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Review Article

Tragedy of women's self-immolation in Iran and developing communities: a review

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Abstract: Committing Suicide is an awful way to die as well as a historical psycho-social problem of human community worldwide. Suicide is an action deliberately initiated and performed by a person with complete awareness of its fatal outcome, prevalence of which is very rare in developed countries, but it is reported with more frequency in Baltic region, Africa (including Egypt), The Middle East (including Iran), The Far East, particularly India and Vietnam. Its rate has ranged from10 per 100,000 people/year in Egypt, and up to 35 per 100,000 people/year in Baltic region (including Lithuania, Finland, and Russia). Categorically Iran is the 93th country of the world in terms of suicide Rate, but self immolation in the reported suicides is very high. There are many different approaches of suicides based on culture, symbols, religion, geographical regions, genders and socioeconomic factors. Self-inflicted burn or self immolation is a common suicidal method. According to the American Burn Association, self- immolation is placed in burn injury category that required long-term treatment as well as social and emotional rehabilitations. Deliberative burn injuries are classified into self- inflicted (self-immolation) or else-inflicted burn (assault burn). In this review study, we try to focus on self- inflicted burn or self- immolation as the most dramatic and violent method of suicide. The present review article was aimed to assess the epidemiology of self immolation phenomenon and its associated factors as a worldwide problem, particularly in Iran and other developing communities. The main victims of this awful way of death are women who are considered the most vulnerable group in such societies.

Keywords: Iran, developing communities, self-immolation, suicide, women

Introduction

The World Health Organization (WHO) and the International Association for Suicide Prevention (IASP) have announced September 10th as the annual world suicide prevention day to pay more attention to such a problem and make a call for a global urgent action [1].

Suicide is one of the most historical psycho-social problems of human society worldwide. It is, particularly, an awful way to die as the result of an action deliberately initiated and performed by a person with complete awareness of its fatal outcome [2].

Suicide commitments among the youth have increased dramatically in recent years nationwide [3, 4]. it is the third leading cause of death for 15 -24 year old young people in the USA, and the sixth leading cause of death for the children and adolescents [5]. During 1952-1994, the incidence of suicide among the adolescents and young adults almost tripled [6]. Suicide rate has ranged from 10 per 100,000 people/year in Egypt, and up to 35 per 100,000 people/year in Baltic region (including Lithuania, Finland, Russia and etc) [7, 8]. Iran is the 93rd country in the world in terms of suicide rate [9], but self immolation in its suicide commitments is very high (**Table 1**).

Self-inflicted burn or self immolation is a common suicidal approach. According to the American Burn Association, self- immolation is placed in the burn injury category that requires long-term treatment as well as social and emotional rehabilitations. Moreover burn injuries are clas-

Table 1. Self-immolation in suicides: a worldwide overview

suicides	Setting/Country	% (self-immolation)
Successful		
	Roma, Italy [20][1]	0.06
	Berlin, Germany [50]	0.76
	Delhi, India [20]	39.8
	Ilam, Iran [93]	71.0
	An average data of 18 provinces, Iran [94]	36.4
	Tehran, Iran [94][2]	35.3
	Tehran, Iran [95][3]	25.0
	Khorasan, Iran [96]	40.3
	Ahvaz, Iran [95][4]	49.0
	Durban, South Africa [97]	9.9
	Karnataka, Maniple, India [98][5]	21.0
	Ontario, Canada [99]	1.0
	Israel [14][6]	14.5
	Miami, Florida [100]	0.96
	Sri Lanka (Jaffna) [40]	3.0
	Saudi Arabia (Damman) [40]	4.5
	UK (England and Wales) [40]	1.5
	Zimbabwe (Harare) [64]	11.0
Unsuccessful		
	Seoul, Korea [101]	1.8
	Israeli Jewish population, Israel [100]	8.5
	West Islamabad, Iran [102]	9.5
	Different part of Iran [103]	1.39-40.3
	Hamadan, Iran [56]	1.39
	Seoul, Korea [101]	1.8

[1]All Forensic files of deceased patients; [2]Rural area of Tehran; [3]Forensic Med. 670 burned deceased patients; [4]Suicide, 11-20years age group; [5]Forensic Med. 152 burned wives6. Suicide Israeli Jewish population.

sified into self- inflicted (self-immolation) and else-inflicted burns (assault burn) [10-13]. The method of choice in suicidal attempts in different societies is determined by availability and accessibility of suicide instruments [14], and occasionally by imitative or symbolic measures [15]. The incidence, patterns and trends of suicide are different between Asian and western countries considerably [16].

