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CHARACTERISTICS AND RATE OF DELIBERATE SELF-HARM AMONG NEWLY REFERRED CHILDREN AND ADOLESCENTS TO CHILD AND ADOLESCENT MENTAL HEALTH SERVICES OUTPATIENT CLINIC IN BRUNEI DARUSSALAM.

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ABSTRACT

Introduction: This study aimed to examine the rate of self-harm among new referrals seen at CAMHS outpatient clinic in Brunei and to compare the clinical and demographic characteristics between deliberate self-harm (DSH) and non deliberate self-harm (non DSH) referrals. **Methods:** This was a retrospective study. Data were collected from Brunei electronic records and the clinic records. **Results:** The rate of DSH among children and adolescent referred was 18.9% and the mean age of DSH cases was 15.2 years. There were statistically significant differences between DSH and non DSH cases with regards to age groups ($p = .00001$), gender ($p = .0012$) and diagnoses ($p = .00001$). There were slightly more females than males involved in DSH behaviours. 73.8% of DSH cases had internalising disorders. More female adolescents than males were involved in cutting. 26.2% and 23.8% of the DSH cases had problems or crisis with parents or other significant family members and relationship problems with boyfriends or girlfriends respectively. **Conclusion:** DSH is not a rare problem among adolescents in Brunei. It is a problem of girls where most have internalising problems and self-cutting as the main method of DSH.

Keywords: Adolescent, Brunei, Deliberate self-harm, Outpatients, Prevalence.

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INTRODUCTION

Deliberate self-harm (DSH) is a common health problem among adolescents worldwide.[1, 2] It is an important predictor of subsequent death by suicide.[3] Most studies on suicide and DSH were done in the West particularly in the United States and European countries. Studies in the West reported a prevalence rates of DSH in teenagers ranging from 6.9 to 16.9%.[4-7] Muehlenkamp and colleagues conducted a systematic review of recent studies reporting on the life time prevalence of DSH in adolescent samples worldwide and found 16% had carried out DSH.[8.] In a more recent systemic review in 2017 the prevalence rates of DSH among adolescents reported by the authors, ranges from 7.5% - 46.5%.[9] Researchers in Hong Kong, reported 15% to 32.7% of Chinese adolescents were engaging in some form of DSH.[10-12] In Singapore, clinic prevalence of DSH among adolescents was about 23% to 58% [13-15]. In West Malaysia the reported DSH rate was 12 per 100000 among Malaysian children and adoles-

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cents population. The DSH rates were 4 per 100000 and 6.4 per 100000 in the neighbouring East Malaysian states of Sabah and Sarawak respectively.[16] The rates of DSH vary in different studies throughout the world. This is due to the different nomenclature and classification of self-harm used in the research on DSH.[17]

Currently there is only one published article on suicide in Brunei but none on DSH found on literature search.[18] Suicide and DSH are classified as crimes and considered to be sinful making it difficult to carry out research on such topics in this country.[18] Understanding the characteristics of DSH in the local adolescents population is important to formulate the prevention strategy for suicide in adolescents.[17.] The aims of this study were to examine the rate of DSH among children and adolescents referred and seen at Child and Adolescent Mental Health Services (CAMHS) outpatient clinic and to compare the clinical and demographic characteristics of children and adolescents reported DSH and those who did not have a history of DSH.

METHODS

This was a retrospective cross-sectional study conducted using the secondary data collected for the Department of Psychiatry audit on non -attendance rate to CAMHS outpatient clinics which was published earlier.[19] CAMHS at Raja Isteri Pengiran Anak Saleha Hospital (RIPASH) is the only center for children and adolescent up to the age of 18, with mental health needs for the whole of Brunei Darusslam. Currently the services are located at Kiarong campus and consisted of an outpatient child and adolescent clinic conducted by a consultant and a rotation medical officer and supported by a community nursing team that provides home and school visitation. [20,21.] Permission to conduct the study was obtained from the Head of the Department of Psychiatry at RIPAS Hospital. Ethics approval was not required as the study was carried out as part of the departmental annual audit and did not involve direct face to face interview with patients.

Data collection

The psychiatric records of all newly referred cases seen at CAMHS outpatient clinic from September 1, 2017 to August 31, 2019 were extracted and reviewed. There were 222 new cases seen of which 91 new cases were from September 1, 2017 to August 31, 2018 and 131 new cases were from September 1, 2018 to August 31, 2019. Ten cases presenting with suicidal thoughts without actually harming themselves were excluded from the study.

