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Characteristics of people who died by suicide: record review of two and half years from the National Referral Hospital, Bhutan

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ABSTRACT

Introduction: A three - year suicide prevention Action Plan was implemented in Bhutan from 1st July 2015 to 30th June 2018 to step up the fight against suicide in the country. Most of the strategies in the Action Plan had to be based on data from other countries due to lack of proper data on suicide within Bhutan. As a result, a National Suicide Registry (NSR) was established in January 2016. Health facilities were mandated to collect comprehensive information on every suicide case using the form developed by NSR. The purpose of the study was to generate information on characteristics of people who died by suicide by reviewing the cases from National Referral Hospital (NRH) for a period of two and half years. **Methods:** This was a record review of the suicide cases investigated by the hospital from 1st January 2016 to 30th June 2018. Descriptive statistics were used to analyze the data using Statistical Package for Social Sciences (SPSS) version 22 software. **Results:** Out of the total of 33 cases, 81.8% were below 40 years and 57.6% were female. Regarding education level, 30.3% did not have any education while 6.1% had Bachelor degree. In terms of employment, 45.5% were unemployed and 15.2% were students. Regarding income, 90.9% either did not earn or earned less than Nu. 1000 (USD 140.0) a month. With regards to health status, 81.8% did not have physical illness or disability while 45.5% had some form of psychiatric disorders and 60.6% of them experienced one or more forms of recent stressful life event prior to death by suicide. **Conclusions:** Majority of people who died by suicide were young and physically healthy adults from lower socio-economic status. Mental illness and stressful live events were other major characteristics among them.

Keywords: Mental illness; Stress; Suicide.

INTRODUCTION

Suicide is defined as the intentional killing of oneself by one's action. It is a complex human behavior with multiple psychological, social and cultural factors contributing to suicidal ideation and suicidal behavior¹. Suicide is a serious public health issue globally². As per World Health Organization (WHO), 79% of suicides in the world occur in low and middle-income countries³. Suicide is one of the commonest causes of deaths among the young people living in developing countries^{4,5}.

There are anecdotal evidences of rise in suicide cases in Bhutan. A survey conducted in 2013 found suicide as the sixth commonest cause of death in Bhutan. It also revealed the lack of a proper system to gather information regarding suicide in the country⁶.

In order to step up fight the against suicide in the country, the Royal Government of Bhutan formulated and implemented a three year Suicide Prevention Action Plan from 1st July 2015 to 30th June 2018⁷. Many suicide prevention strategies and activities by different stakeholders were initiated under that Action Plan. However, due to lack of comprehensive national suicide data, most of the prevention strategies had to be based on regional and international data. In order to strengthen national data, evidence and information on suicide, a National Suicide Registry was established at the Ministry of Health under the Department of Public Health from 1st January 2016 as part of the Action Plan. As per the Manual of the Suicide Registry, all health facilities are mandated to report every suicide case to the Registry by submitting a duly filled National Suicide Case Reporting Form-1 (CRF-1). The CRF-1 collects comprehensive demographic, socio-economic and health profiles as well as other information on each death by suicide.

The Forensic Medicine Department of the National Referral Hospital (NRH) is responsible for investigation of suicidal deaths from Thimphu district along with the Royal

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Bhutan Police. As mandated, the Department has started reporting suicide cases to the National Suicide Registry using CRF-1 from 1st January 2016. NRH is the largest reporting health facility in the country.

This study was undertaken to generate national information on characteristics of people who died by suicide based on the cases investigated by the Forensic Department, NRH from 1st January 2016 to 30th June 2018 using the data collected in the CRF-1. It is expected that the information generated from this study will be used for formulation of evidence based suicide prevention and response plans and policies in the country.

METHODS

After seeking approval from the Research Ethics Board of Health, Ministry of Health, Royal Government of Bhutan (Ref. No. REBH/Approval/2018/07, dated 01/10/2018), a descriptive record review was used to determine the characteristics of suicide cases that were investigated by NRH from 1st January 2016 to 30th June 2018.

All suicide cases investigated and recorded in the CRF-1 were used as source of data for the study. Any case not recorded completely in the CRF-1 was excluded. CRF-1 captures detail information of every case.

There were thirty three cases that were investigated and recorded completely by the hospital during the above period. Each variable was collected from CRF-1 using a Data Collection Form. The variable included the age, sex, education level, employment status, average monthly income, marital status, known medical condition, known physical deformity or disability, known psychiatric condition, alcohol or drug use problem, any episode of deliberate self-harm in the past, any recent adverse life event, and method of suicide.

The data was analyzed using Statistical Package for Social Sciences (SPSS), version 22. The analysis was descriptive and quantitative. Frequency chart was used to analyze the variables.