Assault burn and self-immolation as two mechanisms of burning are classified as non-accidental injuries, both attracting forensic considerations. Self inflicted burns may be an attempt of suicide (self immolation) or part of a continual urge towards the deliberate self harm process [17]. These injuries are commonly associated with previous psychiatric disorders or predisposing factors such as alcohol consumption, substance abusers, relationship discords, joblessness and emotional traumas [18]. Commitment of suicide by burning has a long documented history of powerful cultural significance and political impact across the world, probably more than any other form of self destruction [19]. As Bizarre mean self-destruction; It is the most dramatic, violent and often difficult one to understand [20, 21].

The present review article was aimed to assess the epidemiology of self immolation phenomenon as a worldwide problem, particularly in developing communities. The main victims of this awful way of death are women as the most vulnerable group in such societies.

Epidemiology of Self-Immolation

Self-immolation is considered a significant social and medical disorder in both the economically developed and developing countries. While suicide by self-immolation is very rare in the

developed world, it is more frequent in Baltic region (including Lithuania, Finland, Russia and etc), Africa (including Egypt), the Middle East (including Iran), the Far East, particularly India and Vietnam [22, 18, 23]. Sheth and colleagues have reported that self-immolation in India, for instance, accounts for up to 40% of all the suicide cases [13]. An Iranian study has revealed that the proportional frequency of self-immolation is about 25-40% of all forms of suicides and that it is the second cause of death among the committed suicides following hanging [4]. Self-inflicted injuries as the fourth-leading cause of death and the sixth-leading cause of ill health and disability are more common among the Iranian females aged 15 to 44 years [24]. In Iran, the incidence of self-immolation is significantly higher amongst the women than the men [10, 25, 4]. The same gender-based differences have also been reported from Egypt, Zimbabwe, Serilanka, India, Afghanistan and Uzbekistan [26-30]. In contrast, studies from European countries, Australia and North America show that men have committed suicide by self-immolation more than women [31, 32]. An Australian study reported that almost all the cases of self-immolation belonged to the males [32]. As an awful prognosis, up to 80 % of hospitalized self-immolation patients die before fulfillment of the treatment [2].

Self-immolation accounts for 0.4-40% of the burn center admissions worldwide and from 4% to 37% in developing countries [31, 33]. Suicide by burning is a rare condition in the developed countries (0.06-1% of all suicides) and it is more frequent in developing communities (40.3% of all suicides) [2]. **Table 1** show, the frequency of self-immolation in suicides (successful and unsuccessful) reported by different studies across the world.

In Iran, up to 71% of the committed suicides are conducted via self-immolation [2, 34, 35, 4]. The incidence of self-immolation has increased by 30-40% in Kermanshah and Ilam provinces (western Iran) over the past few years [36]. The mean age of self-immolation victims in Iran ranges between 18-27 years old [3, 25, 4].

Gender and age patterns of self-immolation victims

The gender-based difference of suicide patterns is a controversial topic in suicide studies. Investigations performed in Tehran (Iran) since1961 have shown that the number of females who committed suicide is more than males and that 60-80% of the suicides in Ilam and Lorestan provinces (western Iran) have been committed by young women. In Tabriz city (northwest of Iran), investigation of 412 cases of self-immolation during 1998-2002 showed that 99 % of the cases were female. However, in Zanjan and Gilan provinces (northern Iran), the suicide rate was higher among the male [10].

The Iranian self-immolation surveys show a marked over-representation of women, similar to other findings reported from Middle East and South-East Asian countries where women attempt suicide unsuccessfully, but men are successful [2, 37, 27, 38, 28]. Amongst Israeli Jewish population, 77% of completed self immolations occurred among the women born in either Asia or Africa [14]. Nevertheless, an Italian study [58] and a study from Russia [39] have reported no gender differences in their nations, while male immolators were predominant in some studies reported from developed countries [4]. **Table 2** shows demographic characteristics of self-immolated victims across different parts of the world [40].

