Blue lights on bridges- Emergency responders’ attitudes about suicide threats occurring on a bridge in Lima, Peru

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Abstract

Objectives: Suicide attempts from public places, including bridges, often result in emergency responders being called to these events. Little is known about the attitudes towards suicide in this group. The aim of this study was to investigate the attitudes towards suicides and suicide attempts taking place on bridges, including the Villena Rey Bridge, in a group of emergency responders working in Lima, Peru.

Methods: The study is a qualitative one, involving analyses of response to individual interviews with five emergency responders.

**Results:** The findings of the interviews revealed multiple attitudes associated with behaviour, cognition, and emotions, both for suicide in general, and as an occupational issue requiring interventions.

**Conclusions:** While the risks to their own physical safety are described in each interview, respondents also described an emergency response reaction that numbed down concern for their own safety. There was very little in any of the interviews that indicated that responders understood the nature of suicide as a public health problem. By better understanding underlying attitudes, better training programs can be developed, which in turn can reduce the risk for post-traumatic stress in rescue workers, and improve the ability of rescue workers to communicate to people who are threatening suicide.

**Keywords:** suicide; suicide, attempted; emergency responders

**Introduction**

Emergency responders, so-called blue light professionals, including firefighters and members of public safety organizations, are regularly exposed to traumatic events, defined as circumstances where individuals experience, witness or are confronted with death, or the threat of death or serious physical injury to oneself or others (1). In many of these events, emergency responders often must react to safety risks for the people they are helping, and threats to their own personal safety. This ‘double risk’ of harm to self and others can be particularly high when rescue workers are called to respond to people exhibiting suicidal behaviour in public locations. Methods for suicide in public places are diverse, including car exhaust poisoning in automobiles parked in public garages, people placing themselves in front of moving vehicles and trains, and suicides by jumping from heights, including residential and office buildings, natural heights including cliffs, and bridges (2).

Jumping from bridges is a highly lethal method of suicide. Depending on the height of the bridge, and whether the person lands on water or land, attempted suicides from jumps off bridges result in deaths between 30-85% of all such cases (3). Timely interventions by emergency response personnel to bridges where people are exhibiting suicidal behaviour or voicing intentions to kill
themselves are crucial to save lives. Certainly for rescue workers, the ideal outcome to such interventions would be that the individual threatening suicide agrees to obtain help. However, rescue workers go into these situations without knowing if this outcome will occur and must be prepared to try to rapidly assess environmental factors, and to intervene physically if people begin to climb over barriers or move towards unprotected areas of the bridges. Thus, interactions from rescue workers with the person threatening suicide take place under highly charged circumstances, where both parties may be at high risk for physical harm.

Because the possibility of experiencing occupational stress in emergency responders is high, it is important to understand not only how they view traumatic events in general, but also understand their attitudes towards suicide, both as a general problem and as a stressor that is inherent to their work. Understanding the specific attitudes related to emergency response to suicide attempts by jumping from bridges that emergency responders have, can help organizations to promote more effective coping strategies and or training programs for this at-risk occupational group.

This study defines attitudes as psychological constructions that are relatively stable, composed of cognitions, emotions and behaviours related to specific ideas, events, or people (4). Attitudes help explain the predisposition that persons have towards a specific thing, person, situation, etc. and are learned in social contexts, including colleagues in workplaces. Identifying the different components of attitudes associated with responding to suicide attempts on bridges and other public places can help workplaces to develop specific programs help these responders develop better capacity to deal with the crisis. Understanding the attitudes of emergency responders to public suicide attempts can help shape workplace interventions that can help them form new attitudes about the reality of suicide from social and public health perspectives, and possibly, help them empathize to a greater degree with potential jumpers, thereby improving chances that rescues can be enacted.

