Suicide Statistics in Iran: Let’s Get Specific

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Dear Editor

We would like to share our concerns about the quality and accuracy of suicide data in Iran. In the past few decades, Iran has witnessed a sharp increase in suicide-related mortality reaching 4.7 per 100,000 in 2015 (Hassanian-Moghaddam & Zamani, 2017; Izadi et al., 2018). While the rate of suicide-related deaths has increased among both men (i.e., 5.99 in 2006 to 6.73 in 2015 per 100,000 population) and women (i.e., 2.41 in 2006 to 2.64 in 2015 per 100,000 population), men bore about 70% of complete suicides between 2006 and 2015 (Izadi et al., 2018). Although these statistics are worrisome and point to a concerning upward trend in suicide rates in Iran, they might not provide an actual picture of suicide in the country, given the data quality and approaches to collecting suicide data.

The quality and quantity of complete suicide recordings in the Forensic Medicine Organization (FMO) is often higher than the data recorded in the Ministry of Health and Medical Education (MoHME) due to the limited communications between the offices of death registry within these two organizations (Hajebi, Ahmadzad-Asl, Ershadi, Nikfarjam, & Davoudi, 2013; Poorolajal, Rostami, Mahjub, & Esmailnasab, 2015). For example, once forensic physicians assume the cause of death to be unclear and require further investigations, they would ask for additional laboratory and pathological tests and record the cause of death as “under investigation.” However, after the results of the forensic tests are available, the cause of death would only be updated in the death registry database of the FMO and not the MoHME (i.e., the record would still remain as “under investigation” in the MoHME database). Therefore, suicide studies that rely on MoHME records are prone to underestimating and misunderstanding the real rate of suicide in the country (Hajebi et al., 2013; Hassanian-Moghaddam & Zamani, 2017).

Data collection and analytical approaches in suicide studies could also lead to misinterpretations of suicide statistics in Iran, the details of which are beyond the scope of this letter. First, most studies on attempted suicide rates in Iran are based on self-reported data, which is likely underestimated due to noncoverage of suicide-related medical care costs by insurance companies as well as the sociocultural stigma associated with suicide in the conservative context of Iran; for example, “intentional drug poisoning” is often presumed as accidental overdose of drugs or prescription drug overdose mainly due to lack of knowledge about the prescribed dose. Therefore, it is recorded as “unintentional drug poisoning” and not “suicide attempt” in hospital records and statistics. Second, considering the limitations and incompleteness of death registry databases in remote rural areas of Iran (Hajebi et al., 2013; Sheidaei et al., 2017), suicide estimates based on these records are likely to be an underestimate of true rates. Finally, several suicide studies in Iran have taken the total population as the denominator instead of the population at risk (i.e., 10 years or older), an approach that biases the reported estimates (Ahmadi, Mohammadi, Stavrinos, Almasi, & Schwefel, 2008; Kiadaliri, Saadat, Shahnavazi, & Haghiparast-Bidgoli, 2014; Shojaei et al., 2016).

While the ultimate goal of the health systems and the government in Iran should revolve around addressing the root causes of increasing trends of suicide incidence in Iran through culturally sensitive social and structural interventions (e.g., increasing social happiness and coping skills, decreasing social and gender inequities, decreasing economic problems and unemployment rates; Rostami, Jalilian, Rezaei-Zangeneh, Jamshidi, & Rezaeian, 2016), revisions in how suicide data are collected, analyzed, and interpreted are necessary to help

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provide a more realistic picture of the suicide statistics in Iran and inform the respective upstream and downstream interventions.

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**References**

Ahmadi, A., Mohammadi, R., Stavrinos, D., Almasi, A., & Schwebel, D. C. (2008). Self-immolation in Iran. *Journal of Burn Care Research, 29*(3), 451–460.

Hajebi, A., Ahmadzad-Asl, M., Ershadi, M., Nikfarjam, A., & Davoudi, F. (2013). National registration system of suicide behaviors in Iran: Barriers and challenges. *Archives of Suicide Research, 17*(4), 416–425.

Hassanian-Moghaddam, H., & Zamani, N. (2017). Suicide in Iran: The facts and the figures from nationwide reports. *Iranian Journal of Psychiatry, 12*(1), 73–77.

Izadi, N., Mirtorabi, S. D., Najafi, F., Nazparvar, B., Nazari Kangavari, H., & Hashemi Nazari, S. S. (2018). Trend of years of life lost due to suicide in Iran (2006–2015). *International Journal of Public Health, 1–8*. doi:10.1007/s00038-018-1151-1

Kiadaliri, A. A., Saadat, S., Shahnavazi, H., & Haghparast-Bidgoli, H. (2014). Overall, gender and social inequalities in suicide mortality in Iran, 2006–2010: A time trend province-level study. *BMJ Open, 4*(8), e005227. doi:http://dx.doi.org/10.1136/bmjopen-2014-005227

Poorolajal, J., Rostami, M., Mahjub, H., & Esmailnasab, N. (2015). Completed suicide and associated risk factors: A six-year population based survey. *Archives of Iranian Medicine, 18*(1), 39–43.

Rostami, M., Jalilian, A., Rezaei-Zangeneh, R., Jamshidi, T., & Rezaeian, M. (2016). Suicide pattern in Kermanshah province, west of Iran: March 2012–March 2013. *Middle East Journal of Family Medicine, 14*(8), 38–48.

Sheidaei, A., Gohari, K., Kasaeian, A., Rezaei, N., Mansouri, A., Khosravi, A., … Farzadfar, F. (2017). National and Subnational Patterns of Cause of Death in Iran 1990–2015: Applied methods. *Archives of Iranian Medicine, 20*(1), 2–11.

Shojaei, A., Moradi, S., Alaeedini, F., Khodadoost, M., Abidizadeh, A., & Khademi, A. (2016). Evaluating the temporal trend of completed suicides referred to the Iranian Forensic Medicine Organization during 2006–2010. *Journal of Forensic and Legal Medicine, 39*, 104–108.