J Psychiatry Psychiatric Disord 2022; 6 (2): 047-060 *DOI: 10.26502/jppd.2572-519X0153*

Research Article

Suicidal Ideation, Suicide Attempt and Associated Factors in Thai Patients with Acutely Treated Depressive Disorder

Mayteewat Chiddaycha, Peeraphon Lueboonthavatchai*

Department of Psychiatry, Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand

***Corresponding Author:** Peeraphon Lueboonthavatchai, Department of Psychiatry, Faculty of Medicine, Chulalongkorn University, 1873 Rama 4 Road, Pathumwan, Bangkok 10330, Thailand

Received: 27 February 2022; **Accepted:** 07 March 2022; **Published:** 15 March 2022

Citation: Mayteewat Chiddaycha, Peeraphon Lueboonthavatchai. Suicidal Ideation, Suicide Attempt and Associated Factors in Thai Patients with Acutely Treated Depressive Disorder. Journal of Psychiatry and Psychiatric Disorders 6 (2022): 047-060.

Abstract

Background: The suicide rate in Thailand has increased over the last ten years. Most of the people who died from suicide were depressed, and social problems were thought to be an important crisis for them.

Aim: The aim of this study was to examine the prevalence of suicidal ideation, suicide attempt and associated sociodemographic, clinical, and social factors in Thai patients with acutely treated depressive disorders.

Methods: A sample of 178 patients with depressive disorders who were treated within the six-month period of being diagnosed or of a recurrent episode were recruited from a tertiary hospital. Multinomial logistic regression was used to determine the associated factors of suicidal ideation and suicide attempt.

Results: Most of the subjects were single (80.9%), female (68%), and in early adulthood. The prevalence of suicidality, suicidal ideation, and suicide attempt within one month were 76.4%, 62.4% and 35.4%, respectively. Associated factors of suicidal ideation compared with those with absence of suicidality were unemployment (OR 4.30; 95% CI 1.16 – 15.92) and family relationship (OR 0.93; 95%CI 0.86 – 0.99). Compared with the suicidal ideators, the suicide

attempters were more likely to have more severe depression (OR 1.07; 95%CI 1.02 – 1.12), use benzodiazepines (OR 2.71; 95%CI 1.05 – 7.03) and have interpersonal deficits (OR 3.85; 95%CI 1.03 – 14.45).

Conclusions: Determinants of suicidal ideation and suicide attempt varies among population. Knowledge of these associated factors may raise awareness of suicide prevention during the early phase of treatment of depression in Thai patients.

Keywords: Demographic factor; Depressive disorder; Family relations; Interpersonal relations; Suicide; Suicidal ideation; Suicide attempt

Abbreviations

BDI-II; Beck Depression Inventory II; SSRIs; Selective serotonin reuptake inhibitors; SNRIs, serotonin-norepinephrine reuptake inhibitors

1. Introduction

Suicide is considered a problem not only for individuals but also for family, society, and public health. According to a report from the World Health Organization (WHO) [1], there were an estimated 7.39 hundred thousand suicide deaths worldwide in 2016. In Thailand, the completed suicide rate in 2015 was 6.47 per a hundred thousand, and there has also been an increase in this trend over the last ten years [2]. Persons who have a risk of suicide generally have genetic vulnerability, diagnosed mental illness, social isolation, and impulsiveness [3]. Psychosocial stressors are also found to be associated with suicide, for example, perceived social support, life stress events and poor family communication [4, 5].

Among psychiatric disorders, depressive disorder has received a lot of attention because of its long-term disability. WHO reports that depression is the leading cause of disability and by the year 2030, unipolar depressive disorder is projected to reach first place in the ranking of Disability-Adjusted Life Years (DALYs) [6]. Past studies have shown various levels of prevalence of suicidality in patients with depressive disorders, ranging from 32% to 62% [7-9] depending on the various sites and samples' characteristics. Reports from psychological autopsies demonstrate that more than half of suicidal individuals have depression [10] and indicate that 44% of completed suicides are individuals who underwent psychiatric or psychosomatic treatment within a month prior to suicide [11]. This reminds health care professionals to be aware of patients' suicide risk, even during treatment. The median duration of the depressive episodes found in the previous research ranged from one month to six months [12-14]. This could be an essential period when there is a need to be focused on assessing suicide risk and to provide intensive intervention to prevent suicidal behaviors. There is limited data regarding the suicidality of patients with depressive disorders who are currently in acute treatment. Past studies included depressed patients in various phases of treatment, such as remission and recovery, which may affect their suicidality rate.

