World Journal of Psychiatry

Submit a Manuscript: http://www.wjgnet.com/esps/
Help Desk: http://www.wjgnet.com/esps/helpdesk.aspx
DOI: 10.5498/wjp.v5.i1.4

World J Psychiatr 2015 March 22; 5(1): 4-14
ISSN 2220-3206 (online)

REVIEW

Culturally sanctioned suicide: Euthanasia, seppuku, and terrorist martyrdom

Joseph M Pierre

Joseph M Pierre, Department of Psychiatry and Biobehavioral Sciences, David Geffen School of Medicine at UCLA, VA West Los Angeles Healthcare Center, Los Angeles, CA 90073, United States

Author contributions: Pierre JM solely contributed to this manuscript.
Conflict-of-interest: The author reports no conflicts of interest in relation to this manuscript.

Correspondence to: Joseph M Pierre, MD, Health Sciences Clinical Professor, Department of Psychiatry and Biobehavioral Sciences, David Geffen School of Medicine at UCLA, VA West Los Angeles Healthcare Center, 11301 Wilshire Blvd, Building 210, Room 15, Los Angeles, CA 90073,
United States. joseph.pierre2@va.gov
Telephone: +1-310-4783711
Fax: +1-310-2684448
Received: September 28, 2014
Peer-review started: September 29, 2014
First decision: December 17, 2014
Revised: December 21, 2014
Accepted: January 15, 2015
Article in press: January 19, 2015
Published online: March 22, 2015

Abstract

Suicide is one of the greatest concerns in psychiatric practice, with considerable efforts devoted to prevention. The psychiatric view of suicide tends to equate it with depression or other forms of mental illness. However, some forms of suicide occur independently of mental illness and within a framework of cultural sanctioning such that they aren't regarded as suicide at all. Despite persistent taboos against suicide, euthanasia and physician-assisted suicide in the context of terminal illness is increasingly accepted as a way to preserve autonomy and dignity in the West. Seppuku, the ancient samurai ritual of suicide by self-stabbing, was long considered an honorable act of self-resolve such that despite the removal of cultural sanctioning, the rate of suicide in Japan remains high with suicide masquerading as seppuku still carried out both there and abroad. Suicide as an act of murder and terrorism is a practice currently popular with Islamic militants who regard it as martyrdom in the context of war. The absence of mental illness and the presence of cultural sanctioning do not mean that suicide should not be prevented. Culturally sanctioned suicide must be understood in terms of the specific motivations that underlie the choice of death over life. Efforts to prevent culturally sanctioned suicide must focus on alternatives to achieve similar ends and must ultimately be implemented within cultures to remove the sanctioning of self-destructive acts.

Key words: Suicide; Euthanasia; Martyrdom; Physician-assisted suicide; Seppuku; Hara-kiri; Terrorism; Culture

Core tip: Although most cultures have taboos against suicide, some acts of suicide find moral justification and approval in different cultural settings. These acts typically occur independent of mental illness and are regarded as something other than suicide *per se*. Strategies for prevention therefore require the development of other culturally sanctioned alternatives.

Pierre JM. Culturally sanctioned suicide: Euthanasia, seppuku, and terrorist martyrdom. *World J Psychiatr* 2015; 5(1): 4-14 Available from: URL: http://www.wjgnet.com/2220-3206/full/v5/i1/4.htm DOI: http://dx.doi.org/10.5498/wjp.v5.i1.4

INTRDUCTION

For psychiatrists, suicide represents one of the few true clinical emergencies, a major public health concern, and the most frequent cause of malpractice lawsuits[1]. As a result, most of the attention to suicide within psychiatry has been devoted to prediction (identifying risk factors and developing risk assessment tools), prevention (establishing and implementing clinical practices and healthcare policies to reduce suicide rates), and forensic issues (avoiding lawsuits).

The preeminent suicidologist Edwin Shneidman conceptualized suicide as an act caused by psychological pain ("psychache") stemming from thwarted psychological needs such as love, control, shame, grief, and anger[2]. In his view, the transition from mere suicidal ideation to suicidal act is largely determined by the degree to which an individual feels that pain ("perturbation") and the degree to which one views suicide as a means to end it ("lethality"). It has been estimated that 90% of suicides are associated with mental illness, with 60% associated specifically with mood disorders[3]. Indeed, modern views on suicide in psychiatry have emphasized that "most important contributing factors to suicidal behaviors are depression, depression, [and] depression"[4].

In contrast to this psychocentric view that suicide is an act of internal despair carried out by someone who no longer finds life livable, the 19th Century sociologist Emile Durkheim proposed that suicide is determined by one's relationship to culture and society[5]. He theorized that social integration was primarily a protective force whereby excessive individuation at the expense of society increased suicide risk. But he also proposed that excessive social integration at the expensive of the individual could be just as lethal, as illustrated by examples of "altruistic suicide" in which suicide was completed as a purposeful act of social obligation, achieving some greater good to the group, or reaching the afterlife[6].

Although Durkheim's views on suicide failed to recognize individual factors and the important contribution of mental illness, examining the role of culture may be particularly useful in understanding suicide in non-clinical settings where severe mental illness is absent[7]. While Durkheim described altruistic suicide in "primitive" and "crude" cultures, such a narrow view is out of place in an increasingly globalized world. Even within cultures where there is a taboo against suicide, minority subcultural perspectives may exist that sanction such behavior. The term "rational suicide" has gained traction in recent years as a way of disentangling automatic associations between suicide, psychiatric disorder, and irrational thinking, and instead shining a spotlight on cultural sanctioned forms of suicide[1,8]. "Ruling out" mental illness when evaluating patients with suicidal ideation requires that a clinician be familiar with such practices.

This paper aims to provide a survey of culturally sanctioned suicide across the globe and over time. The overview is not meant to be exhaustive by any means and will instead focus on three key examples of suicide that have emerged within a cultural framework and should help to inform discussions of suicide in both clinical and non-clinical settings.

DEATH WITH DIGNITY: EUTHANASIA AND PHYSICIAN-ASSISTED SUICIDE IN THE WEST

In the Western world, although the concept of culturally sanctioned suicide as a means of avoiding the suffering associated with severe or terminal medical disease dates back to at least the ancient Greeks[9,10], the subsequent rise of Judeo-Christian teachings led to a longstanding and pervasive ethical proscription against suicide under almost any terms. The equation of suicide with sin even found formal translation into modern law, such that suicide was illegal in England until the 1960s and it technically remains a felony in some states within the United States today[11].

Over the past 50 years however, medical advances that now permit the extension of life in conditions previously associated with an untimely demise have resulted in growing concerns about the prolongation of suffering, loss of autonomy, and erosion of the concept of a "good" or "natural" death[12,13]. As a result, suicide in the context of intractable medical illness has gained increasing mainstream acceptance.

Limited information is available about unassisted or solo suicide in the context of suffering related to medical illness. It has been estimated that medical illness is present in up to 40% of suicides and that certain medical conditions such as acquired immunodeficiency syndrome, multiple sclerosis, and some cancers are particularly over-represented[14]. However, the specific contribution of medical illness towards suicide remains unclear owing to the considerable comorbidity of depression among such conditions and the fact that chronic medical illness is common among older people who are at greatest risk of suicide. In other words, while the presence of medical illness a well-known risk factor for suicide, a causal relationship isn't well established. In fact, the proportion of suicide victims who specifically suffer from terminal illness at the time of death appears to be quite small, in the 2%-4% range[14,15]. Other data suggest that independent of those with depression, the vast majority of those with terminal illnesses such as cancer do not wish to die[12,16-18].

