

Completed Suicide among Sinhalese in Sri Lanka: A Psychological Autopsy Study

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Sri Lanka has the one of highest rates of suicide. Important factors associated with suicide were determined via the psychological autopsy approach (which had not been carried out previously in Sri Lanka). Over a 3-month period, in a catchment area, 31 suicides among Sinhalese were identified and 27 were investigated. Males were more likely to commit suicide and alcohol abuse and domestic violence were reported as contributory factors. We found it possible to use psychological autopsy methods to obtain information which can inform planned prevention measures.

Psychological autopsy is a reliable and well established process where details of life history and events are obtained in order to help understand why an individual committed suicide (Cavanagh, Owens, & Johnston, 1999; Phillips, Yang, Zhang, Wang, Ji, & Zhou, 2002; Proença, 2002). Although this method has been used extensively in North America and Europe, only relatively recently has it been used in Asia, mostly in India (Vijayaku-

mar & Rajkumar, 1999; Gururaj & Isaac, 2001) and China (Phillips et al., 2002; Zhang, Conwell, Zhou, & Jiang, 2004). Although there are psychological autopsy studies from Hong Kong (Chiu et al., 2004) and Taiwan (Cheng, Chen, Chen, & Jenkins, 2000), these countries have reached a much higher socioeconomic status than the rest of the Asia. It is interesting to note that Asian suicides are less likely to have a diagnosable mental disorder, and more likely to be religious and to believe in afterlife when compared with Western counterparts.

The primary aim of this study was to determine the precipitating and perpetuating factors associated with suicide in Sri Lanka, a country with one of the highest rates of suicide in the world (World Health Organization, 1999). Although suicide rates declined significantly in late 1990s in Sri Lanka, there appears to have been little change in the past 5 years. To date, there have been no psychological autopsy studies in Sri Lanka. Therefore, we also set out to determine whether such an approach was feasible and useful to produce good quality data where the sociodemographic and economic profile is markedly

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different from Western countries, where the majority of psychological autopsies have been carried out so far.

Sri Lanka has a population of 19.6 million of whom 82% are Sinhalese and among these 95% follow the Buddhist religion. As Buddhists do not see death as an end to life but merely as a transition to another, the act of suicide is not condoned. According to Buddhist teachings, death itself is seen as one of the basic aspects of suffering. However, suicide as a consequence of incurable disease, self sacrifice as a positive act to help others, and, more recently, as a symbol of political act are not condemned.

METHOD

In Sri Lanka, if there is a sudden death, a coroner's inquest or a magisterial enquiry is required before the cause of death is determined. If the circumstances under which the death occurs is unclear, an open verdict is recorded. All sudden deaths including suicides are recorded in the local police station and the officer in charge of respective police stations reports all cases of suicide to the District Investigation Bureau (DIB) of the Department of Police. Each DIB is responsible for a varying number of police stations.

Setting and Sample

This study was carried out in Ratnapura district which has an estimated population of one million and is situated adjacent to the eastern border of the Colombo district. We randomly selected six divisional administrative areas out of fifteen in Ratnapura district. During a 3-month period all completed suicides ($N = 43$) were identified. There were 31 suicides among Sinhalese out of which two cases could not be traced, one had no informant, and another in which the informant was residing out of the study area. Finally, 27 psychological autopsies were performed. Only confirmed cases of suicide were included. Figure 1 illustrates the flow chart of the process.

Process

The closest relative of the deceased individual was approached to obtain verbal autopsies. In addition to the interviews with the next of kin (Barraclough, Bunch, Nelson, & Sainsbury, 1974), we used the coroners' reports to supplement the information. The closest relative who was living with the deceased at the time of the suicide was identified for the interview. For example, if the deceased was a married male, it was the wife; if a young girl, it was the mother. If the deceased was living alone, the person who had the most frequent contacts was chosen. Most of this background information was available through inquest reports and verified on initial contact with family members. The interviews were conducted 3 months after the traditionally recognized period of mourning among Sinhala Buddhists, when religious observances are made in memory of the deceased. We chose to follow this approach in view of the local rites of passage after death although in the West a target of 2 to 6 months is recommended (Brent, 1989).

Ethical Approval and Consent

Ethical approval was obtained from the Sri-Jayewardanepura University. Relatives were approached and given an informational leaflet. Following discussions with them, consent to proceed was obtained. Knowing that relatives were at varying stages of the grieving process, they were approached carefully and sensitively. The confidential nature of the contents of the interview were emphasized repeatedly and we followed the recommendations of Sumathipala and Siribaddana (2003) regarding specific ethical issues pertaining to developing countries.

