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Original Article

Burnt wives in Tehran: a warm tragedy of self-injury

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Abstract: Objective: To investigate the characteristics and causes of self burning among married women in the capital of Iran. Methods: Thirty five victims of self immolation were enrolled in our study during the 4 years of study period. All patients were married attempting suicide by burning themselves. Of these, no one was diagnosed to suffer from a mental or psychological disorder. Results: A statistically significant difference was observed between age groups in terms of education, occupation, and income ($p< 0.05$). In 42.9% of the cases, burning has occurred between 12:00 and 18:00 significantly different from other times ($p< 0.05$). 45.7% of the incidents took place in the courtyard of the house followed by 8% in bathroom, 8% in the kitchen, 2% in dining room, and 1% at the outdoor which revealed a statistically significant difference ($p< 0.05$). 91.4% of the women had used petroleum as a substance for burning which was significantly different with other substances ($p<0.05$). 60% of the victims put their spouse in charge of the main cause for their attempts to self- burning with a statistically significant difference with other causes ($p< 0.05$). Conclusion: Married women who attempted to burn their lives were young wives from low socioeconomic status living in a traditional environment. Time and place of the burning showed that they attempt suicide more likely while they are doing daily routines.

Keywords: Suicide, self- burning, self- immolation, self inflicted burn, married women, wives

Introduction

Self- burning, also called self- immolation, is one of the most violent tragedies ever to be reported as a method of suicidal attempts [1]. Although this method of self injury seems odd in western countries [2-7], it occurs with considerable prevalence among population of the developing nations [8, 9].

Although there are certain risk factors already contributed to this strange behavior [10, 11] including psychological conditions [3, 11, 12] and personal, marital, and environmental affairs [13-16], self- immolation tends to turn into the behavior of choice when attempting to suicide among people of lower- income [1, 6, 9, 17]. Besides, the incidence of violation seems to be underestimated in this population as a result of religious, cultural, and familial restrictions [18].

It has been declared that one of the most dramatic approaches to diminish the incidence of this action could be prevention. But it is evident that high vulnerable populations need to be defined in order to make this preventive strategy acts effective. The distribution pattern for this behavior is variable throughout the world. Hence, each region needs its specific investigation. There are various studies in Iran reporting self immolation attempts [1, 10-15, 17-22]. However, there is not a unique study to investigate the incidence and characteristics of such a behavior among the most risky individuals which seems to be married women.

Our study aimed to evaluate the casualty of self- burning behavior among this group in the capital of Iran, Tehran.

Methods

Through a prospective prospective study, victims of burn incidents who referred to Motahari Burn Hospital affiliated to Tehran University of Medical sciences (TUMS), Tehran, Iran were investigated from January 2009 to January

Table 1. Patients' demographics, age groups, and socioeconomic status

Individual characteristic	Status	Number	Percent (%)
Age group (year)	15-20	6	17.1
	21-25	17	48.6
	26-30	9	25.7
	31-35	3	8.6
	Total	35	100
Living place	City	6	17.1
	Suburb	17	48.6
	Village	12	34.3
	Total	35	100
Education	Elementary	8	22.9
	Lower than high school	20	57.1
	High school	7	20
	More than high school	0	0
	Total	35	100
Occupation	Housekeeper	34	97.1
	Employee	1	2.9
	Total	35	100
Income (1'000'000 Rials)	Less than 1000'000	24	68.8
	1000'000-2000'000	7	20
	2000'000-3000'000	4	11.4
	More than 3000'000	0	0
	Total	35	100

2010. Patients with the following criteria were included in the study: married women admitted to the hospital due to the burning accident and personal confession of self- burning attempts. Patients with history of mental/ psychological conditions were excluded.

A two- part questionnaire was filled out for each patient the first of which was about personal demographics and the latter was related to the characteristics of self burning incident. Patients were interviewed by two of our on-call physicians after initial management and stabilization of general condition was assured. The questionnaire was validated in terms of content's validity and reliability.

Informed consent was obtained from each patient before entering the study and the information was warranted to be kept confidential. Research and Ethics Committee of TUMS approved the study protocol.

