

ORIGINAL ARTICLE

Profiles of Deliberate and Accidental Self Harmers Admitted in Hospitals in Malaysia Project Report (PRODASH)

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ABSTRACT

Introduction: This study is part the Investigator Initiated Research (IIR) project under the mental health suicide and para suicide cluster. Self-harm is an important predictor of suicide and leaves a significant long-lasting psychological effect. Despite the increasing prevalence of rate of self-harm, very little research had been done in Asian countries. The objective of this study is to determine the prevalence of self-harm in selected hospitals, demographic profiles and factors associated with development of self-harm. **Methods:** This is a multi-centred cross sectional study. Six months of data collection was performed between the 1st November 2013 and 30th April 2014. All cases that were identified to have carried out Self-Harm were interviewed using The World Health Organization (WHO) SUPRE-MISS Questionnaire Annexe 1 which had been adapted to the Malaysian culture by the research committee members. **Results:** A total of 99 samples were obtained for this study. They mostly came from low socioeconomic background. Majority of the patients were females, and this was consistent with studies worldwide. Poisoning by pesticides was the most frequent method of choice and about 30% of the patients had previous attempts. **Conclusion:** Sociodemographic factors play a significant role in self-harm. It is important to know the sociodemographic profile to identify which group of people are at risk and intervention can be focused.

Keywords: Mental health, Deliberate self-harm, Para-suicide, PRODASH

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INTRODUCTION

Self harm is a significant predictor of suicide and there are studies that had also link it with psychological morbidity (1-3). Proportion of new cases have increased each year, but only a handful of studies had actually been done in this area in Malaysia. Although, Malaysia has already gathered some data on completed suicides (fatal intentional self-harm) via the National Suicide Registry Malaysia (2, 4), corresponding studies in self-harm are scarce (5). Most of the datas on self-harm originated from either the United States (6), United Kingdom (7, 8) or Europe (9-11) with Asian countries lacking behind in this area. The results obtained from international studies on the prevalence and aetiology of self-harm or self-injury have been mostly heterogenous (12).

According to a study by Mishara in 2007 (13), the rate

of Asian suicides are thought to be more than Western countries. Therefore it might be reasonable to think that corresponding rates of self-harm in Asia are higher as well. It is important to know the severity of this problem in Malaysia. It is necessary to gain insight on the nature of self-harm in order to prevent more future episodes. There has not been any extensive studies on the cultural differences in self-harm. Some researchers postulated that risk factors for suicide are distinguishable between developed and developing countries (14). This hypothesis could be true for non-fatal forms of self harm as well. It is well known that Malaysia is a multi-cultural country, therefore it is imperative that a study on the nature and extent of self-injury across a range of cultures to be conducted. This could prove highly beneficial as it will allow a deeper understanding of how socio-cultural factors are related to such behaviour .

There are studies to suggest that the rates of self-harm among young women are increasing in Malaysia (15). Local data is needed for preventive measures to be taken, tailored to our population. The majority of the population samples in studies done in Malaysia are

patients who had been admitted to hospital due to a suicide attempt and the main bulk of data collection involved examining case files only. Although such methods are convenient and cost effective, they do not provide a thorough understanding of non-suicidal self-harm.

MATERIALS AND METHODS

This is a multi centred cross sectional study. Six months of data collection was performed between the 1st November 2013 and 30th April 2014. All cases who were identified to have carried out Self-Harm and whom were referred to psychiatric services were included in this study. Patients who were discharged from the Emergency Department and patient who died during their admission in the ward were excluded.

Four different hospitals in peninsular Malaysia were used for this study. The hospitals were Hospital Sultan Haji Ahmad Shah (Pahang), Hospital Raja Perempuan Zainab II (Kelantan), Hospital Tuanku Jaafar (Negeri Sembilan) and Hospital Bukit Mertajam (Pulau Pinang).

Data collection procedure

Universal sampling method was used. Data collection of patients whom were admitted with self-harm from the four mentioned hospitals started in November 2013. Informed consent was obtained from the patients prior to the interview. Data collection and data entry were completed in April 2014. All data obtained were then sent to the principal investigator to be analysed.