Past studies have tried to identify factors that would distinguish the groups of people with suicidal ideation and those with suicide attempt. Younger age, female sex, unemployment, severe depression, alcohol use disorder, borderline personality disorder, childhood trauma and recent stressful life events were found to be associated with suicide attempt among suicidal ideators [15-18]. In Thailand, these factors have not

been investigated and they might be different from other countries' regarding divergent sociocultural context. The aim of this study was to examine the prevalence of suicidal ideation, suicide attempt and the associated demographic, clinical and social factors in Thai patients with acutely treated depressive disorders, which may help us to better understand the situation of suicide in this population and to improve the quality of care, which may lead to more effective suicide prevention for patients.

2. Methods

2.1 Study design and setting

This cross-sectional descriptive study was carried out from November 2017 to April 2018. All of 178 participants were recruited from the in- and outpatient psychiatric clinic of King Chulalongkorn Memorial Hospital, a tertiary hospital in Bangkok, Thailand. This study was approved by the Ethics Committee, the Institutional Review Board of the Faculty of Medicine, Chulalongkorn University.

2.2 Participants

Regarding the median duration of the depressive episodes found in the previous research [12-14], patients who were treated within the initial six-month period were classed as 'acutely treated'. The inclusion criteria were 1) age 18 years and older, 2) was diagnosed with a "major depressive disorder" (MDD) or "persistent depressive disorder" (using the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition) and 3) was treated within the six-month period of being diagnosed or of a recurrent episode. The patients were excluded from the study if they were diagnosed as having a "bipolar disorder" or "dementia". Psychotic disorders including schizophrenia, schizoaffective disorder and delusional disorder were also excluded.

2.3 Sample size and sampling

With the suicidality rate from the previous study of 62% [9], a level of precision taken as 7.5% and the 10% allowance for non-response, the calculated sample size was 178. All consecutive patients who met the study criteria were asked to participate in the study until the sample size was met.

2.4 Assessment

After the patients were informed of the objectives and methods of the study, they were asked to complete the demographic questionnaire. The clinical and treatment history in patients' medical records were reviewed. Their suicidality was assessed using semi-structured interviews according to the suicidality module of the Mini International Neuropsychiatric Interview (MINI) Thai version which had good inter-rater reliability (Cohen's kappa = 0.86) ,good sensitivity (0.96) and specificity (0.91) compared with a psychiatrist's interview [19].

The suicidal ideation, suicidal plans, attempted suicide during the past month and any past suicide attempts were asked about. The total scores categorized patients' current suicide risks into absent (0), low (1-8), moderate (9-16) and high risk (17 or higher). Patients' suicidality was presented when the score was higher than zero. The presence of any levels of suicide risk were reported to the doctors, and thus the appropriate interventions were given to the patients. Finally, depressive severity and social factors were evaluated by self-report questionnaires as follows.

1) The Beck Depression Inventory-II (BDI-II) Thai version, a widely used questionnaire for assessment of the severity of depression, was developed from its original version in English [20] and consists of 21 questions with a total score of 63. The severities of depression were categorized into minimal (0-13), mild (14-19), moderate (20-28) and severe depression (29-63). The test showed good internal consistency (Cronbach's alpha coefficient, α = 0.91) and the Spearman's correlation coefficient, which indicated the relationship between the score obtained from this BDI-II and the Hamilton Rating Scale for Depression, was 0.71.

2) The Thai Interpersonal Questionnaire [21] was developed from the interpersonal psychotherapy manual [22] to assess four interpersonal problem areas (grief or complicated bereavement, interpersonal role disputes, role transitions, and interpersonal deficits). The questionnaire showed good internal consistency in each subscale (α = 0.79-0.96). High scores indicate presents of interpersonal problems.

3) The Social Support Questionnaire [23] was developed from Schaefer's concept of social support [24]. This 16-item instrument examines three subscales of social supports: emotional, informational, and tangible or material support. High scores indicate good social supports. The questionnaire had good internal consistency in each subscale (α = 0.87-0.91).