The need for ways to improve outcomes for emergency responders in suicide attempts is acute. While suicide is a problem around the world, the World Health Organisation states that most suicides, 75%, occur in countries with low or middle income economies (5). As in many other low- and middle-income countries, Peru’s emergency responders for suicide attempts are composed of professionals and community volunteers. Lima, the capital city of Peru, has both firefighters and municipal employees known as Serenos. Either group may respond to calls when
people are threatening suicide in public places. The World Health Organisation (5) reported that the age-adjusted suicide rate for both sexes in Peru in 2012 was 3.2 per 100 000, a reduction of 27% from the age-adjusted suicide rate of 4.4 per 100 000 in 2000. However, due to lack of complete injury surveillance data, under-reporting is mostly likely a problem. A recent media report citing information obtained from Peru’s National Institute of Mental Health indicates that between 1 and Peruvians die from suicide each day, and that 9% of Peruvian adults have considered suicide (6). Suicides and suicide attempts in public places are not uncommon in Lima. In particular, Villena Rey Bridge, located in the Miraflores district of Lima, has become a frequently used location for public suicides and suicide attempts. Official statistics are difficult to come by, but a study published in 2005 had already documented 65 suicides or suicide attempts at the bridge between 1988 and 2003 (7). Since then, several dozen media reports on suicides or attempted suicides from this same location have been made. Until recently, the bridge was was a two lane bridge, with little in the way of protection. It now comprises two one-way traffic bridges, with better barriers in place, but jumping from either bridge is still possible.

The frequency with which suicides and suicide attempts occurred at the bridge until mid-2016, and the mix of responders to such events, including both paid firefighters and community volunteers, results in a natural laboratory of sorts for studies related to the attitudes of rescue workers towards suicide as both a social and public health problem, and a specific occupational stressor. The aim of this study was to investigate the attitudes towards suicides and suicide attempts taking place on bridges, including the Villena Rey Bridge, in a group of emergency responders working in Lima, Peru.

Methods

Study population

The study population consisted of three firefighters, and two serenos. The group contained four males and one female, with work related experience ranging from 18 months to more than 15 years. Four of the study participants had been involved in responses to suicides and-or suicide attempts at the Villena Rey Bridge, while a fifth had not yet been called out to this site. Two of the respondents had participated in a highly-publicized rescue on the bridge shortly before being recruited into the study. The study participants were deliberately kept to a small number, as most
were considered to have a wealth of information on the specific issues that were being investigated (attitudes related to suicides and suicide attempts at a highly-trafficked bridge). As little is known about the attitudes of emergency responders dealing with suicide threats on bridges the investigators deemed it important to ‘go deep’ with knowledgeable respondents.

Participants were recruited through purposeful sampling via recommendations from key stakeholders including a supervisor of a local fire fighter unit. Individual interviews were held with all five participants, using semi-structured interviews. Interviews were selected as the best means of collecting information about attitudes related to suicides and suicide attempts at the bridge as this method allows for interactions and dialogues between investigators and study participants. Further, interviews can be focused to specific themes and are suited to exploring contextual factors (8).

The questions in the interviews were pre-tested with a firefighter and an administrative officer in Lima, Peru. Before interviews, each participant was given oral information about the purpose of the study and was advised that he or she had the right to refuse to answer any question, or to terminate the interview at any point. The semi-structured nature of the interviews allowed for the interviewer to probe for additional responses, in order to elicit more information. After oral explanations of the study and the rights of participants, each participant was asked to sign a short statement that verified that they understood the purpose of the study, understood their rights as participants, and were consenting to participate in the study. There were six main questions that were asked in each interview, which were designed to elicit attitudinal information about suicide as a general phenomenon and as an occupational risk (see Table 1). Interviews were conducted in Spanish, and were tape recorded, then transcribed after interviews were completed. Interviews lasted between 30 and 45 minutes. To prevent identification of the study participants, their names and other identifying characteristics are removed from this article. Interviews were transcribed verbatim.

Ethical permissions for this study and the oral consent process were granted by the Universidad Peruana de Ciencias Aplicadas (The Peruvian University of Applied Sciences), Psychology Department, in Lima, Peru.

**Analysis of findings**
Transcriptions of each interview were reviewed multiple times by the study’s two investigators, who separately coded each interview for main themes. The strategies employed to derive themes were based on Thomas’ general inductive analysis approach (9), where raw data were first prepared through transcribing, followed by multiple rounds of close reading of text.