Ethical

The study was conducted in accordance with the Declaration of Helsinki. Approval was obtained from the Medical Research Ethics Committee, Ministry of Health of Malaysia and all participants provided written informed consent.

Instruments

The World Health Organization (WHO) SUPRE-MISS Questionnaire Annexe 1 is an interviewer rated questionnaire which had been adapted to the Malaysian culture by the research committee. The SUPRE-MISS Questionnaire covers detailed sociodemographic and clinical information. This questionnaire was uniformly administered by one sole researcher throughout the research period.

Statistical analysis

Both descriptive and inferential statistics were analysed using SPSS software version 24.0. Descriptive analysis was presented as frequency and percentage while bivariate analysis was done using Pearson's chi square test with Yates correction and independent t-test to determine the relationship between risk factors and types of self-harm used by the respondents. The outcome was categorised into 2 types of self-harm; poisoning

with chemicals/drugs or using non-poisoning methods. A p value of less than 0.05 was considered statistically significant. All significant variables in bivariate analysis were then processed into Multiple Logistic Regression analysis. Backward LR step was used to get the best predictor model of types of self-harm.

RESULTS

General information

A total number of 99 respondents participated in this study from four selected hospitals. The bulk of the sample originated from Hospital Sultan Haji Ahmad Shah with 44 patients. This is followed by Hospital Tuanku Jaafar (26), Hospital Raja Perempuan Zainab II (16) and Hospital Bukit Mertajam (13).

Majority of sample were Indian (37.4%), single (47.5%), female (56.6%), full-time employed (36.4%), with mean age of 29.3 years (Table I). The age ranged from 12 to 79 years. Most of them earned less than RM 500 (46.5%) and worked in services and sales area (25.3%). Almost half (49.5%) lived with their parents.

Present episode of self-harm

Most of the self-harm occurred in the evening (35%) followed by night time episodes (29%). The least was early morning (6%). Table II shows the methods of self harm. The most common method is by poisoning with pesticides (n=16; 16.2%) followed by using sharp objects (n=13; 13.1%).

Many patients had no danger to life (n=62; 63%) as the physical consequences of the act of self-harm. 71% of patient was transferred from the emergency department to intensive unit or respective ward, while only 29% were directly transferred to the psychiatric ward.

Current episode history

Table III shows that majority had somebody nearby or in contact (n=45; 45.5%), did not think of whether someone will be coming (expecting someone) (n=62; 62.6%), took no precautions of being found (n=67; 67.7%) and did not contact or notify potential helper (n=55, 55.6%). There was no final act made in 94.9 % (n=94), no preparation made in 87.9 % (n=87) and no farewell notes written in 88.9 % (n=88). 84.8 % (n=84) did not tell anyone about their intention. 40.4 % (n=40) had hoped to accomplish death during the act, but only 29.3 % (n=29) still had the intention to die during the interview. Almost half of them (n=49; 49.5%) thought that death was unlikely or did not think about it. Most of them (n=89; 89.9%) had none or some previous ingestion of alcohol/substance but without relationship to the act of self-harm.

Previous suicide attempt history, family data and history of traumatic event

Table IV shows that majority had no previous attempts

Table I: The characteristics of the participants in the study. Sample demographic distributions according to age, gender and socioeconomic status.