Questionnaires

Because of its simplicity, comprehensiveness, and culture-free nature, we decided to use the Psychological Autopsy Checklist (Proença, 2002) as the baseline for our inter-

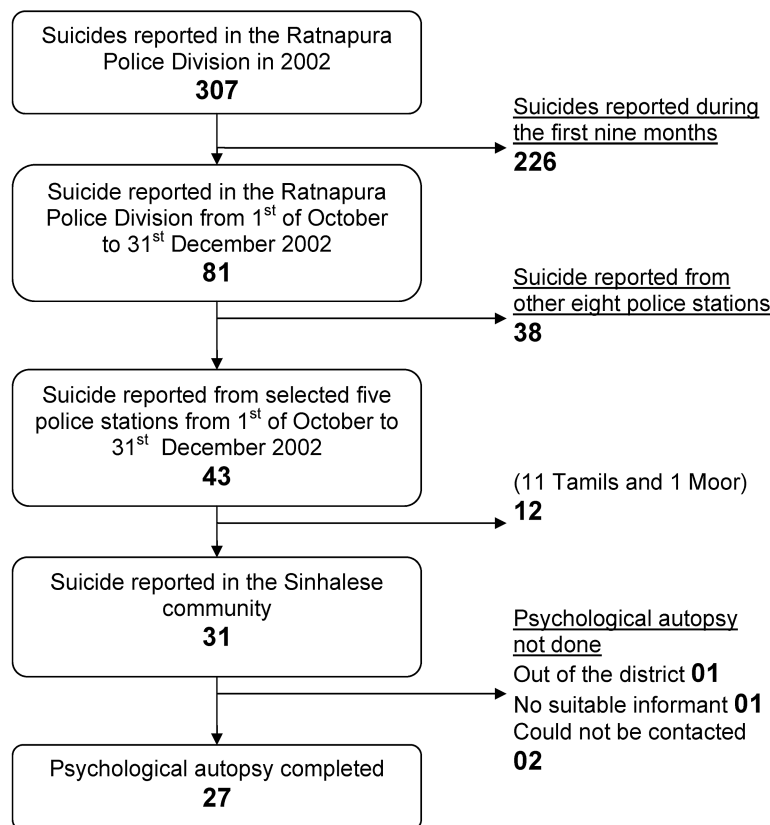


Figure 1. Flow chart for the selection of the suicide sample in the psychological autopsy.

view guide. This was initially translated into Sinhala and then back translated into English. Following discussions where appropriate, words of conceptual equivalence were included rather than straightforward linguistic equivalence. The information collected was then categorized into sociodemographic characteristics, psychological factors, and social stressors including life events. Sociodemographic characteristics included basic information on gender, age, religion, marital status, employment, income, educational status, and presence or absence of any physical or mental illness. Psychological factors identified included psychiatric illness, depressive symptoms, symptoms of any type of psychosis, substance abuse, and the use of psychotropic medication in the month prior to death. Life events included past history of at-

tempted suicide, history of suicidal behavior in immediate or extended family, changes in social activities, financial and marital difficulties, loss of family members by death or separation, break up of close relationships, domestic violence, or other stressors. Family arguments that are temporary in nature, conflicts of opinion, or blaming each other or themselves are not considered as life events. However, if a persistent strife or domestic violence is precipitated by these minor events, then they are considered as life events.

Only one third of Sri Lankan households have a telephone, therefore we decided to approach households by calling upon them directly. Information obtained from the coroners' case notes provided details of the next of kin, and these individuals were approached in the first instance. If they agreed, the inter-

views were then conducted. In some cases the initial contact suggested other informants to contact who may provide additional information.

Based on the interviewer guide, qualitative and quantitative data were collected. All interviews were conducted by the first author. Wherever appropriate and possible the information was gathered from the next of kin. With their permission other key informants such as other members of family, friends, and neighbors were interviewed in a small number of cases. When compared with the western cultures, in Sri Lankan society there is more cohesiveness, collaboration, and interdependency. Furthermore, Hofstede (1984) described cultures as sociocentric and Sri Lankan culture fits into this definition, meaning that culture is kinship-based and family-based with "we-ness" as the norm. Therefore, people are usually very informative of each other. This facilitated the collection of required information by interviewing a lesser number of informants.

Interviews were not audiotaped as it appeared that people were skeptical about it since they are not familiar with such methods. Information generated was transcribed while the interview was in progress. We used these interviews to ascertain mental state of the deceased and to corroborate information. Supplementary information was obtained from the study of prescriptions and medical diagnosis cards (belonging to the patient). In consultation with other psychiatrists on the team, a diagnosis using the *ICD-10* categories was then reached. All quantitative data and some qualitative data divided into categories such as social medical or psychological factors were entered and analyzed using the statistical software package of SPSS-10.

FINDINGS

We completed 34 interviews to collect information on 27 suicides. In one case, three interviews occurred and in five cases two interviews each were carried out. The mean length of interviews was 99 minutes (range

from 45 to 140 minutes). Following the suicide, the shortest period of interview was 84 days, the maximum 140 days (mean 109 days). Of the 34 informants, 19 were female.