Both investigators worked independently with coding, and then compared results. Each investigator read transcripts of interviews several times, taking notes and beginning to organize themes by comparing all six interviews to each other. After initial themes emerged for each investigator, the two investigators compared findings, and agreed on specific terms to categorize each theme. Taking into account language differences (one investigator speaks Spanish as first language, while the other speaks Spanish as a second language), concordance in themes was similar when the two result sets were reviewed the first time. A second round of thematic analysis was conducted by both interviewers, where selected themes were viewed against the data, to ensure that both investigators agreed that the given themes accurately captured the information provided by the respondents.

The in-depth nature of analysis of the interviews with respondents from different organizations helped this study obtain saturation, that is, a deep understanding of the attitudes that the respondents described towards suicide attempts on the bridge.

**Trustworthiness**

In order to obtain trustworthy results from this study, the investigators were guided by several principles related to rigor in qualitative research. Data were collected, analysed and stored in such a manner that other researchers would be able to replicate the findings of this study with no assistance from the original investigators. The investigators also strived to meet the requirements of rigorous study results as stated by Mays and Pope (10), ‘to produce a plausible and coherent explanation of the phenomenon under scrutiny’. The investigators had conducted extensive research before the study to obtain information related to attitudes in emergency responders who were responding to suicides or suicide attempts from jumping off bridges, but little information was found on this subject. The lack of information may have been a beneficial factor, however, as there were no pre-conceived notions of how study participants ‘should’ respond. The independent parallel coding helped ensure trustworthiness in findings as both investigators could agree on themes after multiple rounds of deep reading and analysis of content.
Respondents’ statements were triangulated against each other through extensive categorization. Neutrality in coding was promoted by blind coding of findings by both investigators, upon which similar themes emerged in both parties’ results.

Neutrality in this study was promoted by the relative lack of information about attitudes of emergency responders towards people attempting suicide on bridges. While the body of information about the processes involved in suicide attempts on bridges is growing, particularly for studies set in high-income countries, little is known about the attitudes that emergency responders in middle and lower-income countries have, related to this issue. Lacking knowledge about this phenomenon contributed to neutrality, as both investigators were aware that any number of findings could emerge in this study.

**Findings**

The findings of the interviews revealed multiple attitudes associated with behaviour, cognition, and emotions, both for suicide in general, and as an occupational issue requiring response. These are described below.

**Behavioural dimensions**

Respondents were asked to recall what they had done during their latest response to a potential suicidal jump from the Bridge. (In the case of the person who had not responded to an attempt on the Bridge, the respondent was asked to generalize about what he or she would do, in such a situation.) The respondents described undertaking actions during rescue attempts that could result in risks to both themselves and the person who was threatening suicide. The respondents all discussed the high risk of receiving injuries while trying to prevent people from jumping.

Some typical quotes include the following:

*It could have taken me over the edge.*

*It’s dangerous.*

*She bit me to make me let go of her.*
Responders also described a number of coping strategies that they used to try to distract people from jumping, in order to either restrain these potential jumpers, or to allow other rescue workers to get into position in order to stop jump attempts.

One responder described trying to create a sense of privacy with the potential jumper in a highly-trafficked site, where events were unfolding with bystanders and media coverage, to try to establish a rapport with the person threatening suicide.

A quote characterizes the intimate nature of conversations that can occur during rescues:

*I took the person a bit further away (from onlookers) to talk, because the person only wanted to be talking to me.*

This desire to create a more intimate form of communication is mirrored in the words of other emergency responders, who stated that they tried to narrow the physical boundaries between themselves and potential jumpers while communicating. Responders reported that they sometimes tried to deflect attention, and come closer to potential jumpers, by using ice-breakers, that is, gestures and words that would normalize the situation to a more generic social interaction.