Data were then analyzed by statistical package for windows (Version 16, Chicago, Inc). Chi-square test was employed and the results were considered statistically significant at $p<0.05$.

Results

Thirty five female were included in our study. Patients were divided into 4 groups according to their age from 15 to 35 with an interval of 5 years with a mean age of 24.57± 3.94. Of these, 48.6% aged 21- 25 years old; 48.6% lived in suburbs; 80% had an education level lower than high school; 97.1% were housekeeper; and 68.8% had a monthly income of lower than 1'000'000 Rial (100 $). Demographic characteristics are summarized in **Table 1**.

A statistically significant difference was observed between age groups in terms of education, occupation, and income ($p< 0.05$) but there was not such a difference for residing location (**Table 1**).

In 42.9% of cases, burning has occurred between 12:00 and 18:00 followed by 28.5% between 6:00 and 12:00, 22.9% between 18:00 and 24:00, and 5.7% between 0:00 and 24:00 (**Table 2**) which were significantly different ($p< 0.05$).

45.7% of the incidents took place in the courtyard of the house followed by 8% in bathroom, 8% in kitchen, 2% in dining room, and 1% at the outdoor which revealed a statistically significant difference ($p< 0.05$).

91.4% of the women had used oil as a substance of burning compared to 5.7% gas, and 2.9% gasoline in their suicidal attempts (**Table 3**) which was significantly different ($p< 0.05$).

Table 2. Time and place of burn injury

Time and of burn	Status	Number	Percent
Daily time of burn	0-6	2	5.7
	6-12	10	28.5
	12-18	15	24.9
	18-24	8	22.9
	Total	35	100
Place of Burn	Kitchen	8	22.9
	Living room	2	5.7
	Bath	8	22.9
	Yard	16	45.7
	street	1	2.9
	Total	35	100

Table 3. Source of fire or flame for burning

Source	Number	Percent
Gasoline	1	2.9
Gas	2	5.7
petroleum	32	91.4
Total	35	100

Physical and verbal violence were reported to be present in 94.3% of the cases compared to the remainder of the cases with a statistically significant difference ($p< 0.05$).

Sixty percent of victims reported their spouse to play the main role in causing the incidence followed by 14.3% of husband's family, 8.6% second degree relatives, 5.7% the women's family, women personal conditions, and 5.7% financial issues; all of these revealed a statistically significant difference ($p< 0.05$).

Despite the fact that 40% of our population had a age difference between 5 to 10 years with their spouse, the difference was not statistically significant when compared to other age-difference groups ($p< 0.05$) (**Table 4** and **5**).

91.4% of the cases stated they were not aware of the presence of supporting social parties such as Consulting Centers and Family Support Associations and 97.1% declared they had never referred to these parties.

All the victims in this study expired within 48 to 96 hours of admission due to severity of injury.

Discussion

Self-immolation amongst the most violation and fearsome behaviors occurs with more prevalence in countries of Middle East and India [3, 7]. Islamic countries including Iran seem to be dealing with an underestimation of such a behavior [18]. Self-inflicted burning has been reported to be more common in women especially young married spouses and rural population [16, 19]. Despite multiple studies which have addressed this type of violation and their preventive suggestion, the issue remains of concern. Suicide has been shown to be more committed by men while women attempt more suicidal attempts [23]; however, this report is different in patients subjected to self-burning [21, 24-26].

Iran and India have included most cases of self burning to them [1, 10, 15, 16]. Indeed literatures have pointed to India as an origin of such a suicidal attempt [16]. In Iran, Kohkiluyeh and Boyerahmad, Boushehr, and Ilam are among provinces with the highest incidence of self inflicted burning [26]. Considering the on the causes of self immolation which seems not to be rare among married women who have just started their new life would enable us to apply a more effective prevention of the behavior. In fact, we should know who are attempting to this and why they are doing so.