In contrast to solo suicide, euthanasia, literally meaning "good death," has become something of an umbrella term for taking measures to end the life of someone with unbearable suffering associated with intractable or terminal illness. Such hastening of death is typically overseen if actually not carried out by physicians in the larger context of medical care where a spectrum of voluntary interventions is available.

These include voluntary refusal of food and liquids, withholding "heroic measures" and life-sustaining treatments such as cardiac resuscitation or intubation, palliative sedation, passive voluntary euthanasia or physician assisted suicide (PAS), and active voluntary euthanasia (AVE).

Active voluntary euthanasia refers to having a second party to actively fulfill a dying person's request to be put to death, a practice put into the spotlight by United States physician Jack Kevorkian in the 1990s. Kevorkian was ultimately tried and convicted for second-degree murder since such practice was and still is illegal in the United States. Alternatively, passive voluntary euthanasia in the form of PAS, in which a doctor provides the means (*e.g.*, lethal medication) for patients with terminal medical illness who wish to die but does not administer it, has been legalized in Oregon, Washington, Vermont, and New Mexico, while in Montana the practice has been recognized by state courts as not illegal. Outside of the United States, some form of euthanasia is legal in Belgium, the Netherlands, Luxembourg, and Switzerland. The specific circumstances that permit euthanasia vary within different states and countries. As noted, only PAS is legal in the United States, whereas in Belgium, AVE is the only legal form of euthanasia. Switzerland allows for passive voluntary euthanasia by both physicians and non-physicians. Perhaps because of the option to have euthanasia outside of medical care, Switzerland has become a popular destination for "suicide tourism", attracting those with medical illnesses who wish to die from neighboring countries in Europe where PAS is outlawed. An estimated 200 such "suicide tourists" come to Switzerland each year with the intention of ending their lives, a practice that appears to be growing[19]. In the United States and Europe where it is legal, some 0.1% to 2.9% of all deaths occur by PAS[20].

The legalization of PAS in select locales within Western countries has resulted from the active efforts of various grass roots organizations belonging to the larger "euthanasia movement" that started in the 1930s and has since come to be called the "right to die" or, more recently, the "death with dignity" movement[13,21]. As these names suggest, the primacy of autonomy, self-determination, and the right to a "good death" over the endurance of unbearable suffering lies at the core of this form of culturally sanctioned suicide. Although the term "unbearable suffering" defies objective definition, studies of people seeking PAS indicate that concerns about loss of dignity and quality of life, becoming dependent or a burden on others, intolerable pain or fatigue, loneliness, and loss of identity are the most common motivating factors[21,22].

In its purest form, the ethical justification for PAS hinges on the presence of a terminal illness and it is on this basis that some would distinguish euthanasia from suicide[9]. However, death is an inevitability for all and it isn't always clear when an illness becomes terminal. It has been argued that the growing acceptance of PAS in countries like the United States is a result of a "technological imperative"[13] in which physicians are expected to employ "any and all resuscitative measures… to prolong the life of all patients regardless of age, illness, or prognosis"[23]. In contrast, there may be less support for PAS in countries with limited healthcare resources and where life expectancy is more modest.

In addition to autonomy surrounding the right to die with dignity, religious beliefs figure heavily into one's acceptance of PAS. This is unsurprising since many religions such as Islam, Judaism, and Catholicism expressly forbid suicide and euthanasia. As a result, many people believe that "only God should decide the time of death"[22]. An international survey found that by religious affiliation, Muslims tend to be the most strongly opposed to euthanasia, followed sequentially by Catholics, Protestants, and those with no affiliation[24]. In addition, religiosity itself, irrespective of denomination, appears to be a strong predictor of opposition to PAS[18,24].

Opposition to PAS is also predicted by concerns about the "slippery slope" of legalization in which, once approved, laws concerning euthanasia might become increasingly lax. Indeed, while United States laws permitting PAS require the involvement of a physician and that the patient requesting it be mentally competent and have a terminal medical illness, several different arguments have questioned such restrictions. For example, does illness and suffering only apply to medical conditions or should it be extended to those with mental illness[25]? Should PAS be unavailable to those who have unbearable suffering from terminal illness, but lack decisional capacity? Indeed, European laws have loosened these very limitations in recent years. In the Netherlands, those with mental disorders are now eligible for PAS, while in both the Netherlands and more recently Belgium, PAS is available to those who are mentally incompetent, including children. Such developments challenge the notion of voluntariness in PAS and raise concerns about potential conflicts of interest when decisions are made by proxy. For example, could the legalization of PAS result in pressure on individuals who are burdens, financially or otherwise, on their families? In 2009, proposed legislation providing nationalized healthcare in the United States that would have allowed insurance reimbursement for physicians discussing end-of-life care with patients sparked politically-motivated claims about the anticipated formation of "death panels" that might opt to euthanize people rather than pay for medical care.

Needless to say, PAS remains a controversial and debated ethical issue throughout the world, even in places where it has been legalized. Still, acceptance of PAS has become mainstream in Westernized nations. A recent Gallup poll indicated that the majority of the

United States population believes that both AVE (70%) and PAS (51%) "should be allowed"[26]. This is striking, in that euthanasia by the hand of a physician is more accepted than PAS in the United States, despite the fact that it is AVE that is illegal. There are at least two likely explanations for this apparent paradox. The first concerns the wording of the survey, which described the AVE option as allowing doctors to "end the patient's life by some painless means" and PAS as allowing a doctor to "assist the patient in committing suicide". Given that choice, death by "some painless means" probably sounds better than "committing suicide", which conflicts with a persistent taboo against suicide in the United States. Indeed, the same Gallup poll found that nearly half the sample (49%) deemed PAS to be "morally wrong" and two-thirds of the sample (77%) stated that suicide was morally wrong[27]. Second, the greater acceptance of AVE in comparison to PAS may reflect a preference for the medicalization of euthanasia that places the direct responsibility of hastening death into the hands of physicians. The more active role of the physician in AVE may be more aligned with the range of accepted medical practices that are already in place such as palliative sedation (*e.g.*, administering a medication for pain, but knowing that it will likely hasten death – the so-called "double-effect").

There is irony in the fact that technological advances in medical care that have resulted in increased life expectancy have in turn led to greater acceptance of suicide that is specifically facilitated by physicians, particularly since the Hippocratic Oath forbids it. Not surprisingly, in contrast to the general population, United States physicians tend to have significantly greater acceptance of PAS compared to AVE[28]. There is also a discrepancy in that while many United States physicians support the legalization of PAS, a much lower proportion would agree to actually perform it[28]. Physicians in the United Kingdom have been found to support PAS at a lower rate than does the general public[29]. A study from Israel found that psychiatrists tended to oppose PAS more than other physicians, but there may have been unique cultural factors pertinent to their sample[30]. Palliative care specialists appear to have the lowest rates of PAS acceptance[31] and physicians' knowledge about palliative care is inversely correlated with PAS acceptance[32]. This suggests that support for PAS may be based on a lack of knowledge about other options such as palliative sedation or hospice care.

As with the rest of the population, the religious beliefs of healthcare workers also contribute significantly to their attitudes regarding PAS[22,29-33]. However, it is also likely that while ending the life of someone suffering from a terminal illness is becoming increasingly culturally sanctioned, both physicians and non-physicians must still struggle with cultural taboos against suicide and murder such that their attitudes about PAS and AVE are heavily influenced by imagining their own part in it. In the United States, the general public seems to prefer that physicians perform the deed, whereas physicians prefer that patients do it. In short, when considering an abstract scenario involving euthanasia, most are reluctant to "get their hands dirty".

For those actually struggling with terminal illness however, the distinction between AVE and PAS appears to be less important. A study of cancer patients receiving palliative care in Canada found that the majority favored the legalization of either PAS (56.5%) or AVE (59.1%), although only 5.8% would request it right away if available[17]. While still controversial and subject to different legal details depending on locale, some form of euthanasia is an increasingly culturally sanctioned option of self-determination for those who prefer suicide over continued suffering from terminal illness.