Incentives and etiology of self-immolation

The term immolation may carry a sacrificial connotation and the term self-immolation is frequently used for those treated in or admitted to burn wards for deliberate self-burning. A variety of motives are involved; including imitation of others' symbolic acts, psychological illnesses, political protest and ritual suicide. Meanwhile, stressful events or circumstances can put people at increased risk of self-immolation. Those women who are predisposed or otherwise especially vulnerable to self-immolation should be more supervised.

Both socio-cultural and psychiatric factors have been found to be associated with self-immolation [4]. People ''possessing'' the risk factor are at greater potential for self-immolation behavior. These risk factors may lead to or associate with self-immolation. Therefore, drug addiction, smoking [41, 42], alcohol consumption [43], age differences [44, 45], lack of understanding with the spouse, lack of children or their difficulties [46], bigamy, lack of interest in the family affairs, lack of love, prema-

Table 2. Mean age and Male: Female ratio of deliberate self-burning victims worldwide

Country (region/town)	Male: Female ratio	Age (years)
Indian sub-continent		
India (New Delhi)[104]	0.46	16–35 (most common)
India (Madras)[105]	0.3	No data
India (Solapur)[106]	0.67	20–40 (most common)
Sri Lanka (Batticaloa)[38]	0.26	Mean 27
Middle East		
Egypt (Cairo)[11]	0.09	Mean 23
Iran (Kurdistan)[25]	0.1	16–25 most common
Iran (Shiraz)[74]	6.4	15–29 most common
Iran (Mazandaran)[4]	0.2	Mean 27
Iran(kermanshah)[2]	0.23	24.9
Israel (Beer-Sheva)[107]	0.3	Mean 34
Jordan (Farah)[108]	0.25	Mean 28
Libya (Benghazi)[40]	0.64	No data
Turkey (Ankara)[109]	1.6	Mean 32
Turkey (Istanbul)[60]	3	Suicide attempt 32; non-suicide 27 (mean)
Europe		
Bulgaria (Sofia)[110]	1.2	Most frequent 30–39
Greece (Athens)[111]	0.2	Mean 45
Ireland (Cork)[112]	0.7	Mean 41
Italy (Parma)[40]	1.6	Mean 44
Italy (Verona)[113]	1	Mean 38
Netherlands (Groningen)[114]	1	Most frequent 20–39
UK (Wales)[115]	1	Self-mutilators range 18–49
Netherlands (Beverwijk)[116]	0.9	Mean 37
Spain (Barcelona)[117]	2.5	Mean 38
UK (West-Yorkshire)a[118]	0.2	Mean 29
UK (Middlesex)[119]	0.9	Mean 36
America		
Brazil (Sao Paulo)[120]	0.4	21–30 most common
Canada(Ontario)[121]	4.3	Mean 38
Far-East Asia		
Hong Kong[122]	1.75	Mean 35
Korea (Seoul)[123]	1.9	20–29 most common
USA		
California[124]	0.3	No data
Pennsylvania[1][125]	2.5	Mean 33
Pennsylvania[2][126]	0.8	Mean 37
Florida[1][127]	0.3	Mean 49.5
Florida[2][128]	1.5	Mean 31
Denver[129]	0.6	Mean 33
Georgia[130]	0.7	Mean 38
Pittsburgh[131]	1.75	Mean 35.7
Ohio[132]	1.6	30–39 most common
Utah[133]	0.5	Self-mutilators 29; suicide attempt 39
Australia		
Australia (Brisbane)[134]	2	No data
Papua New Guinea (Port-Moresby)[11]	0	Mean 25
Sub-Saharan Africa		
Zimbabwe (Harare)[135]	0.1	Median 25
Durban [136]	0.30	Mean 31.2

ture marriage [44], low socio-economic status [47], genetic and congenital factors [48, 49] and excessive sensitivity in regard to the taboo of divorce might be the case for initiation of familial tensions leading to depression and suicide attempts. Studies of women who have taken their lives have shown that they had been suffering from degradation in their families, subjected to male domination and arrogance, married at an early age, or arbitrarily married within the clan [10]. Strained interpersonal relations, financial problems, health disorders, severe psychiatric disturbances and political issues have also been involved [50].

Protective factors, on the other hand, decrease the likelihood of self immolation. They are psychosocial, environmental, or socio-cultural in nature and enhance resilience, resistance and patience and may serve to counterbalance risk factors [51].