RESULTS

As shown in Table 1, of 33 people who died by suicide, 21.2% were below 20 years of age, 60.6% (20) were between 20 to 39 years of age, and 18.2% were between 40 to 59 years of age. The youngest was 14 years of age and the eldest was 53 years of age. With regards to sex, 42.4% were male and 57.6% were female. With regards to education level, 30.3%¹⁰ did not have formal education, 9.1% had only primary education (one to six years of schooling), 39.4% had secondary education (seven to twelve years of schooling) while 6.1% of them completed tertiary level of education (Bachelors degree level and above) and 12.2% of them were college students . With regards to marital status, 45.5% of them were married and 48.5% of them were unmarried.

As shown in Table 2, with regards to employment status, 27.3% were employed, 45.5% were unemployed while

Table 1. Demographic characteristics of suicide cases investigated by NRH* from 1st January 2016 to 30th June 2018 (n=33)

Demographic characteristics	n (%)
Age in years (range: 14-53)	
Below 20	7 (21.2%)
20 to 39	20 (60.6%)
40 to 59	6 (18.2%)
Sex	
Male	14 (42.4%)
Female	19 (57.6%)
Education level	
No formal education	10 (30.3%)
Primary education	3 (9.1%)
Secondary education	13 (39.4%)
Tertiary education	6 (18.2%)
Unknown	1 (3%)
Marital status	
Married	15 (45.5%)
Unmarried	16 (48.5%)
In relationship	1 (3%)
Status not known	1 (3%)

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15.2% were students. In terms of average monthly income, 90.9% were either not earning or earning less than Nu. 10,000, while only 6.1% were earning Nu. 20,001 or more. With regards to life events, 60.60% of them had one or more recent stressful life events before death. Of those stressful life events, 15.2% had divorce or relationship breakup issues, 6.1% had lost family member or loved one, 6.1% had come into conflict with law. Rest of the people had stressful life events such as recent diagnosis of significant illness, recent episode of humiliation or scolding, failing exam or interview, business misfortune etc. Of the remaining, 27.3% of them did not have any recent stressful life event and the status was not known in 12.1% of them.

As shown in Table 3, with regards to the health profile, 81.8% were free of any medical condition and 93.9% did not have any deformity or disability while 45.5% had some form of mental/psychiatric illness. Depression was found in 15.2% and 24.2% had alcohol/drug use problems.

With regards to past history of deliberate self-harm, 18.2% had such past history and 15.2% left one form of suicide note. Regarding the method of suicide, 72.7% chose hanging as method of suicide while 9.1% chose ingestion of drugs/poisons and 6.1% died by jumping into river as shown in Table 4.

Table 2. Socio-economic characteristics of suicide cases investigated by NRH* from 1st January 2016 to 30th June 2018 (n=33)

Socio-economic characteristics	n (%)
Employment status	
Unemployed	15 (45.5%)
Employed	9 (27.3%)
Self employed (business)	4 (12.1%)
Students	5 (15.2%)
Average monthly income	
Nu: 00 to 10,000	30 (90.9%)
Nu: 10,001 to 20,000	1 (3%)
Nu: 20,001 and above	2 (6.1%)
Past history of intimate partner violence	
Yes	1 (3%)
No	32 (97%)
Past history of sexual assault	
Yes	1 (3%)
No	32 (97%)
Recent stressful life event	
Yes	20 (60.6%)
No	9 (29.3%)
Unknown	4 (12.1%)

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Table 3. Health profile characteristics of suicide cases investigated by NRH* from 1st January 2016 to 30th June 2018 (n=33)

Health profile characteristics	n (%)
Any known medical condition	
Yes	5 (15.2%)
No	27 (81.8%)
Unknown	1 (3%)
Any known deformity or disability	
Yes	0 (0%)
No	31 (93.9%)
Unknown	2 (6.1%)
Any known psychiatric condition	
Yes	15 (45.5%)
No	18 (54.5%)
Unknown	0 (0%)
Alcohol or drug use disorder	
Yes	8 (24.2%)
No	22 (66.7%)
Unknown	3 (9.1%)

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Table 4. Past history of deliberate self-harm, Suicide note and Method of suicide used in cases of suicide investigated by NRH* from 1st January 2016 to 30th June 2018 (n=33)

Characteristics	n (%)
Past history of deliberate self harm	
Yes	6 (18.2%)
No	27 (78.8%)
Suicide note found	
Yes	5 (15.2%)
No	28 (84.8%)
Method of suicide	
Hanging	24 (72.7%)
Jumping into river	2 (6.1%)
Ingestion of drugs/poisons	3 (9.1%)
Others	4 (12.1%)

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DISCUSSION

In this study, the major characteristics associated with suicide were young adult age, unemployment, low education level, low monthly income, mental illnesses, and stressful life events. The findings from this study are consistent with the findings on suicide from other underdeveloped and developing countries which also found those who died by suicide to be mostly healthy young adults from the more vulnerable and disadvantaged sections of society⁸. The only notable difference was the higher number of women than men who died by suicide in this study. Globally, the age standardized suicide rate was 1.8 times higher in males than in females⁹.