DEATH WITH HONOR: SEPPUKU IN JAPAN

From a historical standpoint, there is probably no more iconic form of culturally sanctioned suicide than the Japanese tradition of seppuku. The terms seppuku ("cutting the stomach") and hara-kiri ("belly cut") both refer to the ancient rite of stabbing the lower abdomen and disemboweling oneself with a short sword. Death typically ensued not from the stomach wounds, but rather by the swift strike of a kaishakunin, or second, who stood at the ready with a long sword to behead the person performing seppuku. Seppuku was a highly ritualized exercise limited to the Japanese warrior caste, the samurai, with its sanctioned practice spanning from the 700s until it was formally outlawed in 1873[34,35].

In its most idealized form, seppuku was an act that, at its heart, symbolized resolution in the face of death. For the samurai class, "the meaning of life was understood in terms of one's ability to find the right time and place to die"[36]. In *Hagakure* ("Hidden Leaves"), a sort of manual for samurai behavior, the author writes, "the Way of the Samurai is found in death. When it comes to either/or, there is only the quick choice of death… Meditation on death should be performed daily… every day without fail one should consider himself dead"[37]. A similar text, *Budoshoshinshu*, notes, "The man who would be a warrior considers it his most basic intention to keep death always in his mind… Day and night without fail, as one is involved in all his business, both public and private, when there is just a moment for the heart to be calm, death should be kept in mind"[38].

To place such value on the readiness for death is understandable for a class of warrior elite, whose chief aim was to serve a lord in wartime (the literal meaning of samurai is "to serve nobility"). For a samurai, death in battle was regarded as among the highest honors. Accordingly, the act of seppuku was typically performed by samurai as an honorable "out" in lieu of surrendering to the enemy, to make amends for

personal failings, or in following one's lord to the grave. Rather than being nihilistic or death-hungry, to embrace suicide in this way was viewed as affirming a life rooted in ideals of loyalty, duty, honor, and self-sacrifice, as reflected by the term for voluntary seppuku, jiketsu ("self-determination")[36,39]. Still, while seppuku was regarded as an honorable act, it was often performed in the context of avoiding dishonor. Any apparent contradiction finds potential resolution in the teachings of Zen Buddhism, which became deeply entwined with the study of swordsmanship during the samurai era. With the constant threat of death, Zen's emphasis on impermanence, the illusory nature of the self, and detachment from dualistic ideas about life and death seem to have had special appeal to the samurai[36,40-42]. At a very basic level, the study of Zen, which holds not proscription against suicide[43] as well as no promise of an afterlife, helped the samurai to gain mastery over the fear of death[42]. Seppuku, it could be argued, was emblematic of that mastery. Indeed, tales of completed seppuku describe steadfast preparation for the act; extended, criss-crossed cuts to the abdomen performed without unsightly emotional displays; and even claims of reaching into the resulting wound to extract one's intestines which were then defiantly flung to the ground[34].

Although such accounts have been romanticized throughout Japanese history to the present day as embodying the essence of bushido (the "way of the warrior"), several authors have called into question the very existence of any such samurai code beyond an often unrealized ideal akin to chivalry[44,45]. In fact, the reverence of death readiness described in *Hagakure* and *Budoshinshu* occurred during a period of prolonged peacetime following the unification of rival warlords and therefore represented a kind of harkening back to, or yearning for, a lost era. In actual practice, seppuku was not always limited to the narrow confines of a valorous samurai ritual, but also occurred in the context of all manner of motivations including "shame, desperation, grief, panic, protest, patriotism, narcissism, revenge, hatred, and love"[34], not to mention depression and murder. By the 1600s, the purpose of seppuku was extended to a form of involuntary capital punishment rather than a self-initiated act and by the 1700s, voluntary self-stabbing was often relegated to a symbolic gesture, with a paper fan replacing the sword and death coming instead by timely decapitation[34-36]. In this sense, seppuku has been described as an "elaborate aesthetic framework that has been constructed around [a] skeleton of truth… augmented by myth and adorned with aesthetic trimmings"[34].

Nonetheless, despite the abolishment of the samurai class, the prohibition of carrying swords, and the outlawing of seppuku in the 1870s as Japan adopted a Westernized form of government and military, seppuku has continued to be viewed as an act of courage, honor, and self-sacrifice within modern Japanese culture. One of the best-known and beloved tales in Japanese history is the Chūshingura, or fictionalized retelling of the true-life exploits of a group of masterless samurai, the 47 ronin, who committed seppuku after avenging the death of their lord in the early 1700s. In the past century, samurai ideals and the idea of seppuku along with it have been revived during periods of patriotic nationalism, most prominently during World War Ⅱ. During that era, Japanese soldiers equipped with both modern firearms and mass-produced swords committed seppuku rather than surrender to enemy forces. The spirit of seppuku, if not the technical practice, was likewise epitomized by the so-called kamikaze bombers who, facing defeat at the end of the war, deliberately piloted their airplanes into enemy vessels. In 1945, both soldiers and civilians alike committed seppuku in droves as an apology for having lost the war[35]. More recently, in 1970, the celebrated author Yukio Mishima committed seppuku in an act of political protest seemingly intended to inspire a return to nationalism. Though other motivations have been proposed[45-48], Mishima clearly revered samurai ideals in his work, was himself well-versed in Japanese swordsmanship, and had written specifically about the honor of seppuku in a short story called "Patriotism"[49].

In modern Japan, there is little remaining cultural framework for seppuku, such that suicide by stabbing the abdomen has become extremely infrequent, comprising only 0.2%-4.5% of all suicides[35,50]. But suicide in general has remained something of a culturally sanctioned act, depending on context. Since 1998, the suicide rate in Japan has been elevated at nearly 25 per 100000 people with over 30000 suicides per year[51], such that Japan has been called a "suicide nation"[52]. As the martial philosophies of the samurai era have been adapted to the business world, newer modes of suicide have emerged. Two such forms that have received recent attention are inseki jisatsu, or "responsibility-driven suicide," and karo jisatsu, or "suicide by overwork." These forms of suicide refer to motivation rather than methodology. Inseki jisatsu is a form of suicide that represents taking responsibility for a personal failing, as in the case of a school principal who committed suicide after a student was killed in an accident on school grounds[53]. Karo jisatsu refers to suicide that occurs in the context of excessive overwork and is typically accompanied by burn-out and depression[54]. Among young people in Japan, suicide by charcoal burning (resulting in carbon monoxide poisoning) reached epidemic proportions starting in 2003[55], as has the phenomenon of internet suicide pacts[52]. Of these modes of modern suicide, inseki jisatsu most resembles the spirit of seppuku, with completers often earning posthumous praise and reverence in the eye of the public. For example, when Yoshikatsu Matusoka, the Minister of Agriculture, Forestry, and Fisheries hung himself under a cloud of suspicion about inappropriate use of public funds in 2007, he was called a "true samurai" by the governor

of Tokyo. Karo jisatsu has come to be modeled as a kind of industrial accident, such that completers are often viewed as victims of an overly demanding Japanese work ethic and other social pressures rather than individual issues of mental health[56]. Suicide in Japan is associated with long work hours and is negatively correlated with income and time spent in leisure activities[57]. As a result, the increasing recognition of karo jisatsu has created potential liability for employers and has prompted workplace reform. In contrast, participants in shinjyu, or "suicide pacts", lacking the purposeful motives of seppuku dictating an honorable death, most conform with a model of suicide as reflecting mental illness and the absence of ikagai, or "worth of living". Participants are therefore often viewed with derision as "copycats or too weak-willed to die alone"[52].