Variables	N (%)
Age (years)	
≤20	25 (25.3)
21-30	38 (38.4)
31-40	22 (22.2)
41-50	10 (10.1)
51-60	1 (0.1)
>60	3 (3.0)
Sex	
Male	43 (43.4)
Female	55 (55.6)
Race	
Malay	35 (35.4)
Chinese	17 (17.2)
Indian	37 (37.4)
Orang Asli	6 (6.1)
Others	4 (4.0)
Religion	
Islam	40 (46.5)
Buddhist	16 (16.2)
Christian	3 (3.0)
Hindu	32 (32.3)
No religion	3 (3.0)
Confuciousnism,Taoism,folk	2 (2.0)
Not known/others	1 (1.0)
Marital status	
Single	47 (47.5)
Married	38 (38.4)
Widow	5 (5.1)
Divorced	9 (9.1)
Education	
Primary	25 (25.3)
Secondary school	62 (62.6)
Tertiary	9 (9.1)
None	3 (3.0)
Citizenship	
Malaysian	95 (96.0)
Non-Malaysian	4 (4.0)
Occupational Status	
Professional	2 (2.0)
Technician and allied professional	2 (2.0)
Clerical	3 (3.0)
Service and sales industry	25 (25.3)
Agriculture workers	3 (3.0)
Craftsman	6 (6.1)
Plant and machine operator	15 (15.2)
Basic labour worker	24 (24.2)
Never worked	19 (19.2)
Employment status	
Full time employed	36 (36.4)
Part time employed	8 (8.1)
Employed but on sick leave	4 (4.0)
Temporary work	2 (2.0)
Unemployed	27 (27.3)
Full time student	1 (1.0)
Disabled,permanently sick	13 (13.1)
Current living arrangements	
Living alone	4 (4.0)
Living alone with children	5 (5.1)
Living with partner and children	22 (22.2)
Living with parents	49 (49.5)
Living with other relatives/friends	5 (5.1)
Living in homes/institutions	1 (1.0)
Others	3 (3.0)
Income per month	
Less than RM500	46 (46.5)
RM500-RM1000	25 (25.3)
RM1001-RM3000	26 (26.3)
More than RM3000	2 (2.0)

Table II: Methods of self harm by ICD 10 classification

Methods of self harm	N(%)
Intentional self poisoning	
X60 Non-opioid analgesics,antipyretics, antirheumatics	14(14.1)
X61 Antiepileptics, sedative-hypnotic, psychotropics	10(10.1)
X63 Other drug acting on Autonomic nervous system	1(1.0)
X64 Other unspecified drugs and biological substances	10(10.1)
X66 Organic solvents;hydrocarbons and its vapour	12(12.1)
X67 Other gases and vapours (e.g : Carbon monoxide)	3(3.0)
X68 Pesticides	16(16.2)
X69 Other unspecified chemicals and noxious substances	12(12.1)
Intentional self harm by non-poisoning	
X70 Hanging, strangulation and suffocation	3(3.0)
X76 Smoke,fire and flame	1(1.0)
X78 Sharp objects	13(13.1)
X80 Jumping from a high place	3(3.0)
X81 Jumping/lying before moving object	1(1.0)
X83 Other specified means	1(1.0)

Table III: Behaviour ,thought and circumstances during the current episode of self harm

	N (%)
Presence of someone during act	
Somebody present	19 (19.2)
Somebody nearby or in contact (e.g telephone)	45 (45.5)
No one nearby or in contact	35 (35.4)
Expecting someone	
Timed so that intervention is probable	20 (20.2)
Timed so that intervention is not likely	9 (9.1)
Timed so that intervention is highly unlikely	8 (8.1)
Did not think about it	62 (62.6)
Act to prevent being found	
No precautions at all	67 (67.7)
Passive precautions such as avoiding others but doing nothing to prevent their intervention (e.g: being alone in room with unlocked doors)	21 (21.2)
Active precautions (e.g being alone in room with locked doors)	11 (11.1)
Call someone to inform about the act	
Notified potential helper regarding attempt	34 (34.3)
Contacted but did not specifically notify potential helper regarding attempt	10 (10.1)
Did not contact or notify potential helper	55 (55.6)
Final act such as paying bills,saying goodbye,writing a testament	
None	
Thought about making or made some arrangements in anticipation of death	94 (94.9)
Definite plans made(making a will,giving gifts,taking insurance)	2 (2.0)
	3 (3.0)
Preparation made	
No preparation(No plan)	87 (87.9)
Minimal or moderate preparation	12 (12.1)
Extensive preparation(detailed plan)	0 (0)
Written farewell letters,SMS,social media	
Neither written a note,nor thought about writing one	88 (88.9)
Thought about writing one	5 (5.1)
Note written (present or torn up)	6 (6.1)
Informing other parties regarding intention to harm self	
None	84 (84.8)
Equivocal communications (ambiguous or implied)	14 (14.1)
Unequivocal communication(explicit)	1 (1.0)
Feelings towards life and death	
Did not want to die	47 (47.5)
Did not care wether he/she lived	23 (23.2)
Wanted to die	29 (29.3)
Hope to accomplish	
Mainly to manipulate others (secondary gain)	19 (19.2)
Temporary rest	25 (25.3)
Death	40 (40.4)
Other e.g accidental	15 (15.2)
Chances of dying	
Death was unlikely or did not think about it	49 (49.5)
Thought that death was possible but not probable	26 (26.3)
Thought that death was probable and certain	20 (20.2)
Others	4 (4.0)
Relationship with alcohol/substance	
None/some previous ingestion,but without relation to the suicide attempt	89 (89.9)
Sufficient for the deterioration of judicious capacity and responsibility	8 (8.1)
Intentional intake to facilitate and implement the suicide attempt	2 (2.0)