A recent study investigating female suicide rates found that this trend had significantly increased in disadvantaged families and areas with lower levels of female education, female labor force participation, and that urbanization had higher female suicide rates [52]. SATI in India (virtuous woman in Hindi), is the traditional practice of a widow immolating herself on her husband's funeral pyre. By doing so, the woman is believed to go to heaven and redeem any of her ancestors' wrong doings. Afghani women also use self-immolation to escape family dilemmas, forced marriages, or abuse by in-laws, even though suicide is objectionable. Unlike SATI in India, self-immolation in Afghanistan, where women are under the authority of the father or husband and will not have the opportunity to assert economic and social independence, nor to enjoy their human rights, is increasing [53]. Forms of violence against women in Afghanistan include Bad and Badal, along with the practice of exchanging girls for cattle or material goods. Majority of self immolation victims had attempted to kill themselves as a result of violence in the family [54, 55].

In Iran, 1.4-9.5% of suicide attempts and 25.0-40.3% of committed suicides are via deliberate self burning. Most the self-immolated women in Iran were illiterate or low educated and from low socio-economic families. In western Iran, where 80% of self-burning cases were committed by young women, the most common incentives for self-burning were excessive depression, calumny about family honor and poverty. Disputes between the married couples, bigamy, frustration in education and physical and mental illnesses including addiction, alcoholism and poverty were the most important incentives for suicide in other studies. Meanwhile, both successful and unsuccessful suicide attempts have mostly occurred amongst housewives who had no independent incomes [10, 56].

Iraqi Kurdish women living in a conservative, patriarchal society believe that the only way to solve their problem is recognized through a dramatic gesture. They resort to setting themselves on fire with kerosene heaters conveniently found at home [57]. Girls are not given say over choice of husbands and find that they are abused and mistreated in the husband's home. Those who try to escape the abuse are stigmatized, isolated, and possibly imprisoned.

In general, it seems lack of family support and living expense burden are the two significant risk factors for both the acute and chronic burn patients in general and self-immolation victims in particular [58].

Self-immolation and psychiatric disorders

The majority of deliberate self-burn victims have had psychiatric disorders with a range of 60% [12] to 91% [13] also 8% [1] to 49% [4] of them have attempted suicide. A literature review incorporating 27 studies and 582 self-immolated patients [4] has found that the most frequent psychiatric diagnoses were affective disorders (21%), schizophrenias (12%) and personality disorders (7%). The most common reasons for deliberate self-burning have already been categorized [13] as escaping from stress/sadness (54.5%), hallucinations/ delusions (18.1%) and suicide attempts (18%). However, motivation is a difficult area to investigate as the patient will not normally talk about it, or even are not aware of the reason why they performed the act [59]. An Iranian study in 2005 found that up to 15% of self-immolation cases had a clinical history of mental disorders [36]. Much higher figures have been reported from Turkey (83%), Finland (87%), Egypt (30%) and Germany (33%) [60, 61, 28, 21, 50].

A very recent case-control study investigating psychiatric disorders in 30 consecutive cases of deliberate self-inflicted burns, admitted to the regional burn center compared with 30 controls

whose mental disorders were assessed found that 67% of the cases had adjustment disorders (all female), one in ten had either drug or alcohol abuse/dependence (all male), 7% dysthymia, 7% borderline personality disorders (50% male), 7% depressive personality disorders (all female), 3% major depression, 3% anorexia nervosa, 3% primary insomnia and 3% antisocial personality disorders. This study has concluded that adjustment disorder is a risk factor for self-immolation [78]. In England, although the trend of suicide rate in general has decreased, the substantial increase in suicide rate among 15-19 years old males may indicate an increased psychosocial stress in this particular sensitive age group [62].

Analysis of nonfatal injury data (National Electronic Injury Surveillance System), and mortality data (American Burn Association & National Burn Repository) showed that 69.2% of risk of burning suicide in victims with specified psychiatric or substance abuse/dependence problems, was attributed to either psychosis and/or a substance abuse/dependence [19]. Similar findings have revealed a history of psychiatric illness as a common disorder among patients with self-inflicted burns [63, 28, 64, 65]. Depression and schizophrenia are reported to be the most important psychiatric disorders associated with self-immolation in different communities. However, some conflicting findings have also been reported in Sri Lanka (3% in Batticaloa) and Papua-New Guinea (10%) [40].