The medical literature includes a number of case reports and retrospective studies from Japan describing suicide or suicide attempts by stabbing or cutting the abdomen. Based on these reports, suicide attempts and completed suicide by cutting the abdomen is typically performed with a kitchen knife[58,59] as opposed to a "samurai sword", with numerous preliminary "hesitation cuts" indicative of self-stabbing[35,60,61]. Overwhelmingly, this method of self-injury is performed by men rather than women, with mental illness found in the majority of cases[35,50,58-62]. The frequent presence of mental illness, usually in the form of mood or psychotic disorders, suggests that these acts were something altogether different than ritual seppuku, despite the fact that about half of these reports explicitly use the literal term "hara-kiri" in describing the abdominal cuts. Although Takai and colleagues[50] refer to a potential "change [in] the meaning of hara-kiri", it would be more correct from a motivational standpoint to avoid the terms hara-kiri or seppuku in such cases. Just because a suicide by stabbing the abdomen occurs in Japan does not make it seppuku.

This mistake in terminology is even more notable among the handful of cases of so-called hara-kiri and seppuki reported in non-Japanese countries. These cases, occurring in the United States[63], Australia[64], Italy[65], and Ireland[66], again document the presence of depression, psychosis, substance abuse, or personality disorder in almost all instances. Another recent report described a case of jigai, or ritual stabbing of the neck, historically performed by samurai women in a corollary ritual to seppuku[67]. However, although the completed suicide was performed in a bathtub with a replica samurai sword, the perpetrator was not a woman, but rather a man with a history of "long-term depression." While such cases suggest that the acts have been inspired by the Japanese tradition of seppuku, the absence of any such cultural sanctioning in other countries and the omnipresence of mental illness suggest that they should be described simply as suicide or suicide attempts by self-stabbing[68] rather than seppuku, hara-kiri, or jigai. Indeed, it has been argued that equating mere acts of self-stabbing with seppuku is "misleading at best, just as a casual benediction offered among friends while serving wine and crackers as refreshments ought not to be equated with the rite of Catholic Eucharist"[69].

Suffice it to say that over time, the cultural sanctioning of suicide in Japan has evolved from the mythologized ideal of seppuku into something altogether distinct. Seppuku as performed by the samurai class was an aesthetic and social ritual that imparted posthumous heroism into the completer with preservation of honor for his bloodline. Although we cannot know the true rate of mental illness among such acts, seppuku does not appear to have been the act of someone with mental illness except in rare cases of "plain suicide"[34]. Today, the high rate of suicide among the general population of Japan suggests that suicide under the right circumstances retains some degree of cultural sanctioning, but seppuku as a sanctioned social ritual has been phased out. Without the use of a kaishakunin, acts of self-stabbing are more often suicide attempts than completed acts. For those that attempt suicide in this fashion, loneliness and despair stemming from depression, psychosis, or the cultural bound syndrome hikikomori that is characterized by severe social withdrawal[70,71] is now the rule. Therefore, outside of inseki-jisatsu, the traditional motivation for seppuku in Japan has been all but lost. Accordingly, there been a shift away from a view of suicide as an act of individual freedom and self-determination to a more medicalized version that has only recently been imported from the West[56]. This new cultural view of suicide has led to the widespread implementation of psychoeducation, public policy prevention measures, and enhanced mental health services in Japan[51,72].

DEATH AS MARTYRDOM: SUICIDE TERRORISM IN ISLAMIC MILITANT GROUPS

Although murder-suicide has been carried out in the name of religion across a spectrum of cultures and faiths throughout history, much attention has been devoted in the psychiatric literature to suicide terrorism as a war tactic of Islamic militants since the World Trade Center attacks of September 11, 2001. The modernity of this issue has two main implications for the understanding of suicide in this context. First, unlike seppuku, what is known about suicide terrorism does not depend on a mythologized historical archetype, but is rather something that exists now and continues to evolve in real-time. Second, the timeliness of this practice in the context of active war means that the issue remains highly charged with wildly divergent cultural views, problems of cultural translation, and biases of propagandization.

A few neutral definitions are therefore in order

to start. Terrorism is an act of violence or threatened violence that intends to provoke fear. Suicide terrorism adds the intended self-inflicted death of its perpetrator. While some have specified that suicide terrorism be directed at "non-combatants"[73] or be "politically motivated"[74], those are ill-defined and debatable modifiers. As the popular saying goes, "one man's terrorist is another man's freedom fighter". Importantly, those who sanction suicide terrorism in the context of modern day Islamic militancy do not view such acts as suicide, but as shahada or istishhad (both translated as "martyrdom")[75-78]. In fact, Islam expressly forbids intihar, or suicide proper[78-80], such that militant interpretations of Islamic scripture sanction suicide terrorism as an act of shahada performed in the spirit of jihad[75,79]. Although typically translated in the Western literature as "holy war," the term jihad is literally translated as "struggle" and carries a broader meaning that implies self-defense against anything that threatens an idealized way of life according to Islam[76,77]. Such threats include generic concepts of temptation and sin, but also Jahilyyah, or barbarism, that is equated with the kind of secularism associated with life in Western countries[81]. According to this broad view of threat, those who sanction suicide terrorism believe that there are no non-combatants or innocents to speak of[82].

While this perspective is difficult to accept in the West, attempting an understanding of the motivations of suicide terrorism is necessary to see how such behavior is culturally sanctioned as opposed to emblematic of psychopathology. In fact, overall rates of suicide in Muslim countries are among the lowest, with Islamic faith seemingly having a moderating effect[79]. Looking at perpetrators of suicide terrorism, the vast majority appear to be free of mental illness[73,80,83,84]. On the contrary, it has been noted that those who recruit suicide bombers specifically avoid those with mental health issues in favor of young men with college educations and the necessary social, linguistic, and technical skills to carry out complex operations[73]. Likewise, counter to stereotypes, impoverishment is not a specific predictor of suicide terrorism. Many Palestinian suicide bombers in the late 1990s were educated, middle-class men[85] and most of the perpetrators of the World Trade Center attacks came from comfortable, middle class families[80], while a survey of the militant group al Qaeda revealed that the majority of members were college graduates from middle to upper class homes who were married and had children[76]. It has been further suggested, perhaps in the spirit of propaganda, that martyrdom or self-sacrifice for Allah would have less meaning if individuals had nothing to lose[73]. Even popular assumptions about the role of Islam itself in suicide terrorism have been called into question. Despite the use of religious rhetoric to frame terrorist acts, it has been argued that religion does not lie at the root of suicide terrorism[83] and that religious motivations per se are not predictive of who becomes a terrorist[73]. Therefore, while it is easy to dismiss suicide terrorists as "crazy" religious "fanatics", "radicals", and "extremists", such pejorative terms fall short in trying to understand the origins of suicide in this context.

In the absence of psychiatric explanations of suicide terrorism, much effort has been devoted to elucidating potential psychological factors that influence this behavior. By nature, the methodology of this research has been for the most part limited to interviews of those aspiring to suicide terrorism or of the family and friends of completed suicides. What emerges is a heterogeneous set of motivations that are often classified as related to both individual psychology and group dynamics.