Data of these 212 patients were collected from the electronic Brunei Health Information Management System (Bru-HIMS) as well as manual record of new appointments and attendance and the first page of the psychiatric case record. Demographic data such as age, gender, ethnicity and clinical data such as DSH methods, factors associated with DSH such as reasons for DSH and diagnoses were extracted. These data were tabulated in Microsoft Excel spreadsheet (Microsoft, USA) in the government password-protected PC at the Department of Psychiatry for statistical analysis. Diagnoses were grouped into developmental, internalizing, externalizing and other diagnoses (psychosis and no diagnosis).This grouping was based on the three groupings described by Goodman and Scott.[22]

Analysis

The data were examined using Social Science Statistics access through www.socscistatistics.com. Descriptive statistics were primarily used in the analysis in this study. Patients were divided into 2 groups: those with DSH and those without a history of DSH or non-DSH and comparison between the two groups were made using Fisher exact test. Further analysis were also made to compare different methods used for DSH and rea-

sons for DSH. A value of $p < 0.05$ was considered as statistically significant.

RESULTS

The final sample analysed consisted of 212 new cases seen at CAMHS outpatient clinic. About 55% were adolescents (mean age 15.5 ± 1.46 years) while 45% were children (mean age 8.5 ± 2.39 years) and more than 62% were males. Majority (83%) were of Malay ethnicity. The majority of the cases seen were diagnosed with developmental disorders (40.1%) and internalizing disorders (30.2%).

There were 42 DSH cases (mean age 15.2 ± 1.9 years) and 170 were non-DSH cases (mean age 11.6 ± 4.02 years). Table I shows the demographic characteristics of DSH and non-DSH cases. There were statistically significant differences between DSH and non-DSH cases with regards to age groups ($p = .00001$), gender ($p = .0012$) and diagnoses ($p = .00001$).

The rate of DSH among children and adolescent attending CAMHS clinics was 18.9%. 90.5% of the DSH cases were 13 years of age or above and slightly more females (59.5%) than males were involved in DSH behaviours. 73.8% of DSH cases had internalising disorders and 64.5% or 20 of the cases with internalising disorders were female adolescents. The main method of self-harm was self-cutting. Table II shows the frequencies of all the methods used. Self-poisoning was used by older adolescents compared to those using other methods. Table III compares adolescents who were harming themselves by cutting and those using other methods. There were significant differences between the two groups with regards to gender ($p = .0043$). More female adolescents were involved in self-cutting than males while male adolescents tend to use other method especially self-poisoning.

Table I: Comparison of demographic characteristics and diagnosis among patients with history of DSH and those without history of DSH (Non-DSH).

Variables	DSH (n = 42)	Non-DSH (n = 170)	*p (Fisher exact)*
Age (years)			
0-12	4	91	*.00001*
13-18	38	79	
Gender			
Male	17	116	*.0012*
Female	25	54	
Ethnic groups			
Malay**	35	141	*1.0000*
Others^{+}	7	29	
Diagnoses			
Internalising	31	33	*.00001*
Externalising/ others^{++}	11	137	

****These include the indigenous Malay ethnic groups (i.e. Belait, Dusun, Kedayan, Murut, Tutong and Bisaya)**
$^{+}$Chinese, Iban and other foreigners
$^{++}$Externalising, developmental, psychosis and no diagnosis

The two main problems associated with DSH were problems or crisis with parents or other significant family members and relationship problems with boyfriends or girlfriends. These constitute 26.2% and 23.8% of the DSH cases respectively. Other problems were being bullied by classmates, stressed by their schoolwork, feeling left out, lonely or overwhelm. Another 16.6% of the DSH cases had no clear reasons documented.

There were more children (53.5%) and males (68.2%) among the non-DSH group. About 80% of the non-DSH group had externalising disorders, psychosis, developmental disorders or had no psychiatric diagnoses.

Table II: Method and frequency of DSH and mean age at which DSH was performed.

Method of DSH	Frequency (%)	mean age (SD) in years
Self-cutting (SC)	24 (57.1)	15.0 ± 1.5
Self-poisoning (SP)	8 (19.1)	16.9 ± 1.1
Combine (SC&SP)	6 (14.3)	15.8 ± 0.7
Others (Scratch / strangle)	4 (9.5)	12.0 ± 1.9

Table III: DSH characteristics comparing adolescents with self-cutting and other methods.