4) The Family Relationship and Functioning Questionnaire was developed by Lueboonthavatchai [23] and has been tested for validity and reliability (α = 0.93). The questionnaire consists of seven questions, and a higher total score indicates good family relationships and functioning.

2.5 Statistical analysis

The data were analyzed using STATA 16 (John Wiley & Sons, Inc.). The prevalence of suicidality, including suicidal ideation and suicide attempt was presented in proportion and percentage. Three groups of depressed patients, 1) with absence of suicidality, 2) with suicidal ideation, and 3) with suicide attempt were compared on various factors by chi-square test, Fisher's exact test, ANOVA or Kruskal-Wallis test as appropriate. Significant factors from the univariate analysis were entered into a multinomial logistic regression model for identifying the potential predictors of suicidal ideation and suicide attempt. A p-value of less than 0.05 was considered statistically significant.

3. Results

3.1 Characteristics of participants

There were 178 participants, aged 18 - 63 years in the study. From the total, 77 of them (43.3%) were in the age range of 21 - 30 years. Most of the patients were female (68%), single (80.9%), Buddhist (83.7%), had at least bachelor's degree (61.2%) and were unemployed (60.7%). The most common occupations were employee (20.8%), personal business (11.2) and government official (6.2%). A percentage of 53.9% of the participants had at least one medical illness, of which the three most common were allergy (31.5%), gastrointestinal disease (12.9%) and migraine (7.3%), respectively. Some of them (35.6%) had a history of substance use within one year, of which alcohol (33.1%) and smoking (13.5%) were the most common. In terms of clinical characteristics, the

majority of the patients were in the outpatient clinic (92.7%), diagnosed with a major depressive disorder (86.5%) or with severe depression (50.6%). The median number of medications they received was two (ranging from one to four), and most of them receive antidepressants (98.9%) and benzodiazepines (68.0%) (Table 1). The mean and median scores from each questionnaire for the assessment of social factors are shown in Table 1.

Demographic, clinical, and social characteristics	**n or mean or median**	**% or ±SD or IQR**
Sex		
Female	121	68.0
Male	57	32.0
Age (years) (min 18, max 63)	24	21 ,35
Marital status		
Single	144	80.9
Married	30	16.9
Widowed or divorced	4	2.2
Religion		
Buddhism	149	83.7
Islam	6	3.4
Christianity	4	2.2
No religion	19	10.7
Occupations		
Student	80	44.9
Employed	70	39.3
Unemployed	28	15.7
Education		
Primary school	10	5.6
High school	59	33.2
Bachelor and higher	109	61.2
Medical comorbidity	96	53.9
Allergic rhinitis	56	31.5
Gastrointestinal disease	22	12.4
Migraine	13	7.3
Musculoskeletal disease	10	5.6
Respiratory disease	10	5.6
Dyslipidemia	8	4.5
Hypertension	8	4.5
Diabetes mellitus	4	2.3
History of substance use within one year	64	35.6
Alcohol	59	33.2
Smoking	24	13.5
Illicit substances	11	6.2
Family history of suicide	24	13.5
Setting of treatment		

Outpatient	165	92.7
Inpatient	13	7.3
Diagnosis		
Major depressive disorder	154	86.5
First episode	126	70.8
Recurrent episode	28	15.7
Persistent depressive disorder (dysthymia)	17	9.6
Double depression	7	3.9
Depressive severity (BDI-II) (min 1, max 53)	29	17, 37
Minimal depression	9	5.1
Mild depression	22	12.4
Moderate depression	57	32.0
Severe depression	90	50.6
BDI-II not include suicidality (min 1, max 52)	26	16, 35
Received psychotropic medication		
Antidepressants (e.g., SSRIs, SNRIs)	176	98.9
Benzodiazepines	121	68.0
Antipsychotics	31	17.4
Anticonvulsants	7	3.9
Others	6	3.4
Duration of treatment (months)		
< 1	44	24.7
1 - 2	47	26.4
> 2 - 6	87	48.9
Median (weeks)	8	4, 20
Interpersonal problem areas		
Grief or complicated bereavement (0-12)	6	0, 9
Interpersonal role disputes (0-15)	9	5, 10
Role transitions (0-9)	3	0, 6
Interpersonal deficits (0-12)	6	3, 7
Social support		
Overall (16-80)	53.4	± 11.4
Emotional (7-35)	24.1	± 5.6
Informational (4-20)	12.5	± 3.7
Tangible or material (5-25)	16.8	± 4.6
Family relationships and functioning (5-35)	22.8	± 6.7

Table 1: Demographic data, clinical characteristics, and social factors of participants.