Returning to the concept of martyrdom, it appears that its appeal is determined by powerful social forces[78] such as active recruitment as well as general cultural sanctioning. In Palestine today, it has been noted that young people don't aspire to be sports stars or professionals, which may be beyond their grasp in any case, but martyrs[86]. For both children and young adults alike, it is easy to see why. Martyrs are idolized as heroes, with trading cards[80], calendars, posters, graffiti, songs, and celebrations dedicated to their honor[85]. That may be little consolation in death but for the fact that martyrdom is regarded by the faithful as a pathway to an afterlife that promises a paradise replete not only with 72 virgins (as is often mentioned in the West), but an immortality in the presence and with the satisfaction of Allah[75,80]. Consequently, the final act of a martyr is said to be carried out with a bassamat al-farah, or smile of joy[84], knowing that "by pressing the detonator, you can immediately open the door to Paradise - it is the shortest path to Heaven"[85]. Beyond these individual benefits, a martyr's actions grant the ability to secure a place in paradise for 70 of his or her chosen ones, and can bestow lasting honor and material wealth unto the surviving family[75]. Collectively, these can be powerful incentives, regardless of whether an aspiring martyr comes from a life of disenfranchisement or an educated middle-class.

Ginges *et al*[87] make a compelling case for the incentives for suicide terrorism stemming from group dynamics that extend beyond self and family. Decisions to participate in suicide terrorism, they posit, are not made by conventional economic or consequentialist reasoning based on analyses of cost and benefit. This is not surprising, given that from the perspective of tangible results such as winning a war or achieving political ends, suicide terrorism is not particularly effective[88]. Instead, such decisions seem to be made using moral or deontic reasoning based on "sacred values." Deontic reasoning involves absolute rights and wrongs that trump concerns about risk or cost, leading people to act independently of outcome or prospects of success[89]. Likewise, conflicts over sacred values have the potential to result in violent behavior such as suicide terrorism. Based on experiments using subjects

in the United States, Africa, and the Middle East, Ginges *et al*[90] demonstrated that hypothetical decisions to choose militancy as opposed to diplomacy are based on sacred values that subordinate considerations about cost. Also, when exposed to political dilemmas involving perceived moral violations such as torture, subjects preferred military responses. Interestingly, using Palestinian and Israeli subjects, participants violently rejected compromise when material incentives were offered as a strategy to give up sacred values, but were willing to compromise when apologies and other symbolic gestures of respect were offered[91]. Based on neuroimaging studies, such deontic reasoning based on sacred values seems to be localizable to specific brain regions[89].

Importantly, this research on sacred values indicates that the motivations for political violence are not unique to Islamic militants. Still, it begs the question of what sacred values drive participation in suicide terrorism within this population. In addition to the religious concepts of jihad and martyrdom, the sacred values of Islamic militants may also be related to a collective identity rooted not only in religion, but geography and ethnicity. It has been shown that strong identification with a particular culture or subculture is predictive of the willingness to participate in political violence, for example, as a way to gain "justice for my people"[87].

For Islamic militants, the thirst for justice may be born out of a variety of circumstances that begin with a longstanding unrealized wish to restore the caliphate that peaked in the 600s during the "Golden Age of Islam"[76,81]. Coupled with the fall of the Ottoman Empire, the military occupation of Palestine, and the current economic success of the West, there are ample grounds for collective feelings of humiliation, resentment, and victimhood[81,92]. On a more personal level, many suicide terrorists have reported that the death of a friend or family member in war spurred them into joining the cause[76]. In this way, instrumental terrorism intended for political gain can transform into retributive terrorism, that is, terrorism for the sake of revenge[93].

As the "War on Terror" becomes, or is perceived as becoming, a "War on Islam," a growing number of people may come to identify with the sense of "us" and "them" that underlies Islamic militancy. Although suicide terrorism is extremely rare, a 2001-2007 survey of Muslims around the world found that 37% felt that the World Trade Center attacks were at least "somewhat justified"[87]. Women are increasingly participating in suicide terrorism[86] and current events suggest that a small but growing number of Muslims born in the West are "radicalizing" and traveling to the Middle East to join Islamic militant groups. These developments are understandable as Muslims around the world fueled by a growing sense of global persecution and marginalization come to identify with a "fictive kin"[73]. As one author puts it, "martyrdom operations are nothing except a declaration of refusal to live in a world of humiliation and defeat"[79]. Islamic fundamentalism, it has been noted, emphasizes not only faith, but action[81]. Based on sacred values of ideology and group identity, suicide terrorism can become a "moral imperative"[90].

The motivations for suicide terrorism discussed thus far are not meant to be comprehensive, but could nonetheless inform strategies for reducing or preventing this form of violent suicide. For example, current patterns of militant retaliation or racial profiling may only escalate violence, deepen resentments, and as is often claimed by militants, stimulate recruitment of those willing to participate in suicide terrorism[73,93]. Instead, more successful strategies might include taking care not to demonize Muslims as a whole, allying with and empowering moderate majorities, helping to build an economic infrastructure and opportunities for those who feel oppressed by circumstances, and thinking about suicide terrorism as a public health issue[74,94]. Post[80] has proposed that psychological interventions aimed at winning over "hearts and minds" is an underutilized but necessary approach to counter-terrorism efforts. This is not to say that there are simple solutions; only that understanding the motivations for suicide terrorism, and terrorism in general, is a necessary starting point. Also, if suicide terrorism is to be prevented, it is its cultural sanctioning that needs to be reversed. Therefore, alternatives must ultimately emerge from within the sanctioning culture rather than being imposed from without.

CONCLUSION

Assuming that one chooses to commit suicide, and that free will exists, the basic choice is between life and death. A psychiatric view of suicide tends to view this decision as biased by the presence of psychopathology that makes life seem worse than it is or can be. It is therefore the role of psychiatry to prevent suicide by treating mental illness. However, an alternative view is that not all suicides ought to be equated with mental illness. Rather, in some circumstances suicide may carry confer certain advantages such as autonomy, honor, or self-sacrifice that make choosing death more appealing than either life or the eventual "natural" death that awaits us all. Though the case for free will is debatable[95], these stereotypically human choices that favor an ideal or abstraction over the instinct for self-preservation would seem to represent the closest thing[96]. In contrast to suicide in the context of mental illness, these acts of ultimate self-determination are often granted an elevated status through cultural sanctioning. As a result, culturally sanctioned suicide is not typically called suicide at all, but instead becomes translated into different words such as euthanasia, seppuku, or istishhad with altogether different meanings.

For both cultural sanctioning and clinical evaluation, understanding the precise motivations behind plans

for suicide is of paramount importance. Depression may very well lurk behind apparent cases of intended or completed culturally sanctioned suicide, but so too might other psychological conflicts that do not represent mental illness *per se*. Up to 47% of patients requesting euthanasia may be suffering from depression[97] and might reverse their decision if depression, pain, or other physical discomforts were properly identified and treated. Despondent souls, whether in Japan or abroad, might cloak their suicides in the ritual trappings of seppuku in the hopes of masking an act of desperate loneliness[69]. Resentful young immigrants who find themselves displaced and unaccepted on foreign soil might seek acceptance and meaning in traveling to the lands of their fictive kin to volunteer for suicide terrorism[98], whereas those who recruit them might be purposely exploiting a vulnerable population[99]. In this regard, although cultural sanctioning can serve as an incentive for suicide, that sanctioning could very well be lost upon closer examination for underlying psychopathology or when revered motives are absent.

Analyzing suicide in terms of mental illness or not, rationality or not, and even cultural sanctioning or not is shortsighted. Just as the presence of mental illness does not automatically render suicide irrational[1,25], the absence of mental illness does not mean that suicide is the "right" decision, and the presence of cultural sanctioning does not mean that clinicians and cultures at large should not try to prevent suicide. However, cultural sanctioning is moral sanctioning, such that efforts to prevent culturally sanctioned suicide may have to be grounded in utilitarian strategies rather than moral or libertarian arguments[1]. In other words, by definition, preventing culturally sanctioned suicide based on arguments that about what is "right" and "wrong" may be futile. Instead, preventing any form of suicide, whether sanctioned or not, must focus on elucidating its particular motivations and developing appealing alternatives. When mental illness is involved, the treatment of an underlying condition is an obvious alternative. But when the motivation for suicide is an abstract cultural ideal such as honor or self-efficacy, other ways to achieve those ideals within an existing cultural framework must be explored. Thinking along these lines, palliative care and palliative sedation might be acceptable options to attain death with dignity among the terminally ill. In Japan, public health efforts directed at destigmatizing mental illness, promoting workplace reform, and encouraging leisure activity could make a healthier national lifestyle more honorable than being a suicide nation. And developing more effective ways to achieve political change, economic vitalization, and pride within a surrounding culture could remove the appeal of suicide within the violent subculture of Islamic militancy. Ultimately though, such alternatives must emerge from within a sanctioning culture - for culturally sanctioned suicide to decline, it must eventually be desanctioned.

