The Heterogeneity in Iranian Completed Suicide

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Dear Editor

Completed suicide is a critical health issue, leading to other subsequent health issues.[1] Findings on national trends of completed suicide in Iran are somewhat heterogeneous, with certain studies estimating decreasing trends,[2] while others are showing an increasing trend.[1] One of the main factors behind this significant difference lies in the sources of data collection. In the former case, most data sources were based on the Ministry of Health and Medical Education (MoHME) in Iran. In contrast, data sources were acquired from the Iranian Forensic Medicine Organization (IFMO) in the latter case. The death registration system managed by the MoHME suffers from several shortcomings, including incompleteness, missing values, and misclassification of deaths.[3] Based on Iranian law, cases of suicide for which a forensic physician issues a death certificate are recorded in the suicide registry dataset by IFMO.[4] Thus, research based on the IFMO suicide registry database tends to have higher accuracy.[1, 4] Another factor contributing to this disparity is conducting statistical analyses in various studies. It is crucial not to classify the total population as at-risk for suicide.[5] More details regarding data quality and suicide statistics in Iran have been documented elsewhere.[5]

It is also worth noting that the suicide methods vary for different regions.[1] It seems that there is no single explanation for suicide in Iran since the suicide methods in the western and southern regions of the country are different from what occurs in the metropolises and industrialized provinces. For instance, due to changing patterns in residential preferences in urban areas, falls from heights as a method of suicide are on the rise.[1] Generally, hanging, self-poisoning, self-immolation, and shooting with firearms have been the most common suicide methods in Iran. The more violent methods of completed suicide, such as self-immolation and firearms, have decreased in the regions which previously showed a high prevalence.[1]

Age and gender differences were also noted for suicide mortality in Iran.[1, 6] Regarding age, suicide is not classified as a cause of death within the under-five age group. If a cause of death in this age group is recorded as suicide, it implies a misclassification, often referred to as a "garbage code" in the death registry. Consequently, when conducting statistical calculations, the total population should not be considered at-risk of suicide.[5] Treating the total population as an at-risk group could lead to underestimating suicide rates.[5] As a result, health policymakers might misconstrue the accurate extent of the problem. Also, people aged under 30 years committed suicide more often in Iran.[6] For this reason, suicide prevention programs have been integrated into Iranian primary healthcare network to expand mental health services. This program aims to reduce the rates of suicide attempts and suicide mortality within the general population.[7] Moreover, another program for the prevention and intervention of suicide in academic environments has been compiled at the national level.[8] Several similar programs provide telephone services throughout the country by simply calling the *social emergency services* (number 123) or the *Iran suicide hotline* so that the counselors can guide and prevent cases of suicidal ideation. However, evaluating the efficacy of these services in preventing suicide is outside the scope of this letter.

The important point is that health policymakers should not neglect the role of digital health marketing in preventing suicidal behaviors and truly

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take advantage of this digital potential,[9] especially for preventing suicide among young populations. After young people, married people, particularly married men, are the next significant sub-group of suicide victims. Approximately half of all suicide cases occur among married people.[1] Nevertheless, as the number of women's suicide decreases with increases in the number of divorces, it can be construed that the social stigma of divorce decreases in closed societies such as rural and nomadic societies, etc., leading to a decrease in completed suicide. It seems that the effects of individuals' marital status in completed suicides deserve further research and interpretation in line with the socio-cultural specification of communities.[1]

To tackle the heterogeneity in Iranian suicide data, a robust connection between the MoHME dataset and the FMO is crucial. This is due to Iranian legal directives mandating that causes of death should be exclusively written in "Persian" on death certificates issued by forensic physicians, with ICD-codes or English terms prohibited.[4] Collaboration between regional health authorities and provincial forensic medicine centers is essential to improve mortality data accuracy, reducing underestimations.[4] Additionally, a technical group, including representatives from these organizations, should be established to exactly align cause-of-death declarations on certificates with the latest version of the International Classification of Diseases codes for enhanced precision.[4] Scientific evidence in different countries from evidence-based suicide prevention approaches has shown that access to psychological support and interventions in critical situations can effectively reduce injuries and prevent suicides.[7,8] The need for such services in the society is increasing. Financial and human resource limitations have made it difficult to fully expand these services, which can be an alarming signal in the future.

Authors' Contribution

Both authors contributed equally to this work.

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