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### Original communication

# Patterns of suicide in Brunei Darussalam and comparison with neighbouring countries in South East Asia



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#### ABSTRACT

A retrospective study of suicides in Brunei Darussalam (Brunei) over a 20 year period from 1991–2010 was conducted by analysing the post-mortem examination and external examination reports and other relevant records. The suicide rate in Brunei is very low (1.9 deaths per 100,000 per year). The majority of the victims were expatriates 82(66%) and hanging was the commonest mode of suicide both in expatriate and local population. The study showed that the suicide rate among the Bruneian Malays was the lowest (0.5 deaths per 100,000 per year) among the different nationalities. The study highlights the demographics and socio-economic background of the victims, methods used in committing suicide, suicide rates in different ethnic groups and predisposing factors. The results of this study would be of use for taking preventive measures to minimize the incidence of suicide.

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#### 1. Introduction

Brunei Darussalam (Brunei) is a South-East Asian country situated in the North-West coast of the island of Borneo with a total land area of 5769 sq. km. It comprises two segments of land, the larger part with three districts Brunei-Muara, Kuala Belait and Tutong and the smaller portion, Temburong district which is separated from the mainland by a strip of land belonging to Limbang district of the Sarawak state of Malaysia. The economy of Brunei is based on its natural gas and oil reserves. It is one of the affluent nations in Asia with a per capita gross domestic product of \$49,824.56.

The estimated mid-year population in Brunei in 2010 was 414,400, Malays being the majority community accounting for 66% (273,600); the others include Chinese 11% (45,400), indigenous groups 3.4% (14,000) and expatriates 19.6% (81,400).<sup>2</sup> The indigenous tribes comprise Kedayan, Belait, Tutong, Bisya, Murut, Dusun and Iban. There is a large expatriate population in Brunei employed in the government sector as well as in the private sector. The majority of the expatriates are employed in the country's labour force. In 2010, among the expatriates there were around 32,000 Indonesians, 14,000 Filipinos, 13,200 Malaysians, 9000 Indians, 4500 Thais and 4300 Bangladeshis.<sup>3</sup>

All sudden unexpected deaths in Brunei are investigated by the police and those requiring an inquest are referred for a magisterial inquiry. It is mandatory to carry out post-mortem examinations on all expatriate deaths. However, due to socio-religious reasons only an external examination is carried out on the deaths of Malays except in those occurring under suspicious circumstances and in homicides where a post-mortem examination is mandatory. In this study, post-mortem examinations were carried out on four Malay suicide victims where the circumstances of the deaths seemed suspicious at the initial stages of the investigations. Blood and vitreous samples were taken for toxicology from all the dead bodies irrespective of whether a post-mortem examination was conducted or not. In the cases where only an external examination was conducted, the blood was drawn from the femoral vein.

Suicide has been a global public health problem for a long time; studies have been done in many a country to establish the factors responsible for suicide. Annually nearly one million lives are lost world over from suicide, the majority being in the prime of their lives. The magnitude of the problem is reflected by the number of books and papers published on the subject by a wide range of professionals. Suicide is one phenomenon which has no social boundaries; it is prevalent in the developed as well as in the underdeveloped countries, in rich and poor families and also among the educated and un-educated. The psycho-social impact on the individual families due to suicide is devastating. Among the precipitating factors responsible for suicide, poverty, some life time events such as loss of a loved one, inter-personal conflicts, disturbed

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relationships, psychiatric illness, failed love affairs etc. take the centre-stage. The precipitating factors driving the people to take their own lives are complex and may be a result of more than one factor operating at a given time. Also in a good number of cases it is not possible to pin point the exact reason for taking one's own life. It is well known that the actual incidence of suicide in most countries is much higher than the official figures as there is underreporting due to lack of evidence, incomplete investigations or because of the social stigma attached to suicide.

Suicides are encountered among both the local and expatriate communities in Brunei. Our objectives were to study the patterns of suicide in Brunei, identify any significant differences in the suicide rates among different ethnic groups, predisposing factors leading to suicide, to compare the findings with the studies conducted in the other countries in the region and to ascertain remedial measures to reduce the incidence of suicide. Hitherto there is no published literature on suicide in Brunei.