One respondent explained:

*I offered (the person) a cigarette to start a conversation.*

Emergency responders reported that they attempted to use paradoxical statements in a humorous way to deflect the stress they felt while responding to suicide threats on the bridge. Responders reported that humour was a way to both distance themselves from an uncertain outcome while they were engaged in rescues, but also as a way to try to establish better rapport with the person who was threatening suicide. Respondents reported saying the following to people threatening suicide:

*Jump already, I’m in a hurry.*

*What? You aren’t going to jump?*

**Cognitive dimensions**

Respondents were asked to describe what they were thinking during the last rescue attempt that they had participated in to prevent a potential jumper from committing suicide on the Villena Rey bridge. Respondents described beliefs associated with these specific events that related to both
their ability to respond effectively to event and thereby prevent suicides, and the possibility that they would fail to prevent suicide, and how this impacted them.

Several respondents felt that they had to employ psychological techniques to establish rapport with potential jumpers, although they did not feel completely confident in their ability to do so. All respondents reported wanting better training in how to converse with people who were experiencing suicidal crises.

Respondents also said that when responding to crises on the bridge they tried to separate people into those who had a ‘real’ intent to jump, and those who did not. Two quotes illustrate this issues:

*There should be a classification systems to help us see who we can save.*

*You can tell when people only want attention.*

Catastrophizing, that is, assuming that the rescue attempt would fail, and that the person involved would jump from the bridge, was also a common cognitive response to suicide threats. One respondent’s comments were typical of the group, when he said that he imagined the worst possible outcome, a completed suicide jump from the bridge, to ‘calm me down’ and prepare himself for a possible failed rescue attempt.

Other common cognitive responses mentioned by emergency responders include tunnel vision, that is, being able to only focus on specific aspects of the emergency response; fallacy of control, that is, feeling that outcome was up to God, and labelling potential jumpers in order to maintain emotional distance. Three typical quotes that illustrative these cognitive attitudes include:

*I am only thinking about rescuing, it’s like I’m in a tunnel.*

*Death depends on God.*

*People who want to commit suicide are aggressive, they are wrong!*

Responders also reported feeling high levels of performance demands during rescue attempts. They noted that they placed some of the demands on themselves- that they were supposed to save potential jumpers, and they were not supposed to give up until a rescue attempt had obtained a good outcome. Typical words and phrases to describe self-demands include: *compliance, don’t*
give up, do the best job possible, contain the person, save her, I have to be calm so I try not to think.

Other demands were placed on managing outcomes during responses. Two quotes illustrate these demands: The person who wants to jump should not die, and I shouldn’t do anything unusual so I don’t cause surprises (meaning doing something that would startle the potential jumper and lead to a fall off the bridge).

Responders described several coping strategies that they used during rescue responses, including depersonalized defensive thoughts. One respondent’s comments typified this type of attitude, when he said, “My mind goes blank. I don’t think about myself”. They also reported a number of beliefs that could result in injury risks to themselves or other. For example, one respondent stated that it would be impossible to die during a rescue attempt the rescuer was correctly strapped into a safety harness. Responders also described the paradox inherent to rescue attempts, as they were expected to save potential jumpers, who in turn saw them as threats to their suicide attempts.

**Emotional dimensions**

Emergency responders described feeling fear both during and after rescue attempts. They described being aware that expressions of fear or concern for personal safety were regarded as things they either were not supposed to feel, or talk about with others. However, most said that it would be socially acceptable, either personally or within their work groups, to express fear of people who were threatening suicide. A typical comment was obtained from one respondent, who said, “It’s normal to feel afraid in front of someone who wants to kill”. Responders described fear as being related to the energy they felt while responding to suicide attempts. Another respondent said this combination of fear and the energy generated during rescue responses created a general sense of alarm, which the respondent viewed as positive, as it helped him stay focused on the unfolding events.

The emotions that were associated with rescue responses were also described in terms of energy rushes, and sensation seeking. Respondents described feeling competitive with other rescuers, to be the person who ‘saved’ the potential jumper. One emergency responder who rescued a person during a highly publicized jumping attempt on the bridge said, “So what if she (the potential jumper) bit me, if my blood was running down, she could do what she wanted, I just had to save her”. The energy required to expend high amounts of physical activity, while at the same time
attempting to establish rapport with the potential jumper, was described as leading to a lack of concern for personal safety. One respondent described it as ‘adrenaline anaesthesia that hides the pain’ of injuries that are incurred during rescue attempts.