Sociodemographic Details

The age of the deceased ranged from 15–74 years with a mean age of 43. Nineteen (70%) of the deceased were male; however, among the younger age group (15–24) three quarters were females (see Table 1). Of the 27 completed suicides, 2 (7%) had no formal education, five (19%) had only primary education, and the rest (74%) had been educated to secondary level. Employment data reveal that 4 (15%) were unemployed, 3 (11%) were housewives, 9 (33%) were laborers, 6 (22%) were farmers, and the rest (18%) were students or businessmen. In regard to marital status, 10 (37%) were single, 14 (52%) were married or cohabiting, and 3 (11%) were separated. Three quarters (20 out of 27, 74%) were living with their own families, only 2 (7%) lived by themselves, and the rest (18%) lived with extended families.

Of the total sample, 23 (85%) reported no physical illness at all while the rest had chronic physical disabilities. Three quarters lived below the poverty line and nearly half were classified as very poor. Seventeen (63%) had poor housing and living conditions out of which 8 (30%) were in very poor housing, which is defined as temporary or a partially built house, inadequate space, or inadequate access to water and toilet facilities.

Psychological and Psychiatric Status

According to the informants, more than one third of cases ($n = 10$, 37%) appeared to have had depression, 2 (7%) had alcohol dependence, 3 (11%) had psychotic illness, and one (4%) had an anxiety disorder. As noted above, the diagnosis of these conditions was made by clinical psychiatrists on the basis of information given by the informant. Six cases had medical notes confirming treatment of such conditions. Thus, 16 out of 27 (59%) had an identifiable psychiatric disorder al-

TABLE 1
Age and Gender of the Deceased and Informants

Age group (Years)	Informants % (male % in age category) <i>n</i> = 34	Deceased % (Male % in age category) <i>n</i> = 27	Ratnapura District		National Suicide data (2001) %**
			population average %§	suicides (1996) %*	
15–24	6 (50)	15 (25)	26.9	29.5	19.7
25–44	38 (62)	37 (70)	39.5	41.8	42
45–64	53 (13)	33 (89)	25.2	21.3	23
65≤	3 (0)	15 (75)	8.4	7.4	15.3#
Total	100 (56)	100 (70)	100	100	100

§District average was taken from the 5% sample of census blocks in 2001 census.

*Data from Registrar General Department.

**Data from Police Department.

#Classified as over 60 years.

though only 6 had received a previous diagnosis and treatment. Among males, 13 (68%) had history of alcohol abuse and 4 (21%) had a lifetime history of cannabis abuse. None of the eight females had any history of substance abuse. Eighteen (67%) had experienced one or more life events in the year prior to the suicide. These results are illustrated in Table 2. Interestingly, no significant life events were reported immediately prior to the actual act of suicide.

TABLE 2
Life Event Triggers of the Deceased

Life event	Frequency (%)
Marital disharmony or broken love affair	7(28)
Being accused of adultery or sexual abuse	3(12)
Death or injury of close relative or friend	9(36)
Separation from grand children	1 (4)
Physical illness	1 (4)
Threat of an assault	1 (4)
Fear of exorcised after being involved in a robbery	1 (4)
Change of residence	2 (8)

Social and Family Circumstances

Thirteen individuals (48%) had shown a recently reduced level of social activities, such as going out or participation in religious activities. There was a history of marital discord among 11 out of 14 married, and 8 of these were males. All the males and three others who were separated from their spouses had been violent toward their partners as a result of marital discord.

Seventeen individuals (63%) had rarely or hardly ever sought help from the medical profession during the year before their death and only 6 (22%) had seen a mental health professional in their lifetime. More than half (*n* = 14, 52%) had reported a history of suicide in the family and a quarter (*n* = 7, 26%) reported positive history of mental illness in the family. Eleven cases (41%) had a positive but passive suicidal ideation over their lifetime expressed as “dying is better than living anymore” and a further 9 (33%) had expressed active suicidal ideation of “wanting to die.” Seven cases (26%) had a history of previous suicide attempts.

The Act of Suicide

Nineteen cases (70%) died as a result of self-poisoning and 14 (52%) had used pes-

ticides, the most common being paraquat. Six (22%) died by hanging and one each used drowning or self-immolation. Eleven (58%) of the 19 males were intoxicated with alcohol at the time of death and 20 (74%) committed the act in their house.

As far as it was possible to ascertain, only 7 (26%) individuals had planned the act for less than 24 hours and 5 (19%) for more than a day, whereas the majority (56%) had not planned the act whatsoever. Only 3 (11%) individuals left suicide notes. Although 11 (41%) had reported some kind of family conflict immediately prior to the act, none of those could be accounted as significant life events. Furthermore, 12 (44%) showed no precipitating events at all.

