Review Article

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Epidemiological and etiological factors related to suicide in the Middle East

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ABSTRACT

Estimates show that suicide is relatively common among Middle Eastern countries as a total of 26,000 fatalities in 2016 were attributable to suicide in them. However, the quality of care of mental illness in these countries is not adequate as compared to the international levels. The aim of the study was to discuss the different epidemiological and etiological factors that were linked with suicide in the Middle East, according to evidence obtained from studies in the literature. The impact of cultures and religions on dealing with mental illnesses and suicide as well as the roots of these conditions will be explored to find the appropriate solutions. Suicide in the Middle East is common but unique from other countries in the world. Religion, socio-economic status, war and conflict in many regions play a big role in the rate of suicide. Religion reduces the prevalence rates of suicide but other factors might be more dominant as many regions are in conflict and have low socio-economic status. Furthermore, gender, family conflicts and mental illnesses were identifiable risk factors in the literature. More efforts on a national level is warranted as well as among communities to reduce the rates of suicide. The initiation of support groups among those with mental illnesses and low socio-economic state will prove extremely beneficial in reducing the rate of suicide as they are almost non-existent in Middle East.

Keywords: Suicide, Middle East, Epidemiology, Psychiatry

INTRODUCTION

Estimates from previous investigations in the literature

show that 5.6% of the total disease burden on the healthcare systems within the Middle East and North Africa region attribute to psychological diseases and

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mental illnesses. Besides, among the reported psychiatric disorders, depression is the commonest and can cause serious life-related complications. Reports also show that the prevalence of mental disorders within the Middle East and North Africa countries is higher than the global rates of the same diseases.

Estimates also show that suicide is relatively common among these countries as a total of 26,000 fatalities in 2016 were attributable to suicide in these countries.² However, the quality of care of mental illness in these countries is not adequate as compared to the international levels, as 4.2 hospital beds and 7.3 healthcare workers responsible for managing mental illnesses per 10,000 population only were recorded in these countries, which is significantly lower than 35 and 34.5 estimates in Europe. The impact of cultures and religions on dealing with mental illnesses and suicide is important when approaching the roots of these conditions to find the appropriate solutions.^{3,4}

The aim of the study was to discuss the different epidemiological and etiological factors that were linked with suicide in the Middle East, according to evidence obtained from studies in the literature.

METHODS

We performed an extensive literature search of the Medline, Cochrane, and Embase databases on 15th June 2021 using the medical subject headings (MeSH) or a combination of all possible related terms. This was followed by the manual search for papers in Google Scholar and the reference lists of the initially included papers.^{5,6} Papers discussing suicide in the Middle East were screened for relevant information. We did not pose any limits on date, language, age of participants, or publication type.

DISCUSSION

Epidemiological factors related to suicide in the Middle East

Many previous studies have reported the prevalence of suicide in the middle east and the associated cultural and community factors. It is logical to say that the reported prevalence rates are not the same across the different countries across the previously published investigations within the different countries. Moreover, it should be noted that some countries might suffer from additional factors that might add to the severity and increased prevalence of mental-illness-induced suicide rates across the countries as the presence of a civil war within a country.

For instance, a previous meta-analysis reported that up to 30% of children and adolescents living in Iraq suffered from post-traumatic stress disorder (PTSD) while 4.3% and 3.3% suffered from separation anxiety and

photophobia, respectively.7 The authors also showed that up to 70% of Palestinian kids also suffered from PTSD, while around 11%, 10%, and up to 100% suffered from depression, attention deficit hyperactivity disorder (ADHD), and anxiety, respectively. 7.8 Within the countries of the Middle East, it has been previously estimated that suicide-related death is the 25th leading cause across the region, which has been reported to be a low prevalence rate as compared to other regions.8 This has been attributed to the potential impact of religions, including Christianity and Islam that are highly prevalent there, which prohibit suicide.9 This was indicated by a previous Swedish investigation which showed that the prevalence of suicide among immigrants from the Middle East was relatively low as compared to immigrants from other regions during the period from 1990-1998.¹⁰

The authors also reported that the prevalence of suicide was higher in males compared to female individuals and the rate was also higher in individuals that had at least one Swedish parent. The latter was a significant risk factor for suicide as the authors estimated that the odds ratio increased from 0.5 to 0.9 if this condition was present. Although reports within the Middle East indicate the low prevalence of suicide across the region, it has been previously demonstrated that such reduction compared to other countries is probably attributable to the potential underreporting of many cases. Moreover, recent investigations have reported that the prevalence rates tend to be increasing in recent years, which is probably attributable to the increased prevalence of psychiatric disorders like depression. For instance, a previous investigation in Egypt reported that around 15% of their included 602 adolescent female population had depression. 11 Besides, the authors also reported that major depressive disorder (MDD) or subsyndromal depression, and dysthymic disorder was present in 5% and 3%, respectively. Among the included females, 2.5% and 20% had serious suicidal attempts and suicidal ideation, respectively. Another investigation from Egypt also reported that suicidal ideation among school children was present in up to 30% of the included population. 12,13

As a result of the small number of reports about suicide in the Middle East, it is hard to decide the most prevalent and used suicidal methods in these countries. However, it was previously demonstrated that the tools and methods used for suicide among adults in these countries are significantly different from the ones used by the Western populations. For instance, immolation-induced suicide is highly prevalent in the Middle East, despite not being a very common modality in Western countries. In a previous investigation in Egypt, around 3% of the included population were admitted to the burn unit as a result of attempted suicide, and the majority of them were females.¹⁴