Self-immolation and religious effects

During the Great Schism of the Russian Church, the entire villages of old believers burned themselves to death in an act called "Fire Baptism". Scattered instances of self-immolation have also been recorded by the Jesuit Priests of France in the early 1600s.They would burn certain parts of their bodies to signify the pain Jesus endured while upon the cross. Self-immolation has been tolerated by some elements of Mahayana Buddhism and Hinduism in India due to SATTI, political protest, devotion, and renouncement. Self-immolation is also practiced in certain warrior cultures [66].

A number of Buddhist monks immolated themselves in protest of the discriminatory treatment endured by Buddhists under the Roman Catholic administration in South Vietnam - even though violence against oneself is prohibited by most interpretations of Buddhist doctrine [67]. The Judeo-Christian traditions use imagery of fire as cleansing and purifying. The ritual death of widows upon their husband's funeral ceremony is closely associated with some religious beliefs in south east of Asia. Secular imagery associates fire with images of condemnation and evil [68]. Charans (the term for a caste living in the Rajasthan state of India) were created along with other divine forms such as Yaksha, Gandharvas, Kinnara, etc. and lived with them in Heaven. Charnas immolate themselves when demands of honor are unmet; believing that by doing so they bring down the vengeance of heaven on the offender whose obstinacy necessitated the sacrifice [69].

In Moslem traditions, imagery of fire is the most violent punishment [2]; however, suicide attacks has recently and frequently been used in some Islamic countries including Afghanistan, Pakistan, Saudi Arabia and Iran. In central Asia, self-immolations are the most wide spread practice of committing suicides among Muslim women. In the Samarqand region in Tajikistan alone, according to the official data, about 35 women burn themselves annually. On average, 4-7 suicides per 100,000 people happen each year [70]. Fida' heart, "self-sacrificer" in Arabic fidawi, or, in Persian, fada' heart describes a devotee of a religious or national group willing to engage in self-immolation to attain a holly goal. The term first appeared in the eleventh century regarding to the members of the Nizari Ismaili sect of Assassins who risked their lives to commit political murder [71, 72]. However, Islamic countries display lower suicide rates compared to the other countries of the world [73], In Iran, self- immolation rate is moderately high [25, 74], and in Sri Lanka, it is just as frequent among Muslim and non-Muslim patients [75]. In the developed world, Grossoehme and Springer specifically studied mental images of the Divinity in a population of American self-injurious burn patients and found that some patients imagined God as a legalist, others imagined Him as an agent of change, and the rest still viewed God as being absent [68].

Self-immolation outcomes

Burns are in charge for significant mortality and morbidity worldwide. They are among the most devastating of all the injuries, with outcomes spanning the spectrum from physical impairments to emotional and mental consequences

[76]. Many variables associated with burn injuries contribute to the presentation of each burn patient as one with a unique injury that requires most vigilant nursing care and expertise [77].

Of all forms of suicidal attempts, self-immolation is perhaps the most dramatic, violent and often one difficult to understand [78]. Self-inflicted burn injuries are significant sources of morbidity and mortality. Several factors may influence the outcome of self-immolation including physical characteristics of victims, the intention of dying, the burn sizes as well as the levels of hospitals facilities [38]. A case-control study on 36 deliberate self-burn patients, matched separately into two groups of accidental burn and self-immolated cases, found that deliberate self-burn patients had significantly larger burns ($p<0.01$). They also were more hospitalized, even when matched for burn-size ($p<0.02$) [59].

Burn management even in well-equipped burn units of advanced affluent societies remains demanding and extremely expensive. Unfortunately, over 90% of fatal fire-related burns occur in developing countries accounting for over half of these fire-related deaths [98]. Even though, in Europe or North America, majority of self-inflicted burn injuries patients admitted to hospitals survive [79], and for those who do not survive, death often comes slowly. Many patients live for several hours to several months before dying [20]. Those who survive tend to have extensive burn injuries [13] leading to considerable damage to their skin integrity, including hypertrophic scarring [80]. In addition, they face an excruciatingly painful recovery process and will most likely continue to experience pain and itching even several years after the injury [81, 82].

