaviours as they learn new skills and mature may reveal avenues for intervention[13].

It is not necessary for the increases to be real. They may reflect an improvement in documentation that occurred in some governorates, more than other ones, in the last 5 years[14]. However, the variability in the numbers of persons who were appeared in front of the judge can, to a considerable extent, be linked to the coincidence of ISIS occupation to some of the Iraqi governorates as suggested by a study conducted in 2020[14]. Moreover, the same study showed similar results regarding the statistically significant fluctuation of abusing some of the addiction substances. The determinant, of the statistically significant differences between the Iraqi governorates in the commonest substance abused, can be the position of each governorate and the presence of seaports, airports and border cross-points.
CONCLUSION
It seems that substance abuse may represent a serious social problem in Iraq. Numbers relevant to this problem are increasing dramatically. The rapid escalation of the number of addicts in this way indicates the lack of cognitive immunity in society.

RECOMMENDATIONS
It was found that there has been an upward increase in abuse in all Iraqi governorates during the past five years, especially in the abuse of synthetic substance, stimulants and cannabis, which requires additional and more serious efforts to confront this phenomenon, through:

- increasing the number of addiction treatment centers and increasing their capacity, as well as providing well-trained staff to work in them.
- taking urgent measures to fortify society intellectually through awareness campaigns of all kinds. These need to include the development of an educational curriculum in schools to prevent substance abuse.
- unifying all the efforts of governmental and non-governmental institutions in a clearly defined national plan under a specialized leadership and influential intervention.

Limitations of the study
The most important limitation faced the researchers in this study, was the widely prevalent problem of documentation in the third world countries, that is the inaccuracy and incompleteness of data in the records.

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