Emergency responders used emotional language to describe their views of potential jumpers during rescue attempts, both in empathic terms, and in distancing terms. Most described a built-in ambivalence in rescue attempts, as the person needed saving. However, the act of jumping off the bridge was viewed as aggressive, and likely to result in not only the death of the jumper, but also had high potential for harm to the rescuer. Some respondents described the targets of their latest rescue attempts in patronizing terms, for example, one respondent said, “I thought of him as a kid (in order to motivate the rescuer) to save him”.

Discussion

There are a number of attitudinal inconsistencies between behaviours, cognitions and emotions that are described in the narratives of the study’s respondents. While the risks to their own physical safety are described in each interview, respondents also described an emergency response reaction that numbed down concern for their own safety, in order to be able to establish rapport with potential jumpers, and also respond physically, when necessary, to stop jumpers from completing suicide attempts.

Respondents describe potential jumpers in paradoxical terms, as well. People who want to commit suicide are characterized variously as ‘wrong’, ‘upset’, or ‘mental’. Respondents were aware of the need to establish rapport with potential jumpers to try to dissuade them from making suicidal attempts, but respondents were also aware that they might not have adequate training to deal with psychological issues that are often present during rescue attempts. While many of the rescue attempts that are described in the respondents’ narratives were publicized, and-or involved many bystanders, little is discussed about the impact of other people on the bridge when suicide attempts are made. Rather, what is striking about the narratives is the focus on the rescuer and the person attempting suicide. References to others are primarily limited to descriptions of what the emergency responder’s nearest work partner was doing during a rescue attempt, and how these actions impacted the respondent. The ‘tunnel vision’ reaction of emergency responders during rescue attempts, along with attitudes relating to the unstable nature of people who are attempting
suicides from the bridge, creates a highly challenging situation, where rescue workers are likely to feel that the outcomes will largely be determined by their own efforts. Although rescue workers attempt to distance themselves emotionally from highly likely possibility that some of their responses will end with successfully completed suicides by leaving outcomes up to God, or by labelling people who are experiencing suicidal urges as wrong or childish, they still describe situations where they are fully engaged, mentally, emotionally and physically, in trying to save someone. While a substantial body of work describes the physical and mental responses that occur during highly stressful situations, little is known about how conflicting attitudes might present risk factors for occupational stress in emergency response workers who respond to suicide attempts in public places. The specific factors involved in responding to suicide attempts are significantly different from those involved when emergency responders are dealing with attempted crimes, where there is a clearer division between ‘good’ and ‘bad’. Dealing with suicidal attempts in public places is also substantively different from responding to fires or natural disasters, as suicidal attempts normally involve only one potential victim. Respondents are probably aware of this, as they all describe how they try to build rapport, and create opportunities to talk, with potential jumpers. The one-on-one nature of the rescue responses they described indicates that emergency responders may take unsuccessful rescue attempts more personally than rescue workers who responding to events involving large groups, where the ability to establish rapport or dissuade an individual from an action is not an issue.

Suicide is a relatively rare event in Peru, at least as far as is known via available data. Rescue workers who attend emergency response to potential suicide attempts on the bridge are not going to benefit from institutional memory, or routinized ways to conduct rescues. Suicide attempts from the bridge involve many different ‘types’ of potential jumpers, including those who do not want help and will not be dissuaded from jumping. The nature of their rescue responses means that emergency responders understand that they are expected to help victims in difficult situations. This expectation to provide help is probably even more true for firefighters, who primarily respond to events involving people who can be considered innocent victims in events like fires. Serenos are more likely to have encountered complex situations involving both intentional violence, as they also are expected to respond to robberies or other crimes involving weapons. In either case, rescue workers are not likely to encounter situations apart from suicide attempts,
where an ‘innocent’ person is also the possible threat to both the rescue worker’s personal safety, and a threat to the potential jumper’s own life.