The management of burn patients with previous psychiatric history is characterized by delayed wound healing and increased number of operations [16, 28]. Self-immolated patients have a significantly higher total burn surface area (TBSA) and prolonged hospitalization [59, 83, 84]. Severe burns are often life-altering injuries that cause high demands on hospital staff and resources [85].

Nursing challenges

The management of patients with large burns following suicide attempts or self-immolation represents a challenge for all the health care providers in burn unites [57]. The overall burn admissions in European and North American burn centers range from 2 to 6% [86], but this figure is increasing in the third world. Nurses who are working in critical care environments such as burn units are often the most vulnerable to stress and need more support. An Iranian study to explore nurses' perceptions of their caring behaviors and related factors using Grounded theory found that nurses' experiences of burnout, responses to burnout, and the type of caring behavior exhibited were significantly affected by the personal characteristics of the nurses and patients [87]. These patients required complex individualized care, but the psychosocial treatment challenges had many common elements. Psychiatric aspects of these patients proved problematic for the burn unit staff [88]. It is essential to have early psychiatric team involvement and high staffing levels [89]. Though the burns treatment is a time consuming process, the management of burns still provides a formidable challenge. When the patient survives the burn, the deformities leave the patient handicapped socially, economically, and psychologically [90].

There are two main individual and community based strategies for suicide prevention. Public health model is the most common approach to achieve this goal. This approach has five phases including problem definition, etiology, surveillance and evaluation [91].

Victim stories-based interventions

A victim story, presented to the public through media sources, can be effective in changing safety related behaviors. Victim stories give people an opportunity to know more about patients who attempted to immolate themselves. In victim stories, two basic messages are delivered. First, the stories make the audience aware of burn complications. Second, they offer some suggestions, approaches and recommendations for alternative therapies [2].

Mental health approaches and preventive strategies

WHO, the United Nations, and many national suicide-prevention strategies embrace mental health promotion as an approach to suicide

prevention. South East Asia and Africa, as the most high risk areas in the world for self-immolation, which account for 89% of the population, have only 0.44 and 0.34 mental health professionals per 100,000 population respectively [92]. Because adjustment disorders are main causative factors for self-immolation in our society, interventions to improve mental health, interpersonal relationships, marital problems, and family structure, should be emphasized more prominently in preventive strategies [2]. Strong cultural and religious beliefs that discourage suicide and support self-preservation are considered the main important factors that prevent suicide [92].

Research evidences suggest consistent linkages among the families, social, and economic disadvantages, and self-immolation risks. This observations have led to frequent calls for macro social and macroeconomic policies to improve social equity in a range of areas, including enhancing educational and employment opportunities to reduce the fraction of the population at risk of developing mental disorders [2].

School-based interventions and educational programs for students can also be beneficial [2]. Adequate skills in problem solving, conflict resolution and ability to resolve disputes in a nonviolent manner greatly reduce the risk of suicide [92]. In India 2.1% of suicides are committed by students following failure in exams and majority of them occur in May/June when the results of the board exams are announced. It was also found that students who took their lives fell into two categories including those who expected a higher percentage and those who failed in only one subject [92].

Role of NGOs

Non-governmental organizations and local communities are important settings for self-immolation prevention activities [2]. Overall, 93.5% of African countries and 80% of South East Asian countries have NGOs in the field of mental health. Obviously, the governments in developing countries have not been able to address the suicide-related problems and issues. NGOs in the form of suicide prevention centers using crisis centers or free hotlines have been considered successful strategies in both the developed and developing communities to stop suicide and self-immolation [92].

Conclusions

Majority of women who commit suicide in developing countries are illiterate or low educated. In developing countries, where almost all suicides are committed by young women from disadvantaged families, psychiatric symptoms and cultural issues such as excessive depression, calumny about family honor, having arguments between married couples, bigamy, frustration in education, addiction, alcoholism and poverty are the most important incentives for suicide.

As a gender-based distribution, majority of self-immolation patients are female, in Europe and Far-East Asia, but not in the USA and Spain Where the majority of suicides are committed by the male.

Suicide and self- immolation in particular should be more prioritized by the governments, planners, professionals, and NGOs. The prevention strategies should more emphasize on co-operation, collaboration and commitment, being executed with patience, persistence, and precision.

While no health-care professional is immune to the pressures raised by self-immolation patients, nursing staff particularly in burn units are often the most vulnerable and susceptible group to job-related stress; and therefore, they need extraordinary supports.

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