Table IV: Previous suicide attempt history ,family data, history of traumatic event and psychiatric diagnosis

	N (%)
Previous suicide attempt	
Yes	30 (30.3)
No	69 (69.7)
Suicide of closest people	
Yes	5 (5.1)
No	94 (94.9)
Suicide in family	
Yes	6 (6.1)
No	93 (93.9)
Traumatic events:	
Threatened with abuse	6 (6.1)
Emotionally abused	11 (11.1)
Beaten so badly that required medical help	2 (2.0)
Sexual harassment/rape	4 (4.0)
Victim of disaster,accident,war	1 (1.0)
Physically tortured	3 (3.0)
Emotionally or psychologically tortured	10 (10.1)
Diagnosis	
Affective and Other Stress Disorders	
Acute stress reaction	43 (43.4)
Major Depressive disorder	25 (25.3)
Adjustment disorder	10 (10.1)
Psychotic Disorders	
Schizophreniform	14 (14.1)
Brief psychotic disorder/schizophreniform	1 (1.0)
Drug induced psychosis	3 (3.0)
Organic psychosis	1 (1.0)
Others	2 (2.0)

(n=69; 69.7%), no history of suicide among closest people (n=94; 94.9%) and no history of suicide in family (n=93; 93.9%). The most common traumatic events reported was emotionally abused (n=11; 11.1%) and emotionally/psychologically tortured (n=10; 10.1%).

Presence of physical illness, past psychiatric history, feeling of hopelessness and substance abuse.

Figure 1 shows that only 82 % among patient with self-harm had presence of physical illness and only 23% among patient with self-harm had presence of psychiatric illness. Table IV shows that the most common diagnosis among patient with self-harm is Acute stress reaction (n=43; 43.4%), followed by Major Depressive disorder (n=25; 25.3%) and adjustment disorder (n=10; 10.1%).

Figure 1 shows that majority of patients do not have feeling of hopelessness (n=69; 70%) and majority of

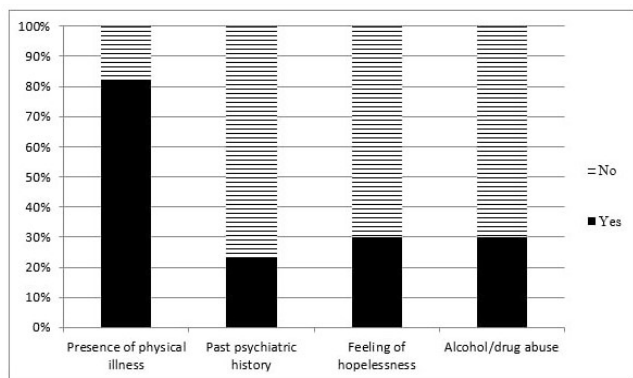


Figure 1: Distribution of patients. Histogram depicting the distribution of patients according to the presence of physical illness, past psychiatric history, feeling of hopelessness and substance abuse.

patients do not have history of alcohol or drug abuse (n=69; 70%).

Social support and legal or offending history/antisocial behaviour

Only 35 % of patients perceived to have good social support from family (n=35; 35%). Many patients with self-harm do not have any history of convictions (n=92; 92.9%) or history of being jailed (n=95; 96%).