This paper is based on a retrospective analysis of the deaths due to suicide in Brunei over a 20 year period from 1991 to 2010. Brunei has a government hospital in each of the four districts with RIPAS Hospital being the main hospital situated in the capital city, Bandar Seri Begawan. RIPAS Hospital provides medico-legal services to the entire country including conducting of post-mortem examinations.

#### 2. Methodology

In this study the post-mortem examination reports, the reports of external examinations carried out on dead bodies and other medical records at the RIPAS Hospital pertaining to suicides during the period of study were examined. The demographical data, the methods used to commit suicide, the reasons for committing suicide and the precipitating factors were analysed. As RIPAS Hospital is the centre where all medico-legal cases are handled, the police investigators refer all suicides to our department. An inquest is conducted on all unnatural deaths by a magistrate who arrives at a verdict on the circumstances of a death (accident, suicide or homicide), based on the evidence led before him. It is possible that some cases may have been missed out if a death was not treated as a suicide.

#### 3. Results

#### 3.1. Age and sex distribution of victims

During the period of the study a total of 124 suicides were identified, 101 males and 23 females (Table 1).

#### 3.2. Nationality and sex distribution of the victims

There were victims from ten nationalities within the study group of which 42 (34%) were Bruneians (Table 2). Of the 82 expatriates 46 males were manual workers and 7 females were domestic workers.

**Table 1**Age and sex distribution of victims.

Age groups in years	Males	Females	Total
10-19	6	1	7
20-29	31	4	35
30-39	31	14	45
40-49	22	3	25
50-59	6	1	7
60-69	2	0	2
70-79	1	0	1
80-89	2	0	2
Total	101	23	124

**Table 2**Nationality and sex distribution of victims

Nationality	Males	Female	s Total
Bruneian	38	4	42
Thai	20	2	22
Indian	15	1	16
Filipino	7	9	16
Indonesian	7	6	13
Nepalese	6	0	6
Bangladeshi	6	0	6
Sri Lankan	0	1	1
Burmese	1	0	1
Malaysian	1	0	1
Total	101	23	124

#### 3.3. Ethnicity, sex, mean age and suicide rates of Bruneians

Table 3 shows the differences in the mean age and suicide rates of the different ethnic groups among the Bruneians.

The suicide rate for the expatriates in Brunei was 6.8 deaths per 100,000 per year.

#### 3.4. Methods used to commit suicide

Table 4 shows the methods used to commit suicide. There were 57 males and 14 females among the expatriates who committed suicide by hanging. Among the Bruneians there were 27 males and 1 female who used hanging as the method of committing suicide. There were 4 male and 4 female deaths among the Bruneians due to poisoning. Two victims used more than one method; a male hanged himself in the hospital toilet while under treatment for a self-inflicted stab injury of the abdomen and a female first attempted to commit suicide by cutting her neck and then hanged herself.

#### 3.5. Possible reasons for committing suicide

The reasons for committing suicide (Table 5) were based on information provided by the medical records, family members, coworkers, suicide notes, circumstantial evidence and from police investigations. As such, this data may not establish the exact reason for committing suicide. The apparent reason for committing suicide was evident only in 75 (60%) cases, of which 26 (21%) cases were due to financial hardships.

Financial hardships leading to suicide was more prevalent among the expatriates, accounting for 22 cases compared to 4 cases among the Bruneians. The leading cause for committing suicide among the Bruneians was chronic illness -12 (28%); 6 suffered from chronic physical illness and 6 from a psychiatric disorder.

A total of 31 victims were positive for alcohol with 13 having a blood alcohol level over 100 mg/100 ml. No other drugs of dependence were detected in any of the samples subjected to toxicological analysis. There were four drug addicts among the victims. Three of the drug addicts committed suicide by hanging and the other died of self-inflicted firearm injuries.

**Table 3**Ethnicity, sex, mean age and suicide rates among the Bruneians.

Ethnicity	Male	Female	Mean age of victims	Suicide rate per 100,000 year
Malay	19	02	32 years	0.5 <sup>a</sup>
Chinese	17	00	51 years	2.3ª
Indigenous population(Iban)	02	02	25 years	1.7

<sup>&</sup>lt;sup>a</sup> Sample of Malay = 273,600, sample of Chinese 45,400 Therefore, Standard Normal Test was used to estimate the p value.  $Z \ge 3$  p < 0.05.

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