Variables	Self-cutting	Self-poisoning/ others	P*
Age (years)			
0-12	2	2	1.000
13-18	22	16	
Gender			
Male	5	12	***0.0043***
Female	19	6	
Ethnic groups			
Malay	19	16	0.6786
Others	5	2	
Diagnostic groups			
Internalizing	17	14	0.7306
Externalizing/others	7	4	

***** *Fischer exact test*

DISCUSSION

Brunei is a small country in South East Asia with an estimated population of about 433000 in 2019 and Islam is the official religion.23 Islam plays an important role in the life of the majority of the people in Brunei.[24] Generally Islam forbids DSH or other suicidal behaviour and suicide or attempted suicide are considered criminal offense.[25] Lester concluded that the statistics on these behaviours in Islamic countries are not accurate and underestimated.[25] The study of DSH in Saudi Arabia reported a very low rate and the authors believed that this could be the influence of Islamic faith.[26] In Brunei suicide and DSH are considered as a criminal offense as well as sinful and forbidden.[18] Thus there was the possibility that the cases seen at the CAMHS outpatient clinics were just the tip of the iceberg and the clinic - based rate of 18.9% reported in this study could be an underestimate of the actual rate. This rate was much lower than the rate of DSH reported in New Zealand of 48% and clinic-based rate of 23% reported in Singapore.[13,14,27] The difference in the reported rate to Singapore could be the consequent of the different population structure in Singapore with 74.4% Chinese and 13.4% Muslim Malays.[28] In neighbouring Malaysia, majority of those who attempted suicide were Indian and Chinese while Malays appeared to be resilient because of their Islamic faith.[29]

Most young people who harmed themselves hide their injuries and may never get medical help.[30] Ystgaard and colleagues reported that nearly half of young people engaged in DSH did not get any help from the medical services.[31] Young people are secretive about their self-harming behaviour due to the stigma attached to it.[32] This could be another reason for underestimation of the clinic-based prevalence rate. In Brunei parents of children or young people who harmed themselves might not get help from CAMHS for medical and psychological treatment for fear of their children being labeled as crazy and stigmatized for life.[18]

DSH is a common problem of older adolescents above 12 years of age who had attended CAMHS outpatient clinic. In England and Hong Kong, DSH was also common among the adolescents.[6, 7, 12] In this study, only 9.5% of DSH were of the peadiatric age group, that is 12 years of age and under. This was slightly lower than the rate 13.2% reported by Hawton and colleague.[33] There is scarcity of information about self harm among primary school children. The community survey in Britain found that 1.3% of 5 to 10 years had tried to harm themselves.[34]

Nearly 60% of the adolescents engaged in DSH behaviour were female and this is consistent with the findings from other studies.[7, 12-14, 27, 31, 35] Of the 42 adolescents in this study who were engaged with DSH, 31 adolescents or 73.8% had internalising disorders. Internalising disorders include anxiety, phobia, depression, obsessive-compulsive disorder (OCD) and some somatisation.[22] This finding was consistent with that in Singapore and other countries.[13,14,36] In this study more females who were engaged with DSH had internalising disorders than males. Female gen-

der has the tendency to turn their distress inward to themselves while male usually externalises their problems.[12, 14] Many studies reported self-cutting as the most common method of DSH among adolescents.[7, 8, 14, 31, 35] Similar method was used by the adolescents who were engaged with DSH attending CAMHS in Brunei. In this study 79% of the self-cutters were female gender. Male and female gender use different behaviour to express their emotional distress and female tends to turn the distress "inward" by cutting.[10, 15] Hawton and colleague reported that common problems faced by adolescents engaged in DSH were relationship difficulties with family members (77.3%) and with friends (38.9%).[33] In this study, the main problems faced by the adolescents were crisis in their relationship with family members and problems with boy or girl friends. This is consistent with other studies elsewhere.[9, 33, 37, 38]

To our knowledge, this is the only study on DSH in Brunei. The data collected for this study serve as baseline for future studies on this topic. This study had many limitations as it was a retrospective cross-sectional study of a clinical sample. The findings were mostly descriptive in nature and with only a few variables analysed statistically. As CAMHS accept referrals from the whole of Brunei but only those who have come to medical attention either through family referrals or GP referrals, this findings cannot be generalised to the general population and the rate of DSH may be under-reported. Hence a national survey of a representative sample of children and adolescents population preferably in a school settings may provide a clearer picture of the true DSH rate in Brunei Darussalam.

CONCLUSION

In conclusion, DSH is not a rare problem among adolescents in Brunei with the DSH (CAMHS) clinic prevalence of 18.9%. This rate may be much higher in the general adolescent population. It is a problem amongst female teenagers where most have internalising problems and self-cutting as the main method of DSH. This study provides some baseline data necessary for the development of strategies to help adolescents with DSH. The findings from this study are consistent with the findings of studies done elsewhere.

CONFLICT OF INTEREST

None

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