Bivariate analysis

Non-Malay patients are more likely to poison themselves with chemical or drugs (85.1%) as compared to Malay patients. Malay patients showed an inclination towards non-poisoning method of self-harm (37.1%). These include self-hanging, using sharp objects and jumping from heights. Patients who have an established psychiatric illness are more likely to use non-poisoning method (47.2%) as opposed to patients with no established psychiatric illness. Patients with no psychiatric illness have a propensity towards chemical or drug poisoning (85.5%). Patients who have history of alcohol or other drug abuse are more inclined to commit self-harm using non-poisoning method (40.0%) compared to those who have no history of alcohol or drug abuse (85.5%). Patients who perceived themselves as not religious are more likely to commit chemical or drug poisoning (92.3%) as compared to those who perceived themselves as religious. 31.7% of patients who perceived themselves as religious are more likely to use non-poisoning methods. These findings were statistically significant using Pearson’s chi square test with Yates correction (Table V). Other sociodemographic variables and risk factors such as feeling of hopelessness, previous attempts of self-harm, presence of external stressors, having social support and physical illness were not statistically significant.

Multivariate analysis

Multiple logistic regression analysis was used to predict the factors associated with non-poisoning method of self-harm among patients. It was noted that patients who perceived themselves as religious (Adjusted OR=4.183, p=0.042) and had established psychiatric illness (Adjusted OR=4.324, p=0.015) have higher risk to use non-poisoning methods to self-harm (Table VI).

DISCUSSION

Self-harm is a significant predictor of suicide, and it has been associated with significant psychological morbidity (1-2, 12). The objective of this study is to determine the profiles of deliberate self-harmers in terms of sociodemographic, methods and its associated factors. This is an investigator-initiated research whereby 4 hospitals were selected for this study with Hospital Sultan Haji Ahmad Shah (HOSHAS) being the principal investigator’s site. Hospital Tuanku Jaafar was selected to represent the urban population while

Table V: The relationship between risk factors and types of self-harm (N=99)

Variables	Types of self-harm		p value
	Poisoning with chemicals/drugs	Non-poisoning	
Age, mean (SD)	28.22 (11.15)	33.00 (12.07)	0.110
Gender, n (%)			0.330
Male	31 (72.1)	12 (27.9)	
Female	46 (82.1)	10 (17.9)	
Ethnicity, n (%)			0.012*
Malay	22 (62.9)	13 (37.1)	
Non-Malay	55 (85.9)	9 (14.1)	
Educational level, n (%)			0.422
None/primary	20 (71.4)	8 (28.6)	
Secondary/tertiary	57 (80.3)	14 (19.7)	
Employment status, n (%)			0.153
Yes	42 (84.0)	8 (16.0)	
No	35 (71.4)	14 (28.6)	
Marital status n (%)			0.465
Married	28 (73.7)	10 (26.3)	
None/divorce/widow	49 (80.3)	12 (19.7)	
Feeling of hopelessness, n (%)			0.600
Yes	22 (73.3)	8 (26.7)	
No	55 (79.7)	14 (20.3)	
Presence of stressors, n (%)			1.000
Yes	29 (78.4)	8 (21.6)	
No	48 (77.4)	14 (22.6)	
Had previous attempt, n (%)			0.293
Yes	21 (70.0)	9 (30.0)	
No	56 (81.2)	13 (18.8)	
Perceived social support, n (%)			1.000
Yes	59 (77.6)	17 (22.4)	
No	18 (78.3)	5 (21.7)	
Self-perceived on religiosity, n (%)			0.006*
Yes	41 (68.3)	19 (31.7)	
No	36 (92.3)	3 (7.7)	
Presence of psychiatric illness, n (%)			0.003*
Yes	12 (52.2)	11 (47.8)	
No	65 (85.5)	11 (14.5)	
Presence of physical illness or disability, n (%)			0.756
Yes	15 (83.3)	3 (16.7)	
No	62 (76.5)	19 (23.5)	
History of alcohol/drug abuse, n (%)			0.008*
Yes	18 (60.0)	12 (40.0)	
No	59 (85.5)	10 (14.5)	

*p < 0.05 using Chi-square test with Yates correction

Table VI: Associated factors of non-poisoning self-harm by univariable and multiple logistic regression model

