

# SUICIDAL BURNS IN SAMARKAND BURN CENTERS AND THEIR CONSEQUENCES

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**SUMMARY.** Suicide is a global public health problem, particularly in Asia where few countries with large populations have high suicide rates accounting for the majority of the world's suicides. During a 14-year period, 76 individuals, aged 17 to 66 years, committed suicide from 1995 to 2008 and were included in this report. Data was collected on each patient including, age, sex, place of injury, patient occupation, accommodation, psychiatric illness, suicidal motives, flammable substances used, place of burn, season of the year, and total body surface area (TBSA) burnt. Most suicidal cases (55 out of 76) had a history of depressive episodes and emotional unstable disorders, and 18 of them had a known history of psychiatric illness. In 5 cases alcohol intoxication was present at the moment of suicide, and 3 patients had chronic alcohol dependence together with basic psychiatric disease. It is also evident from this study that the causes of suicide in females are mainly socio-economical and psychological.

**Keywords:** suicidal burns, patient data, collection and analysis

## Introduction

Suicide is a global public health problem, particularly in Asia where high suicide rates in few countries with large populations account for the majority of the world's suicides. Worldwide, approximately one million individuals die of suicide each year, 10-20 million attempt suicides, and 50-120 million are profoundly affected by the suicide or attempted suicide of a close relative or associate. Asia accounts for 60 percent of the world's suicides; at least 60 million people are affected by suicide or attempted suicide in Asia each year.<sup>1</sup>

Cultural influences, religious factors, stigmatization of the mentally ill, political imperatives, and socio-economic factors play a significant role. Unfortunately, the magnitude of the problem is unknown in some Asian countries and, although there are some highlights in terms of preventive initiatives, overall efforts are uncoordinated, under-resourced, and generally under-valued.<sup>2</sup> Analysis of contemporary literature reveals that self destructive behavior is an important component of the various forms of psychological reactions to adverse conditions. It is necessary also to recognize the effect of armed conflicts on the suicidal behavior of some individuals, since they generate an extreme, intense and prolonged form of psychological stress and trauma. Armed conflicts create life-

threatening situations to the affected individuals and their surroundings, as well as aggravating existing socio-economic difficulties; ultimately they intensify the dynamics leading to suicide. According to WHO data (1993), individuals living in places of armed conflicts are particularly vulnerable. However, data collected during World War I regarding suicide rates demonstrated a reduced incidence.<sup>3</sup> Suicide incidence increases in years of economic crisis.

Suicides by fire usually result in a high total body surface area (TBSA) involved and have a poor survival outcome with a significant mortality rate,<sup>4,7</sup> even with the current advances in burn resuscitation and management. The purpose of this present study is to evaluate, with assistance from psychiatrists and burn specialists, all individuals hospitalized at the Burn department of RSCUMA and Inter-Regional Burn Center, Samarkand Uzbekistan, following attempted suicide by fire.

## Materials and methods

### Population

The Burn department of RCSUMA and Inter-Regional Burn Center serves a population of 2.3 in Samarkand Region with a mixture of urban and rural areas. 1000 - 1200 patients are treated for burns each year.

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*Data collection*

During a 14 year period, 76 individuals 17 to 66 years of age committed suicide from 1995 to 2008 and were included in this report. Data was collected on each patient including, age, sex, place of injury, occupation of the patient, accommodation, psychiatric illness, suicidal motives, flammable substances used, place of burn, season of the year, and total body surface area (TBSA) burnt.

**Results**

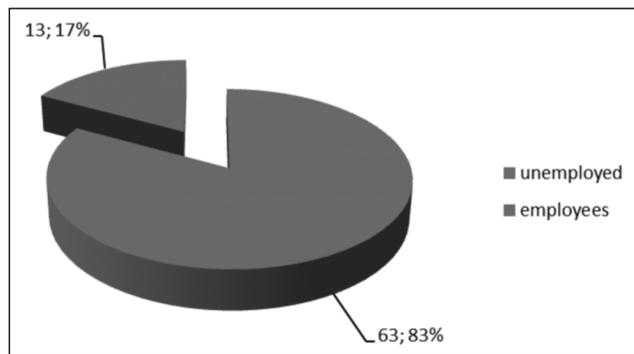
*Patient overview*

71 patients were female and five 5 were male. Age and sex distribution of individuals committing suicide by fire is shown in *Table I*. The most common place of injury was at home in 97.4% (74) of patients. 64 (82, 9%) patients were unemployed (*Table II*). 57 lived in rural areas and 19 in urban areas (*Table III*). 64 patients lived