A previous meta-analysis also previously reported that hanging, followed by poisoning and self-immolation was the most commonly used method for suicide according to the results of 19 included countries from the Middle East, with estimated rates of 39.7%, 20.3%, and 17.4% for each reported method, respectively. The study also showed that the prevalence of using these methods was significantly different by gender as a hanging, poisoning and self-immolation were significantly different in males and female individuals, with estimated prevalence rates of 38.8% versus 26.3%, 19% versus 32%, and 11.3% versus 29.4%, respectively. Many other methods have also been reported in the literature, and organophosphorus poisoning was a prevalent method among females, that was responsible for up to 20% fatalities, according to a previous investigation in the Middle East, which is even higher than medical drug overdose, which accounted for 0.5% only. 15

It was previously demonstrated the prevalence of suicide among females that are 15-29 years old is higher than males, even the older ones.9 The levels of education and urbanization have also been previously reported to be associated with changes regarding gender and suicide rates. This was indicated in a previous Iranian investigation which showed that 85% of the patients that were admitted to the burn unit in a rural healthcare facility were females and around three-fourths of the admissions were attributable to failed suicidal attempts. 16 The authors also showed that parenteral conflicts were more common than marital conflicts among the included participants. Moreover, in the urban Iranian regions, it was estimated that the prevalence of suicide by immolation was relatively low compared to the rural ones, as it has been estimated that 41.3% of females and 10.3% males only committed suicide by this method.¹⁷

The higher rates among females in this study were attributable to the lower educational levels as suggested by the study authors. On the other hand, another Iranian investigation reported that the prevalence of suicide among males was higher than females, as the authors reported that young females from urban regions usually committed suicide by overdosing and immolation as compared to males that used firearms. 18 The authors also reported that hanging, drug overdose, and self-immolation were the commonest methods of suicide among this population. Moreover, the same study also demonstrated that hanging and self-immolation were equally used by 10-19 aged children to commit suicide in this study. Previous studies also indicated that the prevalence of suicide was much higher in Middle Eastern females than males. For instance, this was indicated by studies in Saudi Arabia, and in Turkey that showed that the prevalence of suicide among females was 3.8 times higher than in males. 19-21

Etiology and risk factors

Many causes and risk factors have been proposed by patients who previously committed suicide among the different studies in the literature that were published in the Middle East. Moreover, the presence of political and economic heavy burdens is also another cause for inducing

serious life problems and committing suicide, as investigations show that many immigrants from the Middle East usually travel overseas looking for more prosperous futures and careers. The presence of extreme religious-related also impacts the individuals, and especially children in these countries, adding significant stress, which might also be a significant factor for committing suicide. Oppressive or non-supportive communities with no true opportunities for success can push the child or the youth to be aggressive against their governments by making them join terrorist campaigns and committing suicidal missions. ²² This might be attributable to the increased exposure to traumatic situations by these individuals, which is usually associated with the development of anxiety, depression, PTSD, and other behavior-associated problems.7 Although some global studies have suggested that the suicide rates among their included participants decreased during wars, which is probably attributable to the presence of social cohesion among individuals of the society, other investigations questioned the efficacy of this theory as they found that social exclusion was the main feature in their countries, which was directly responsible for increased suicide rates during the periods of wars.²²⁻²⁵

In Jordan, a study showed that most of the participants that were admitted to the emergency department due to harm-related and suicide attempts were females and housewives aged between 20-30 years old. The authors reported that family violence was the most common reason for these admissions which were attributable to psychosexual or physical abuse, according to the study participants. In Lebanon, such reasons for emergency department-related admissions were also reported among the included middleaged single females who tried to commit suicide and reported that family abuse and interpersonal issues were the commonest causes of such events. ²⁷

Moreover, the presence of anxiety, depression, and other psychological symptoms was also reported as common risk factors that were associated with such attempts. Overdose related to prescriptions of medications was the only significant predictor for hospitalization in these patients. Another Lebanese investigation by Faris et al.²⁸ also showed that around 7% per 100,000 population that are admitted to the emergency department for suicidal attempts required psychological consultation, anxiety and depression being the commonest psychological disorders noticed in these patients. In a previous study that was conducted in Morroco, the authors reported that family conflict was the commonest reason that was reported for suicide, however, more than two-thirds of the reasons were not documented in this investigation.²⁹ In Qatar, it was reported that having a psychiatric disorder, being male, being divorced, or widowed were significantly associated with induction of self-harm and suicidal attempts.³⁰ In Saudi Arabia, two studies showed that female individuals and age groups at 12-35 years of age were the most vulnerable to committing suicide than individuals.31,32

Besides, in Tunisia, the association between many demographic factors and repeated suicidal attempts was investigated. A study showed that having a previous family history with psychiatric disorders, a prior mental illness, being unemployed, single or divorced, and with depression were the commonest factors that were associated with the repeated performance of suicidal attempts.³³ The study also showed that the commonest cause of attempting suicide was the presence of interpersonal problems as reported by the study participants. In the United Arab Emirates, a study showed that female patients were more prone to committing suicide than males, also probably due to the presence of interpersonal problems.³⁴

Moreover, it should be noted that the low socioeconomic levels in some of the countries within the Middle East might lead to neglecting the importance of mental illnesses, which might impact the prognosis of these diseases leading to increased chances of suicide attempts as previously discussed. 35-39 Although the positive impact of religious beliefs on suicide, cultural habits might hinder the process of asking for help and treatment from a mental illness and individuals tend to hide such actions. 35

CONCLUSION

The epidemiology of suicide in the Middle East was different from anywhere in the world. Although religions might have a positive impact in reducing the prevalence rates, this can be compensated by the wrong cultural habits and the war circumstances that are currently undergoing in many regions there. Many factors have been identified as causes and risk factors for committing suicide as gender, family conflicts, mental illnesses, and economic burdens. National interventional approaches should be offered to the populations at risk, in addition to encouraging awareness and educational campaigns about the importance of psychiatric help in these situations.

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