Our patients aged mostly between 21-25 years old which is consistent with previous studies [16]; Kumar has pointed to this note that most of marital conflicts appear at early common life and this meets the mentioned period of age as the time of marriage seems to initiates at early 20s. Although most of the women try to tolerate the distressing condition, but it is likely that some of them exit the circle. However, most of them at least elapse a period of 1 to 5 years before trying to relieve their pain by attempting suicide. Such marital conflicts differ among nations; it has been stated that most suicides

Table 4. Age differences and aggression

Feature	Status	Number	Percent
Age differences (year)	0-5	9	25.7
	5-10	14	40
	10-15	9	25.7
	15 & more	3	8.6
	Total	35	100
Spouse aggression	No aggression	2	5.7
	Physical & verbal aggression	33	94.3
	Total	35	100

Table 5. Source of marital conflicts

Source of marital conflicts	total	Percent
Wife's family	2	5.7
Husband's family	5	14.3
Husband	21	60
Poverty and financial problems	2	5.7
Woman	2	5.7
Other relatives	3	8.6
Total	35	100

in Indian young wives is related to the pressure of dowry disputes [16]. However, such an issue is not considered an issue in our society. Our patients complained mostly of the conflicts with their husband and his family which was more commonly observed when 5 to 10 years of age difference existed between them. In addition, conflicts appear to be mostly in the form of verbal and physical aggression; in fact, when the husband could not convince his wife to act as he desires, he tries to force her to do so. Self burn however, has not been remarkably reported to be prevalent at earlier ages. Soltani et al. have previously reported a high incidence of burn injuries in Tehran [20]. In contrast to them, Mzezewa et al. [27] and Agha and Benhamia [28] have noticed a wider range of 16 to 40 for such a method of suicide.

Most of the cases in our study had a monthly income of lower than 1'000'000 Rial (100 $), lived in suburbs, had an educational level lower than high school, and were occupied in housekeeping. This is in the same line with reports from similar societies such as India [16, 28], and Iran's different cities [1, 9-15, 17-22, 24, 25]. Low socioeconomic and smaller society of living along with lower level of education [16, 29] and being in a joint family all have been shown to be associated with higher incidence of self burning. Higher socioeconomic status and level of education in addition to an open culture seem to raise women's knowledge, make them more independent to behave, and award alternatives to deal with their life disaster. Younger wives are expected in these cultures to bear most of the duties of their group family to such as babysitting, cooking, and washings. They are even welcomed this way as their lives began with their spouses.

Our patients expressed the source of burn to be mostly petroleum. This is evident as the most material which is available as fuel in traditional and lower socioeconomic settings is petroleum.

Time of self immolation was mostly between 12:00 and 18:00 followed by 6 to 12. This is the time at which most of the housekeeping women are doing their duties which is commonly cooking or washing. This is in accordance with other observations which self-inflicted women reported to be occupied by these tasks during this time. In addition, considering the task they were doing, the place of burn would seem to be the kitchen and bathroom. However, our results showed that yard is the most common place of suicide followed by kitchen and bathroom. This may be justified as the women intend to represent a showing action or maybe the place of home duties is the yard in the joint families. It is more important to notice that yard as one of the place with many passerby is associated with more suicidal attempts and it also quest that why the victims have not been cared well after they have undergone burn injuries in front of other eyes.

Limitation of the present study includes its cross-sectional design and cultural restrictions. This is because of agression by their spouse, conflicts with insurance and financial coverage, or the shame of such a behavior in the culture in which the present study was performed. Further studies need to investigate the occurrence of such violation in different cultures and

conditions to provide sufficient evidences regarding establishment point of preventive strategies.

Most of our cases declared that they had no knowledge regarding supporting social parties such as Consulting Centers and Family Support Associations to refer in case of necessary. This disappointing fact unfortunately is pointing to one of the failure of our society and public health system which people is suffering from the lack of social support and they are kept behind the close door when they seek these sources. By recognizing the vulnerable population for this behavior and providing them with sufficient social and emotional support, we could take one step further toward eradication of this sad firework.

Conclusion

A large proportion of married women who attempted self-burning were young wives from low socioeconomic status living in a traditional setting. Time and place of burn showed that they attempt suicide when they seem to do daily routines. In addition, marital conflicts especially due to husband's family were the most common causes of such behavior in wives whose spouse had a 5 to 10 year difference of age with them. Petroleum as the most used fuel in the low income families was the substance of choice in lighting up the tragedy.

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