Many people, including policy makers and health professionals assume mental illness as the underlying reasons for most of suicide cases and believe in strengthening mental health services as the main tool to combat suicide in the community. Studies also found psychiatric disorders as major risk factors for suicide¹⁰.

However, there are people who assume suicide as a socio-economic issue rather than pure mental problem¹⁰. They believe in improving socio-economic status of people as the main tool to combat suicide in the country. Studies of farmer suicides in India showed distress resulting from socio-economic hardships due to crop failures as the main risk factor for suicide among farmers¹².

There is also strong association between mental illness and socio-economic hardship. It is a well known fact that mental illnesses like depression, anxiety disorders, substance use disorders etc. can present as surface manifestations of underlying socio-economic stressors like unemployment, poverty, financial crisis, conflict with law, loss of loved ones, failure in exam/

interview etc¹³. At the same time, people with mental illnesses are at higher risk of socio-economic hardships by way of loss of jobs, irrational decision-makings, poor coping abilities etc.

In addition, there is a saying, “suicide is a permanent solution for a temporary problem”. There seems to be some truth in this saying as, even in this study, more than sixty percent of them experienced some stressful life events before dying by suicide. It is likely that some of them took their lives to escape from the stressful life events. Positive coping skills and good psycho-social supports would have prevented some or most of these deaths.

Therefore, it is essential to appreciate the complex relationship between suicidal tendency, socio-economic hardships, mental illnesses, and stressful live events and address each of them holistically and comprehensively. A recent study on attempted suicide patients admitted to NRH from 2014 to 2018 also found socio-economic hardships, mental illnesses and stressful live events to be common characteristics among them¹⁴. Improving the socio-economic condition of general population, inculcation of emotional skills and social skills through education and community based systems and establishing easily accessible mental health and social support services will probably contribute in preventing suicidal thoughts and suicidal behaviours.

In this study, only 18.2% had history of deliberate self-harm or suicidal ideation. This rate is lower than findings from other studies. However it was likely to be underestimated as the relatives who provided the information either did not know of the incident or did not wish to provide true information. Previous history of attempted suicide or suicidal ideation is considered a major risk factor for suicide¹⁵. An international review of psychological autopsy studies found that about 40% of those who died by suicide had histories of attempted suicide¹⁶. Therefore, it is essential that people who present with deliberate self-harm and suicidal ideation are comprehensively assessed and assisted with necessary medical care and psycho-social supports to prevent further harms.

LIMITATIONS

The findings from this study may not reflect the situation of the entire country as the study reviewed the records available at NRH. The other limitation is that the information gathered in CRF-1 were provided mostly by the family members and therefore, might not reflect the true details of the deceased.

CONCLUSIONS

Majority of people who died by suicide were young and physically healthy adults from lower socio-economic status. Mental illness and stressful life events were other major characteristics among them. Therefore, it is likely that improving the psychological

well being, social support services and economic conditions of general population would reduce suicide in the country.

RECOMMENDATIONS

As this study showed that most of the suicide cases were associated with socio-economic hardships, stressful life events and mental illnesses, it is likely that interventions that could improve socio-economic situations could help in decreasing the suicide rates in the country. Inculcating emotional and social skills among general population through education, training and community-based systems might help in prevention of suicide. Establishing easily available and accessible mental health and social support services would also help in combating suicide ideations and actual commitment of suicide. However, further studies are recommended to generate more information on how each of the characteristics contributes to suicidal thoughts and behaviours. It is also important to undertake studies to find out why most of the people who died by suicide were physically healthy young adults. In addition, further studies are recommended to verify whether suicide rates for females are truly higher than for males in the country as found in this study. If it is confirmed, then it would be really necessary to undertake further studies, especially from gender equity perspective.

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AUTHORS CONTRIBUTION

Following authors have made substantial contributions to the manuscript as under:

N: Concept, design, data collection and analysis, manuscript writing and review.

CD: Concept, design, data collection and analysis, manuscript writing and review

KN: Concept, design, data collection and analysis, manuscript writing and review

KP: Concept, design, data collection and analysis, manuscript writing and review

Author agree to be accountable for all respects of the work in ensuring that questions related to the accuracy and integrity of any part of the work are appropriately investigated and resolved.

CONFLICT OF INTEREST

None

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