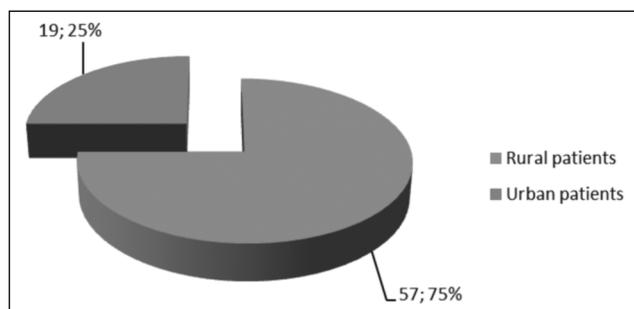
**Table I - Sex/age distribution of suicidal patients**

Nº	Age	Males	Females	%
1.	< 20	-	16	21,1
2.	21-30	1	38	51,3
3.	31-40	1	13	18,4
4.	41-50	-	3	3,9
5.	Over 50	3	1	5,3
Total	76	5	71	100,0

**Table II - Occupation**



**Table III - Place of residence**

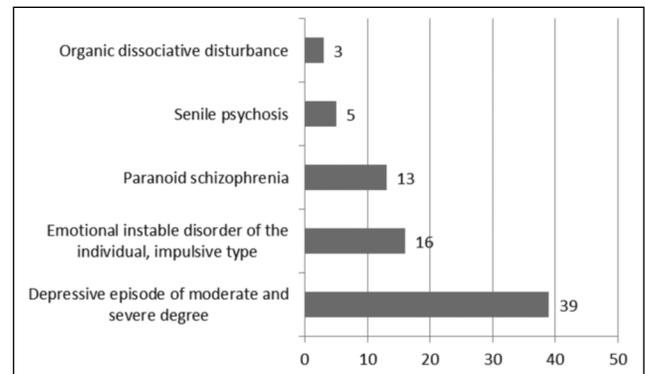


with family (married living with their spouse), 7 patients were unmarried living with parents and 5 were single parents. Most suicidal patients (55) had a history of depressive episodes and emotional unstable disorders; 18 patients had a known history of psychiatric illness. In 5 patients alcohol intoxication was present at the moment of suicide. Chronic alcohol dependence together with basic psychic disease was documented in 3 patients (*Table IV*).

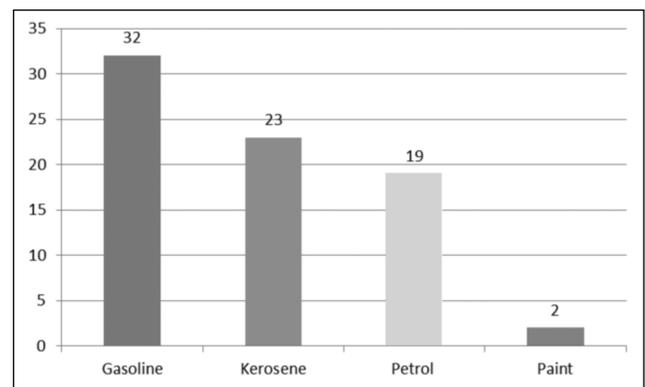
*Suicidal motives*

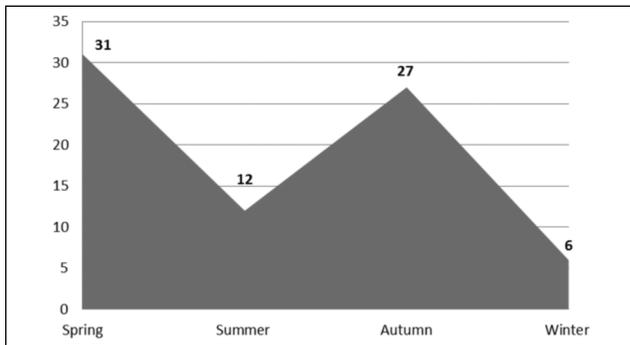
Suicidal motives of patients in depressive conditions were associated with a sense of hopelessness and despair as a result of melancholic vital distress and anxiety. Suicidal attempts in our patients were most often genuine in contradistinction to individuals with personality disorders whose suicidal attempts are characteristically for attention seeking. Suicidal acts were committed as an affective reaction in situations where individuals could hardly control their behavior and had a vague idea of their purpose. Flammable substances used for self-burning are presented in *Table V*. In spring, self-burning was recorded in 31 patients, 12 in summer, 27 in autumn, and 6 patients during the winter (*Table VI*).

**Table IV - Diagnostic psychiatric distribution of suicidal individuals**



**Table V - Flammable substances used**



**Table VI** - Self burning according to seasons.**Table VII** - The percentage of body area involved in the burn

The involved area %	Total number of patients	Survived	Died (%)
< 30%	9	7	2 (22,2%)
30-50%	33	14	19 (57,6%)
Over 50%	34	1	33 (97,1%)

#### Patient injuries

In most patients burns were severe involving 45-70% of the body surface area associated with inhalation burn. Mortality rates increased with increasing TBSA involved (Table VII). On admission, 41 patients were diagnosed with inhalation injury. Gastrointestinal bleeding occurred in 9 patients. Esophageal and gastric ulcerations were diagnosed endoscopically in 6 patients, and duodenal ulcerations in 3 patients. Acute renal insufficiency developed in 3 patients. Of the 22 patients who survived their suicide attempt, the majority (77, 3%) was discharged with recommendation to be treated in local psychiatric dispensary and the rest (22, 7%) were sent to Psychiatric Dispensary Centre for therapy.

