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Epidemiology, risk and protective factors of self-immolation; a study from Iran

ACADEMIC DISSERTATION

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ABSTRACT

Background: Suicide by self-burning (self-immolation) is one of the suicide methods that is far more common in low-middle income countries than in high-income ones. Iran is one of the countries that has a high rate of self-immolation. Women are the main victims as the reports show. In this study we aim to find the epidemiology, risk and protective factors of self-immolation.

Methods: Initially, we analyzed two national databases to identify the epidemiological aspects of self-immolation including demographic, geographic, cultural, economic and health-related characteristics of fatal self-immolation cases that may vary across regions of Iran (sub-study I). Subsequently, we conducted two case-control studies in regard to attempted self-immolation. One titled *Preliminary study* with 60 participants (30 cases and 30 controls), and the other entitled *Main study* with 151 cases and 302 controls dedicated to identifying the risks and protective factors of self-immolation (sub-study II-IV).

Results: Results show that the total rate of suicide by all methods in Iran was 6.42 per 100,000, of which 1.74 per 100,000 (27%) were self-immolation. Seventy one percent of the self-immolators were female and the mean age was 29 years. The geographical features of self-immolation indicate that self-immolation rates are higher in the border provinces of the country, in the rural areas, and in the provinces that were most intensively affected by the postwar socioeconomic consequences, as well as Kurdish people. Results from our studies show that adjustment disorders, opium dependence, major depression, and an individual history of suicide attempts were risk factors. In the married subgroup, marital conflict and addiction of spouse and in unmarried subgroup, problems with parents, parents' death and parents' addiction were identified as risk factors. Moreover, "receiving consultation services" and "anxiety about school/ university performance" played protective roles against self-immolation.

Regarding identification of potential factors for future prevention interventions, descriptive analyses revealed that the means of self-immolation in more than 93% of patients was kerosene. Imitational self-immolation was showed in most of self-immolation cases (more than 60%). The majority of participants (both cases and control) had not used any "consulting services" to solve or manage their problems or enhance their problem-solving abilities. Moreover, unplanned (impulsive) self-immolation was detected in 80% of all self-immolation patients

Conclusion: Overall, in this study we found that self-immolation is an important public health issue in particular regions in Iran. Our results also suggest that self-immolation is a compound phenomenon with multiple potential causes. Our results have implications for interventions that aim at screening, identification, and education of individuals who are at-risk for self-immolation to reduce the rate of self-immolation in the study area.