REFERENCES

1 **Ho AO**. Suicide: rationality and responsibility for life. *Can J Psychiatry* 2014; **59**: 141-147 [PMID: 24881162]
2 **Shneidman E.** The suicidal mind. New York: Oxford University Press, 1996
3 **Pandey GN**. Biological basis of suicide and suicidal behavior. *Bipolar Disord* 2013; **15**: 524-541 [PMID: 23773657 DOI: 10.1111/bdi.12089]
4 **Goldney RD**. Depression and suicidal behavior: the real estate analogy. *Crisis* 2003; **24**: 87-88 [PMID: 12880228]
5 **Durkheim E**. Suicide: A study in sociology. New York: The Free Press, 1951
6 **Stack S**. Emile Durkheim and altruistic suicide. *Arch Suicide Res* 2004; **8**: 9-22 [PMID: 16006395]
7 **Robertson M**. Books reconsidered: Emile Durkheim, Le Suicide. *Australas Psychiatry* 2006; **14**: 365-368 [PMID: 17116073]
8 **Leeman CP**. Distinguishing among irrational suicide and other forms of hastened death: implications for clinical practice. *Psychosomatics* 2009; **50**: 185-191 [PMID: 19567753 DOI: 10.1176/appi.psy.50.3.185]
9 **Mystakidou K**, Parpa E, Tsilika E, Katsouda E, Vlahos L. The evolution of euthanasia and its perceptions in Greek culture and civilization. *Perspect Biol Med* 2005; **48**: 95-104 [PMID: 15681882]
10 **Pridmore S**, McArthur M. Suicide and Western culture. *Australas Psychiatry* 2009; **17**: 42-50 [PMID: 19137467 DOI: 10.1080/10398560802596843]
11 **Cohen LM**. Suicide, hastening death, and psychiatry. *Arch Intern Med* 1998; **158**: 1973-1976 [PMID: 9778196]
12 **Siegel K**. Psychosocial aspects of rational suicide. *Am J Psychother* 1986; **40**: 405-418 [PMID: 3766820]
13 **McCormick AJ**. Self-determination, the right to die, and culture: a literature review. *Soc Work* 2011; **56**: 119-128 [PMID: 21553575]
14 **Kleespies PM**, Hughes DH, Gallacher FP. Suicide in the medically and terminally ill: psychological and ethical considerations. *J Clin Psychol* 2000; **56**: 1153-1171 [PMID: 10987689]
15 **Hendin H**. Suicide, assisted suicide, and medical illness. *J Clin Psychiatry* 1999; **60** Suppl 2: 46-50; discussion 51-52, 113-116 [PMID: 10073387]
16 **Brown JH**, Henteleff P, Barakat S, Rowe CJ. Is it normal for terminally ill patients to desire death? *Am J Psychiatry* 1986; **143**: 208-211 [PMID: 3946656]
17 **Wilson KG**, Chochinov HM, McPherson CJ, Skirko MG, Allard P, Chary S, Gagnon PR, Macmillan K, De Luca M, O'Shea F, Kuhl D, Fainsinger RL, Karam AM, Clinch JJ. Desire for euthanasia or physician-assisted suicide in palliative cancer care. *Health Psychol* 2007; **26**: 314-323 [PMID: 17500618]
18 **Wilson KG,** Dalgleish TL, Chochinov HM, Chary S, Gagnon PR, Macmillan K, De Luca M, O'Shea F, Kuhl D, Fainsinger RL. Mental disorders and the desire for death in patients receiving palliative care for cancer. *BMJ Support Palliat Care* 2014 Mar 5; Epub ahead of print [PMID: 24644212 DOI: 10.1136/bmjspcare-2013-000604]
19 **Gauthier S**, Mausbach J, Resich T, Bartsch C. Suicide tourism: a pilot study on the Swiss phenomenon. *J Med Ethics* 2014 Aug 20; Epub ahead of print [PMID: 25142806 DOI: 10.1136/medethics-2014-102091]
20 **Steck N**, Egger M, Maessen M, Reisch T, Zwahlen M. Euthanasia and assisted suicide in selected European countries and US states: systematic literature review. *Med Care* 2013; **51**: 938-944 [PMID: 23929402 DOI: 10.1097/MLR.0b013e3182a0f427]
21 **Dees MK**, Vernooij-Dassen MJ, Dekkers WJ, Vissers KC, van Weel C. 'Unbearable suffering': a qualitative study on the perspectives of patients who request assistance in dying. *J Med Ethics* 2011; **37**: 727-734 [PMID: 21947807 DOI: 10.1136/jme.2011.045492]
22 **Hendry M**, Pasterfield D, Lewis R, Carter B, Hodgson D, Wilkinson C. Why do we want the right to die? A systematic review of the international literature on the views of patients, carers and the public on assisted dying. *Palliat Med* 2013; **27**: 13-26 [PMID: 23128904 DOI: 10.1177/0269216312463623]
23 **Behuniak SM**. Death with "dignity": the wedge that divides the