#### Discussion

A wide range of socio-economic, cultural, and religious factors influence patterns of suicide in the Asian countries involved in the Strategies to Prevent Suicide project.<sup>8</sup> As a general rule, suicide rates are highest among relatively more prosperous countries, particularly in countries with rapid development rates. Within these countries, suicide rates are highest among sub-groups that have remained socio-economically disadvantaged. Economic development has triggered a movement from rural areas to urban centres, and this has been associated with a heightened risk of suicide among those remaining in rural settings, perhaps because of economic hardship, lack of social support, isolation and access to lethal substances like pesticides. Cultural factors also play a role in shaping the profile of suicides in participating countries. For example, cultural attitudes towards the woman's role in marriage have been

implicated in the comparatively high ratio of female to male suicides seen in several participating countries. The easy availability of pesticides resulting in death in cases that might otherwise have been non-fatal also plays a role. Religion – or the absence of religious belief – also exerts an influence on the pattern of suicides: it may be protective in circumstances where a given faith expressly forbids suicide or it may be permissive of suicide.<sup>9</sup>

In the late 1920s and early 1930s, at the height of the movement for the emancipation of women, many women who dared to remove their paranja (also known as burqa), a symbol of women's slavery in Central Asia, were subjected to banishment and exclusion and were abused vocally and often beaten. Social opinion sharply blamed and disgraced these women. As a result many of them committed suicide through self-burning because they could not bear the atmosphere of moral pressure and constant social censure. From 1926 to 1928, 203 women committed self-burning.<sup>10</sup>

At present, attempts to commit suicide by fire are taking place in post-soviet countries. The following quotes from the press provide examples of this, as people continue to protest: "The lodgers of one of Bishkek's hostels are threatening to commit self burning"; "They got off with nothing more than being discharged for self-burning of women"; "Retired workers are going to commit self burning".<sup>12</sup> These quotes are not an exhaustive list of publications on self burning attempts as a form of protest in Russia, Kyrgyzstan, Tajikistan, and its victims are not only women but men as well. Having chosen this way to take their lives, they protest against unsolved social problems. The essence of these quotations is that "three employees of the tax inspection board got off with nothing more than being discharged because a woman burned herself after they confiscated her property. During social-economic transformation of a society self-burning and suicidal acts are forms of protest against injustice and harsh laws and they are not rare."<sup>11</sup>

Data from sociological research carried out in Tajikistan in the late 1980s and early 1990s demonstrated that in the Tajik society self-burning constitutes a significant part of suicide attempts among women. Taking into account these findings and our own observations, we are trying to draw attention to the phenomenon of self-burning in the Tajik society, analyzing its causes, taking into consideration the date of civil war and reformation time in Tajikistan.<sup>13</sup>

It is evident from this study that the causes of suicide in females are mainly socio-economical and psychological, although most of the young women committing self-burning hoped that other people who were at home would have saved them. Suicide can be qualified as conscious (planned) and unconscious (spontaneous). In most women committing suicide by self-burning, their act is mostly spontaneous and necessitates the development of specific prevention and treatment methods at the pre-hospital, in-hospital, and post-hospital stages.

**RÉSUMÉ.** Le suicide est un problème mondial de santé publique, en particulier en Asie, où peu de pays avec de grandes populations ont des taux élevés de suicide qui représente la majorité des suicides dans le monde. Au cours d'une période de 14 ans entre 1995 et 2008, 76 personnes, âgées de 17 à 66 ans, se sont suicidées et ont été incluses dans le présent rapport. Les données ont été recueillies sur chaque patient, y compris l'âge, le sexe, le lieu de la blessure, le métier du patient, l'hébergement, les troubles psychiatriques, les motivations suicidaires, substances inflammables utilisées, endroit de la brûlure, la saison de l'année, et la totale de la surface corporelle brûlée. La plupart des cas de suicide (55 sur 76) avait des antécédents d'épisodes dépressifs et les troubles d'instabilité émotionnelle, et 18 d'entre eux avaient des antécédents connus de maladie psychiatriques. Dans 5 cas, l'intoxication à l'alcool était présent au moment du suicide, et 3 patients avaient une dépendance à l'alcool chronique avec la maladie psychiatrique de base. Il ressort également de cette étude que les causes de suicide chez les femmes sont principalement socio-économique et psychologique.

**Mots-clés:** brûlures suicidaires, la collection et l'analyse des données des patients

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