The attitudes described by the study’s respondents indicated that they feel some fear when responding to suicide attempts. The lack of understanding about suicide as a mental health emergency that can affect anyone may create problems for both the responder and the person who feeling suicidal urges. Particularly troubling is the repeated use of paradoxical phrasing that is described in the interviews, where rescue workers said that they attempt to change a suicidal person’s mind by jokingly suggesting that the potential jumper just go ahead and jump. The available research in this area suggest that such phrasing is counterproductive in such situations (11).

Respondents in this study speak of mental and physical reactions during rescue attempts that indicate they are experiencing high levels of stress, as evidenced by comments about tunnel vision, adrenaline rushes, and intense focus on obtaining positive outcomes. Lazarus and Folkman (12) describe two kinds of coping skills that people evidence, based on individual attitudes and psychological make up- hot coping skills, and cold coping skills. Hot individuals are those who are more likely to experience emotional responses to high stress situations. It appears from some of the comments that some respondents fell into this category, while other respondents described ‘cold’ coping styles, which are based more on logical, cerebral reactions to high stress situations. Training programs for emergency responders could incorporate approaches to train rescue workers in both hot coping skills and cold coping skills. While most people have a preferred coping style, rescue workers who are responding to suicide attempts may find that they benefit from using both hot and cold coping skills, both during the rescue attempt, and afterwards, in order to reduce the risk of traumatic stress. A good range of coping skills is particularly important for rescue workers who are responding to suicidal attempts, as the findings from this study about needing to establish rapport with potential jumpers indicate that rescue workers may place a huge amount of responsibility on themselves for a successful rescue, and may be at higher risk for traumatic stress if these attempts are unsuccessful.

The nature of a suicide attempt in a public place, as on Villena Rey Bridge, means that rescue responses are occurring under highly visible, and often chaotic circumstances. Other rescue teams are showing up while rescue workers are trying to establish rapport with potential jumpers, which
can interfere with communication. When multiple factors are competing for attention, safety can be further compromised in what is already a highly unstable situation, and pre-existing attitudes can predispose some emergency responders to place themselves at even higher risk.

Although the purpose of this study was to identify behavioural, emotional and cognitive factors relating to how emergency workers felt about responding to suicidal attempts on the Villena Rey bridge, most of the study’s finding were primarily focused around cognitive factors. This may be due to two factors. Firstly, as a percentage of the total duties that both firefighters and serenos experience in their work, responding to suicidal attempts, including potential jumps from the bridge, comprise a small percentage of overall duties. Lack of experience in responding to potential suicides may increase the presence of irrational beliefs and demands for performance in the rescue workers.

Secondly, cognitive responses towards the highly intense, and intimate encounters that rescue workers experience during responses to suicidal attempts may help rescue workers defuse the impact of these events. Respondents described depersonalization during rescue events, and sometimes described potential jumpers in distancing terms, for example, as ‘a little child’.

When discussing emotional factors related to attitudes, respondents described an adrenaline rush that they felt helped them stay focused during rescue attempts, but rescue workers need to be aware that this type of reaction can also be problematic, if it places them in harm’s way. Rescue workers also described emotional responses to the people they were attempting to rescue, for example, ‘It’s normal to be afraid of suicidal people’.

There was very little in any of the interviews that indicated that responders understood the nature of suicide as a public health problem. There was no discussion about the aftermath of suicidal attempts as experienced by either the victims, their families, or the rescue workers themselves.

Villena Rey Bridge has now been retrofitted with jump barriers, but it’s highly likely that other attempts will be made on other bridges in Lima, and rescue workers in the city, and around the world, will benefit from better awareness of suicidal ideation as a mental health emergency that can happen to anyone. This study is the first of its kind to document attitudinal factors associated with suicide threats in Lima as voiced by emergency rescue workers. The study describes some of the components of rescue attempts which are likely to be present in most rescue events, including the need to establish communication with a highly-stressed individual, and the
uncertain outcome of any rescue attempt. By better understanding underlying attitudes, better training programs can be developed, which in turn can reduce the risk for post-traumatic stress in rescue workers, and, possibly improve the ability of rescue workers to communicate to people who are threatening suicide.

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