DISCUSSION

Prior to discussing the findings, it is important to emphasize the shortcomings of the data, which affect the generalizability of these findings. First, the numbers are small and collected over a short period, ignoring the geographical and seasonal variations of suicidal behavior. Second, the same individual collected all the information, which may be a source of bias. Third, the informant may increase the prevalence of nonexistent medical pathology in the deceased to get away from the stigma of mental illness. However, supplementary sources of information such as prescription sheets may reduce this likelihood. Fourth, in the majority of cases information was not verified using multiple informants, although we used proceedings of inquests as a supplementary source of information. It is also likely that some cases where open verdict was recorded may have been due to suicide. Finally, we did not use controls, which may have strengthened our findings.

There are, however, a number of general observations that can be made. The majority of the deceased were male and despite having higher levels of education were poor and lived in poor housing conditions. Domestic violence and strife were identified as

important factors and this, combined with alcohol misuse, confirm the stereotype of the poor drunk male coming home and beating his wife. But cause and effect are difficult to ascertain from this cross-sectional data even though wives were most likely the informants. It can be argued that poverty and poor socioeconomic status are important in view of their level of education, indicating a discrepancy between high aspirations and poor achievement. These factors may result in poor and low self-esteem, and combined with a sense of entrapment, may produce a sense of depression. A lack of planning for suicide points toward the impulsive nature of the act; combined with an ease of access to pesticides such as paraquat (which are lethal), comes the increased likelihood of fatality. Our findings are similar to those that Phillips et al. (2002) found in China in regard to the use of pesticides in self-poisoning, rates of exposure to suicide, and mental illness. The prevalence rates of mental illness in this sample from Sri Lanka are much less than findings from the UK (Appleby, Cooper, & Faragher, 1999), USA (Conwell, Duberstein, Cox, Herrmann, Forbes, & Caine, 1996) Finland (Markus et al., 1993) and Hong Kong (Chiu et al., 2004). It must be emphasized, however, that the diagnosis of psychiatric morbidity was based on informants' views and corroborated by a small number of prescriptions and not on clinical interviews.

Not surprisingly, poisoning (especially with pesticides) was the most common method and this confirms findings from the Indian diaspora in Malaysia (Morris & Maniam, 2001) and Trinidad (Hutchinson, Daisley, Simeon, Simmonds, Shetty, & Lynn, 1999), and from South India (Vijayakumar & Rajkumar, 1999) itself. The increased rates of pesticide use as a suicidal format indicate the potential for prevention. In addition, the fact that a significant proportion (48%) of the suicides studied here had showed a reduction in social activities may suggest that they were already beginning to lose interest in social interaction. This may reflect either a depressive, withdrawn mood or reduction in energy levels which need to be explored in future

studies. The “persistence” of suicidal interaction over a lifetime may indicate a dysthymic factor which requires further exploration.

The role of the religion and culture in suicidal acts cannot be underestimated. Buddhist tradition suggests that the deceased should not be criticized, which may influence the information provided by the informants. They may be willing to talk to the researcher because in a kinship-based society (which also has hierarchical dialogue embedded in it) it is difficult to say no to a doctor dropping in “unannounced.” The findings indicate that nearly a quarter of the suicides had attempted suicide before and that, in some cases at least, suicidal ideation was passive. In future studies it will be helpful to know if there were any precipitating factors that switched the suicidal thought from passive to active. For suicide prevention in Sri Lanka, both previous history and use of agricultural poisons need to be part of any such strategy. It is possible that when an individual’s passive suicidal thoughts are made active (e.g., by family conflict or alcohol disinhibition), they are more likely to succeed with an impulsive gesture because they can access poison. Since informants may not like to portray the deceased as being mentally ill because of the stigma, their explanations in such conditions need to be investigated thoroughly. In these cases prevention strategies focusing on suicidal ide-

ation rather than the act itself would be most relevant as more people had expressed passive suicidal ideation. Additionally, high risk factors such as family history and exposure to suicidal acts must be investigated further.

This small study should be treated as a pilot. It highlights that it is possible to conduct psychological autopsy studies in developing countries provided local cultural and religious values are taken into account. Bhugra (2004) has suggested that culture is an important contributor to not only psychopathology but also to patterns of suicide in the act, the method, and the precipitating factors. Policy makers and clinicians must take into account cultural and religious factors in a serious fashion and not in a superficial way. Furthermore, this study confirms the findings by Philips and others (2002) that the characteristics of suicide in Asia have marked differences from those in western societies. More psychological autopsy studies in other Asian societies are needed to corroborate these findings.

In future research on suicide in Sri Lanka, psychological autopsy will be a feasible and reliable method to collect information. Using similar methodologies, including use of standard instruments in psychopathology diagnosis as in western studies, would generate data more reliable and comparable across cultures.

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