disability rights movement from the right to die movement. *Politics Life Sci* 2011; **30**: 17-32 [PMID: 22204677 DOI: 10.2990/30_1_17]
24 **Verbakel E**, Jaspers E. A comparative study on permissiveness toward euthanasia: Religiosity, slippery slope, autonomy, and death with dignity. *Public Opin Q* 2010; **74**: 109-139 [DOI: 10.1093/poq/nfp074]
25 **Hewitt J**. Why are people with mental illness excluded from the rational suicide debate? *Int J Law Psychiatry* 2013; **36**: 358-365 [PMID: 23838292 DOI: 10.1016/j.ijlp.2013.06.006]
26 **Saad L**. U.S. Support for euthanasia hinges on how it's described. Available from: URL: http: //www.gallup.com/poll/162815/support-euthanasia-hinges-described.aspx
27 **Newport F,** Himelfarb I. In the U.S., record-high say gay, lesbian relations morally OK. Available from: URL: http: //www.gallup.com/poll/162689/record-high-say-gay-lesbian-relations-morally.aspx
28 **Dickinson G,** Clark D, Winslow M, Marples R. US physicians' attitudes concerning euthanasia and physician-assisted death: A systematic literature review. *Mortality* 2005; **10**: 43-52 [DOI: 10.1080/13576270500030982]
29 **McCormack R**, Clifford M, Conroy M. Attitudes of UK doctors towards euthanasia and physician-assisted suicide: a systematic literature review. *Palliat Med* 2012; **26**: 23-33 [PMID: 22190615 DOI: 10.1177/0269216311397688]
30 **Levy TB**, Azar S, Huberfeld R, Siegel AM, Strous RD. Attitudes towards euthanasia and assisted suicide: a comparison between psychiatrists and other physicians. *Bioethics* 2013; **27**: 402-408 [PMID: 22494462 DOI: 10.1111/j.1467-8519.2012.01968.x]
31 **Marini MC**, Neuenschwander H, Stiefel F. Attitudes toward euthanasia and physician assisted suicide: a survey among medical students, oncology clinicians, and palliative care specialists. *Palliat Support Care* 2006; **4**: 251-255 [PMID: 17066966]
32 **Portenoy RK**, Coyle N, Kash KM, Brescia F, Scanlon C, O'Hare D, Misbin RI, Holland J, Foley KM. Determinants of the willingness to endorse assisted suicide. A survey of physicians, nurses, and social workers. *Psychosomatics* 1997; **38**: 277-287 [PMID: 9136257]
33 **Hains CA**, Hulbert-Williams NJ. Attitudes toward euthanasia and physician-assisted suicide: a study of the multivariate effects of healthcare training, patient characteristics, religion and locus of control. *J Med Ethics* 2013; **39**: 713-716 [PMID: 23378530 DOI: 10.1136/medethics-2012-100729]
34 **Rankin A**. Seppuku: A history of samurai suicide. Tokyo: Kodansha International, 2011
35 **Watanabe T**, Kobayashi Y, Hata S. Harakiri and suicide by sharp instruments in Japan. *Forensic Sci* 1973; **2**: 191-199 [PMID: 4696520]
36 **Fusé T.** Suicide and culture in Japan: A study of seppuku as an institutional form of suicide. *Social Psychiatry* 1980; **15**: 57-63 [DOI: 10.1007/BF00578069]
37 **Yamamoto T**. Hagakure: The book of the samurai. Wilson WS, Trans. Tokyo: Kodansha International, 2002
38 **Yuzan D**. Budoshoshinshu: The warrior's primer of Daidoji Yuzan. Wilson WS, Trans. Santa Clarita: Ohara Publications, 1984
39 **Young J**. Morals, suicide, and psychiatry: a view from Japan. *Bioethics* 2002; **16**: 412-424 [PMID: 12472089]
40 **Suzuki DT**. Zen and Japanese culture. Princeton: Princeton University Press, 1959
41 **Roach CM**. Japanese swords: Cultural icons of a nation. North Clarendon: Tuttle Publishing, 2010
42 **King WL.** Zen and the way of the sword: Arming the samurai psyche. Oxford: Oxford University Press, 1993
43 **Picone M**. Suicide and the afterlife: popular religion and the standardisation of 'culture' in Japan. *Cult Med Psychiatry* 2012; **36**: 391-408 [PMID: 22549663 DOI: 10.1007/s11013-012-9261-3]
44 **Bolitho H**. The myth of the samurai. In: Dix A, Mouer R, editors. Japan's impact on the world. Nathan: Japanese Studies Association of Australia, 1984
45 **Ames RT.** Bushido: Mode or ethic? Japanese Aesthetics and Culture. In: Nancy Hume, editor. Albany: SUNY Press, 2002
46 **Ushijima S**. The narcissism and death of Yukio Mishima--from the object relational point of view. *Jpn J Psychiatry Neurol* 1987; **41**: 619-628 [PMID: 3330995]
47 **Piven J**. Phallic narcissism, anal sadism, and oral discord: the case of Yukio Mishima, Part I. *Psychoanal Rev* 2001; **88**: 771-791 [PMID: 11980029]
48 **Piven J**. Narcissistic revenge and suicide: the case of Yukio Mishima. Part II. *Psychoanal Rev* 2002; **89**: 49-77 [PMID: 12058562]
49 **Mishima Y.** Patriotism. New York: New Directions Publishing Corporation, 1966
50 **Takai M**, Yamamoto K, Iwamitsu Y, Miyaji S, Yamamoto H, Tatematsu S, Yukawa M, Ide A, Kamijo Y, Soma K, Miyaoka H. Exploration of factors related to hara-kiri as a method of suicide and suicidal behavior. *Eur Psychiatry* 2010; **25**: 409-413 [PMID: 20427155 DOI: 10.1016/j.eurpsy.2009.10.005]
51 **Motohashi Y**. Suicide in Japan. *Lancet* 2012; **379**: 1282-1283 [PMID: 21885102 DOI: 10.1016/S0140-6736(11)61130-1136]
52 **Ozawa-de Silva C**. Too lonely to die alone: internet suicide pacts and existential suffering in Japan. *Cult Med Psychiatry* 2008; **32**: 516-551 [PMID: 18800195]
53 **Takei N**, Nakamura K. Is inseki-jisatsu, responsibility-driven suicide, culture-bound? *Lancet* 2004; **363**: 1400 [PMID: 15110511]
54 **Inoue K**, Matsumoto M. Karo jisatsu (suicide from overwork): a spreading occupational threat. *Occup Environ Med* 2000; **57**: 284-285 [PMID: 10819565]
55 **Yoshioka E**, Hanley SJ, Kawanishi Y, Saijo Y. Epidemic of charcoal burning suicide in Japan. *Br J Psychiatry* 2014; **204**: 274-282 [PMID: 24434075 DOI: 10.1192/bjp.bp.113.135392]
56 **Targum SD**, Kitanaka J. Overwork suicide in Japan: a national crisis. *Innov Clin Neurosci* 2012; **9**: 35-38 [PMID: 22468243]
57 **Takeuchi A**, Sakano N, Miyatake N. Combined effects of working hours, income, and leisure time on suicide in all 47 prefectures of Japan. *Ind Health* 2014; **52**: 137-140 [PMID: 24464025]
58 **Morita S**, Inokuchi S, Aoki H, Yamagiwa T, Iizuka S, Nakagawa Y, Yamamoto I. The comparison of characteristic and clinical features of self-inflicted abdominal stab wound patients in Japan: simple stab wounds versus Hara-kiri wounds. *J Trauma* 2008; **64**: 786-789 [PMID: 18332824 DOI: 10.1097/TA.0b013e318165bb3a]
59 **Kato K**, Kimoto K, Kimoto K, Takahashi Y, Sato R, Matsumoto H. Frequency and clinical features of patients who attempted suicide by Hara-Kiri in Japan. *J Forensic Sci* 2014; **59**: 1303-1306 [PMID: 25077671 DOI: 10.1111/1556-4029.12411]
60 **Ohshima T**, Kondo T. Eight cases of suicide by self-cutting or -stabbing: consideration from medico-legal viewpoints of differentiation between suicide and homicide. *J Clin Forensic Med* 1997; **4**: 127-132 [PMID: 15335572]
61 **Fukube S**, Hayashi T, Ishida Y, Kamon H, Kawaguchi M, Kimura A, Kondo T. Retrospective study on suicidal cases by sharp force injuries. *J Forensic Leg Med* 2008; **15**: 163-167 [PMID: 18313011 DOI: 10.1016/j.jflm.2007.08.006]
62 **Kimura R**, Ikeda S, Kumazaki H, Yanagida M, Matsunaga H. Comparison of the clinical features of suicide attempters by jumping from a height and those by self-stabbing in Japan. *J Affect Disord* 2013; **150**: 695-698 [PMID: 23701752 DOI: 10.1016/j.jad.2013.04.048]
63 **Harte RH**. VI. A Case of Hara-Kiri which terminated in Recovery. *Ann Surg* 1898; **27**: 745-752 [PMID: 17860593]
64 **Patel V**, de Moore G. Harakiri: a clinical study of deliberate self-stabbing. *J Clin Psychiatry* 1994; **55**: 98-103 [PMID: 8071255]
65 **Di Nunno N**, Costantinides F, Bernasconi P, Di Nunno C. Suicide by hara-kiri: a series of four cases. *Am J Forensic Med Pathol* 2001; **22**: 68-72 [PMID: 11444667]
66 **Richardson AJ**, Tevlin R, Larkin JO, Beddy D. Seppuku: a modern approach to an ancient injury. *Ir Med J* 2013; **106**: 211-212 [PMID: 24218749]
67 **Maiese A**, Gitto L, dell'Aquila M, Bolino G. A peculiar case of suicide enacted through the ancient Japanese ritual of Jigai. *Am J Forensic Med Pathol* 2014; **35**: 8-10 [PMID: 24457577 DOI: 10.1097/PAF.0000000000000070]
68 **Start RD**, Milroy CM, Green MA. Suicide by self-stabbing. *Forensic Sci Int* 1992; **56**: 89-94 [PMID: 1398382]