Variable	Simple Logistic Regression			Multiple Logistic Regression		
	b	Crude OR (95%CI)	p	b	Adjusted OR (95% CI)	p
Self-perceived religiosity						
Yes	1.716	5.561(1.520-20.350)	0.042	1.483	4.183 (1.055-16.588)	0.042
No						
Psychiatric illness						
Yes	1.689	5.417 (1.918-15.296)	0.001	1.464	4.324 (1.337-13.9)	0.015
No						

^a Backward LR Multiple Logistic Regression Model was applied. Multicollinearity and interaction term were checked and not found. Hosmer-Lemeshow test, (p= 0.577), classification table (overall correctly classified percentage=81.8%) and area under the ROC curve (82.1) were applied to check the model fitness

Hospital Sultan haji Ahmad Shah would represent the sub-urban population. Hospital Bukit Mertajam was selected as Pulau Pinang is one of the states with the highest rate of suicide according to the National suicide Registry Malaysia, published in 2007 while Hospital Raja Perempuan Zainab II, Kota Bharu was selected being a predominantly Muslim state. It was found in several studies that religion is a protective factor for suicide/self-harm.

From socio-demographic aspects, majority were Indian, although the study was also conducted in predominantly Malay state like Kelantan. This is similar with studies done by Nor Zuraida Z (16), Hamidin et al (15) and Moris et al (17). Most were single while correlates with multiple studies done in Malaysia by Nor Zuraida Z (16), Salleh A et al (18). It was not surprising that most of them were females as this reflects the pattern of self-harm worldwide. It was also found that they were full-time employed, but majority earned less than RM 500. This means that though they are working, they are of low socio-economic status. Study by Ainsah et al (19) also found that majority of patients were employed with 78%, however the income of those employed was not stated. The mean age of our study subjects were 29.3 years with age range from 12 to 79 years old. Other studies done in Malaysia showed a younger mean age as demonstrated by a study by Zyoud et al in Northern region of Malaysia showed a mean age of 23.4 (20) while a study by Nor Zuraida Z showed mean age of 28 years old with age range of 14-65 (16). The mean age in our study was a bit older because of the wide age range in our population as the youngest was 12 and oldest was 79 years old. From studies, most people who self-injure are teenagers and young adults, although those in other age groups also self-injure. Self-injury often starts in the early teen years, when emotions are more volatile, and teens face increasing peer pressure, loneliness, and conflicts with parents or other authority figures. Most of them were staying with parents. This finding showed that parents may no longer plays a supportive role. This is quite alarming.

Most self-harm occurs in the evening (35%) and the commonest method was poisoning followed by using sharp objects. Among poisoning, pesticide was highest followed by antipyretics and analgesics. Majority had no danger to life as a physical consequence of the act.

71% was transferred from the Emergency Department to intensive care unit or respective clinical wards. Only 29% was transferred directly to the psychiatric wards. In relation to suicidal intention during the episode of self-harm. It was found that most have low suicidal intent. This was because majority of patients has somebody nearby during the act, did not take any precaution or prepare a plan and has no documentation of intent during the act of self-harm. Only 29.3 % (n=29) had the intention to die during the act. 19.2% admitted that the intention was mainly to manipulate others. Almost half of them (n=49; 49.5%) thought that death was unlikely or did not think about it. Majority (89%) did not ingest substance prior to the act. This shows that most act were impulsive and therefore preventable. Focus should be given in enhancing coping skills and problem-solving strategies.

Risk factors of self-harm/ suicide that have been established in many studies worldwide include history of suicidal attempt, presence of physical or psychiatric illness, having family history of suicide or closest people who attempted suicide, traumatic life events, substance abuse, feeling of hopelessness, poor social support and anti-social behaviour (7, 21- 23). Another rare risk factor of self-harm is the role of depression in the manifestation of a homicide-attempted suicide (24).