69 **Pierre JM**. Suicide, swords, and cultural sanctioning. *Am J Forensic Med Pathol* 2014; **35**: 284 [PMID: 25361061 DOI: 10.1097/PAF.0000000000000122]

70 **Teo AR**, Gaw AC. Hikikomori, a Japanese culture-bound syndrome of social withdrawal?: A proposal for DSM-5. *J Nerv Ment Dis* 2010; **198**: 444-449 [PMID: 20531124 DOI: 10.1097/NMD.0b013e3181e086b1]

71 **MacFarquhar L**. Last Call: A Buddhist monk confronts Japan's suicide culture. Available from: URL: http: //www.newyorker.com/magazine/2013/06/24/last-call-3

72 **Kaga M**, Takeshima T, Matsumoto T. Suicide and its prevention in Japan. *Leg Med* (Tokyo) 2009; **11** Suppl 1: S18-S21 [PMID: 19269232 DOI: 10.1016/j.legalmed.2009.01.015]

73 **Atran S**. Genesis of suicide terrorism. *Science* 2003; **299**: 1534-1539 [PMID: 12624256]

74 **Bhui KS**, Hicks MH, Lashley M, Jones E. A public health approach to understanding and preventing violent radicalization. *BMC Med* 2012; **10**: 16 [PMID: 22332998 DOI: 10.1186/1741-7015-10-16]

75 **Orbach I**. Terror suicide: how is it possible? *Arch Suicide Res* 2004; **8**: 115-130 [PMID: 16006392]

76 **Post JM**, Ali F, Henderson SW, Shanfield S, Victoroff J, Weine S. The psychology of suicide terrorism. *Psychiatry* 2009; **72**: 13-31 [PMID: 19366292 DOI: 10.1521/psyc.2009.72.1.13]

77 **Haddad S.** A comparative study of Lebanese and Palestinian perceptions of suicide bombings: The role of militant Islam and socio-economic status. *Int J Comp Soc* 2004; **45**: 337-363 [DOI: 10.1177/0020715204054155]

78 **Bélanger JJ**, Caouette J, Sharvit K, Dugas M. The psychology of martyrdom: making the ultimate sacrifice in the name of a cause. *J Pers Soc Psychol* 2014; **107**: 494-515 [PMID: 25133728 DOI: 10.1037/a0036855]

79 **Abdel-Khalek AM**. Neither altruistic suicide, nor terrorism but martyrdom: a Muslim perspective. *Arch Suicide Res* 2004; **8**: 99-113 [PMID: 16006397]

80 **Post JM**. "When hatred is bred in the bone: " the social psychology of terrorism. *Ann N Y Acad Sci* 2010; **1208**: 15-23 [PMID: 20955321]

81 **Taylor M,** Horgan J. The psychological and behavioural bases of Islamic fundamentalism. *Terrorism Political Violence* 2001; **13**: 37-71 [DOI: 10.1080/09546550109609699]

82 **Miller L**. The terrorist mind: II. Typologies, psychopathologies, and practical guidelines for investigation. *Int J Offender Ther Comp Criminol* 2006; **50**: 255-268 [PMID: 16648381]

83 **Rogers MB**, Loewenthal KM, Lewis CA, Amlôt R, Cinnirella M, Ansari H. The role of religious fundamentalism in terrorist violence: a social psychological analysis. *Int Rev Psychiatry* 2007; **19**: 253-262 [PMID: 17566903]

84 **Townsend E**. Suicide terrorists: are they suicidal? *Suicide Life Threat Behav* 2007; **37**: 35-49 [PMID: 17397278]

85 **Hassan N**. An arsenal of believers: Talking to the "human bombs." Available from: URL: http: //www.newyorker.com/magazine/2001/11/19/an-arsenal-of-believers

86 **Grimland M**, Apter A, Kerkhof A. The phenomenon of suicide bombing: a review of psychological and nonpsychological factors. *Crisis* 2006; **27**: 107-118 [PMID: 17091820]

87 **Ginges J**, Atran S, Sachdeva S, Medin D. Psychology out of the laboratory: the challenge of violent extremism. *Am Psychol* 2011; **66**: 507-519 [PMID: 21823773 DOI: 10.1037/a0024715]

88 **Palmer I**. Terrorism, suicide bombing, fear and mental health. *Int Rev Psychiatry* 2007; **19**: 289-296 [PMID: 17566906]

89 **Berns GS**, Bell E, Capra CM, Prietula MJ, Moore S, Anderson B, Ginges J, Atran S. The price of your soul: neural evidence for the non-utilitarian representation of sacred values. *Philos Trans R Soc Lond B Biol Sci* 2012; **367**: 754-762 [PMID: 22271790 DOI: 10.1098/rstb.2011.0262]

90 **Ginges J**, Atran S. War as a moral imperative (not just practical politics by other means). *Proc Biol Sci* 2011; **278**: 2930-2938 [PMID: 21325334 DOI: 10.1098/rspb.2010.2384]

91 **Ginges J**, Atran S, Medin D, Shikaki K. Sacred bounds on rational resolution of violent political conflict. *Proc Natl Acad Sci USA* 2007; **104**: 7357-7360 [PMID: 17460042]

92 **Alderdice JT**. Sacred values: psychological and anthropological perspectives on fairness, fundamentalism, and terrorism. *Ann N Y Acad Sci* 2009; **1167**: 158-173 [PMID: 19580562 DOI: 10.1111/j.1749-6632.2009.04510.x]

93 **Miller L**. The terrorist mind: I. A psychological and political analysis. *Int J Offender Ther Comp Criminol* 2006; **50**: 121-138 [PMID: 16510884]

94 **De Jong JT**. A public health framework to translate risk factors related to political violence and war into multi-level preventive interventions. *Soc Sci Med* 2010; **70**: 71-79 [PMID: 19883967 DOI: 10.1016/j.socscimed.2009.09.044]

95 **Pierre JM**. The neuroscience of free will: implications for psychiatry. *Psychol Med* 2014; **44**: 2465-2474 [PMID: 24330830 DOI: 10.1017/S0033291713002985]

96 **Montague PR**. Free will. *Curr Biol* 2008; **18**: R584-R585 [PMID: 18644328 DOI: 10.1016/j.cub.2008.04.053]

97 **Levene I**, Parker M. Prevalence of depression in granted and refused requests for euthanasia and assisted suicide: a systematic review. *J Med Ethics* 2011; **37**: 205-211 [PMID: 21278132]

98 **Lankford A**. Précis of the myth of martyrdom: what really drives suicide bombers, rampage shooters, and other self-destructive killers. *Behav Brain Sci* 2014; **37**: 351-362 [PMID: 24826814 DOI: 10.1017/S0140525X13001581]

99 **Atran S**. Martyrdom's would-be myth buster. *Behav Brain Sci* 2014; **37**: 362-363 [PMID: 25162840 DOI: 10.1017/S0140525X13003555]

P- Reviewer: Tovilla-Zarate CA, Ursano RJ **S- Editor**: Ji FF
L- Editor: A **E- Editor**: Lu YJ

Published by **Baishideng Publishing Group Inc**
8226 Regency Drive, Pleasanton, CA 94588, USA
Telephone: +1-925-223-8242
Fax: +1-925-223-8243
E-mail: bpgoffice@wjgnet.com
Help Desk: http://www.wjgnet.com/esps/helpdesk.aspx
http://www.wjgnet.com