In our study, it was found that only 30.3% had previous history of suicidal attempt while only 18% among patient with self-harm had presence of physical illness. 23% among patient with self-harm had presence of psychiatric illness. Self harm is commonly associated with certain mental disorders, such as borderline personality disorder, depression, anxiety disorders, post-traumatic stress disorder and eating disorders. The most common psychiatric diagnosis among patients with self-harm in our study were Acute stress reaction (n=43; 43.4%), followed by Major Depressive disorder (n=25; 25.3%) and adjustment disorder (n=10; 10.1%). This shows that most self-harm are related to mood disorders rather than psychotic disorders.

Only 6.1% had family history of suicide, this suggest that environmental issues are an important contributing factor for self-harm as only a small percentage had family history of suicide. Majority had no history of suicide among closest people (n=94; 94.9%). This is important to note because ppeople who have friends who intentionally harm themselves are more likely to begin self-injuring. The most common traumatic events reported was emotionally abused (n=11; 11.1%) and emotionally/psychologically tortured (n=10; 10.1%).

Majority of patients do not have feeling of hopelessness (n=69; 70%). It is essential to elicit feelings of hopelessness among patients with self-harm. This is because numerous studies have shown that feelings of hopelessness in conjunction with a mental disorder can lead to suicide (25). In many studies, significantly

more suicides occurred in the group of individuals who exhibited the highest levels of hopelessness. Thus, anyone expressing feelings of hopelessness who may be suffering from depression or a similar disorder needs to be evaluated as soon as possible.

Only 35% of patients perceived to have good social support from family (n=35; 35%). According to a study done in Taiwan in relation to social support by Chia-Yi Wu et al, more limited social networks were associated with self-harm (26). Enhancing social structure and effective networking of people with self-harm may be important for self-harm management in Asian societies and elsewhere.

Majority of patients with self-harm do not have any history of conviction (n=92; 92.9%) or history of being jailed (n=95; 96%). People who self-injure are more likely to be impulsive, explosive and highly self-critical, and be poor problem-solvers and was associated with some personality disorders such as Borderline and antisocial personality disorders. Those with anti-social personality disorders often end up with legal problems. Thus, in our study, we could assume that the number is very small as less than 10% had history of conviction or jailed.

Bivariate analysis showed differences in the demography and characteristics of patients in determining the methods of self-harm used. Malay patients are more inclined to use non-poisoning methods in self-harm as opposed to non-Malays who used chemical or drug poisoning. This an interesting finding as these non-poisoning methods are often violent and high risk in nature. Patients who have an established psychiatric diagnosis, those with history of drug and alcohol misuse and people who perceived themselves as religious all favoured non-poisoning self-harm methods. This association is further supported by multiple regression analysis. Patients who perceived themselves as religious (Adjusted OR=4.183, p=0.042) and those with an established psychiatric illness (Adjusted OR=4.324, p=0.015) have higher risk to commit self-harm by non-poisoning. These associations could be used as a predictor in determining future risk in patients.

CONCLUSION

In conclusion, sociodemographic factors may play a significant role in self-harm (27). It is important to know the sociodemographic profile to identify which group of people are at risk and intervention can be focused. In addition, the presence of previous sexual abuse and comorbid substance misuse play a significant role in assessing the risk of self-harm (28). Findings showed that parents may no longer play a supportive role and environmental issues are important (only 6.1% with family history). Most acts were unplanned, therefore preventable. Majority do not have any physical illness,

psychiatric illness or personality disorders. The fact that pesticide poisoning and using sharp objects were among the commonest method showed that majority chose lethal way of self-harm. Thus, immediate action is necessary. Majority of patients did not take any precaution or prepare a plan and has no documentation of intent during the act of self-harm. This shows that most act were impulsive and therefore preventable.

Patients' characteristics may also play crucial roles in predicting the most likely methods used. People who perceived themselves as religious and those with prior psychiatric history are at an increased risk of self-harming using other methods other than poisoning. The exact nature of these associations should be researched further, and preventative measures should be drawn up to prevent future incidents in these at-risk groups. Preventive measures should focus on family role (parenting skills), coping skills and spiritual empowerment since majority lives with families and most act were unplanned/impulsive. Strict regulations needed for purchasing of pesticide. Those with significant suicide intent should be further evaluated, closely monitored and given regular follow-up to prevent suicide.

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