3.2 Prevalence of suicidality

The prevalence of suicidal ideation, suicide attempt within one month and lifetime suicide attempt were 62.4%, 35.4% and 41.0%, respectively. Suicidality was presented in the majority of the patients (76.4%), and 83 patients (46.6%) were classed as having high suicide risk (Table 2).

Suicidality in the past month	n	%
Thought of death	115	64.6
Suicidal ideation	111	62.4
Suicidal plan	52	29.2
Non-suicidal self-injury	59	33.1
Suicide attempt	63	35.4
Lifetime suicide attempt	73	41.0
Current suicide risk		
Absent risk	42	23.6
Low risk	32	18.0
Moderate risk	21	11.8
High risk	83	46.6

Table 2 : Suicidality.

3.3 Demographic, clinical, and social factors associated with suicidal ideation and suicide attempt in the univariate analysis

The associated demographic and clinical factors of suicidality were age ($p < 0.01$), marital status ($p < 0.05$), occupation ($p < 0.05$), severity of depression ($p < 0.01$), and receiving benzodiazepines ($p < 0.01$). Regarding the social factors, it was found that interpersonal role disputes ($p < 0.01$), interpersonal deficits ($p < 0.01$), overall social supports ($p < 0.01$), emotional social support ($p < 0.01$), informational social support ($p < 0.05$), and family relationships and functioning ($p < 0.01$) were associated with suicidal ideation and suicide attempt in the univariate analysis. (Table 3).

Factors	Absence of suicidality (n= 67)		Suicidal ideation (n= 48)		Suicide attempt (n= 63)		p-value
	n or mean or median	% or ±SD or IQR	n or mean or median	% or ±SD or IQR	n or mean or median	% or ±SD or IQR	
Age	29	23,45	22.5	20,27.5	22	20,32	<0.001*
Male Sex	24	35.8	15	31.3	18	28.6	0.670
Single / divorced /widowed	50	74.6	44	91.7	54	85.7	0.046*
Religion							0.176
Buddhism	60	89.55	37	77.08	52	82.54	
Others	4	5.97	2	4.17	4	6.35	
No religion	3	4.48	9	18.75	7	11.11	
Occupation							0.011*
Student	10	14.9	10	20.8	8	12.7	
Employed	36	53.7	11	22.9	23	36.5	

Unemployed	21	31.4	27	56.3	32	50.8	
Education							0.083
Primary school	8	11.9	19	2.1	1	1.6	
High school	19	28.4	15	31.2	25	39.7	
Bachelor	40	59.7	32	66.7	37	58.7	
Family history of suicide	6	9.0	8	16.7	10	15.9	0.355
Medical comorbidity	40	59.7	22	45.8	34	54.0	0.339
Substance use	19	28.4	17	35.4	28	44.4	0.161
Alcohol	17	25.4	17	35.4	25	39.7	0.207
Smoking	8	11.9	5	10.4	11	17.5	0.572
Recurrent episode	9	13.4	8	16.7	11	17.5	0.802
BDI-II not include suicidality	18	7,27	28	19.5,36	34	28,40	<0.001*
Medications							
Antidepressants	66	98.5	48	100.0	62	98.4	1.000
Benzodiazepines	39	58.2	30	62.5	52	82.5	0.006*
Antipsychotics	8	11.9	6	12.5	17	27.0	0.060
Interpersonal problems							
Grief or complicated bereavement	6	0,9	6	0,9	7	0,8	0.995
Interpersonal role disputes	7	0,10	9	7,11	9	8,11	0.003*
Role transitions	0	0,5	4	0,6	5	0,7	0.070
Interpersonal deficits	4	1,6	6	4,8	6	4,8	<0.001*
Social support							
Overall	57.0	±11.1	51.4	±11.6	50.9	±10.6	0.004*
Emotional	25.9	±5.3	22.9	±5.7	23.1	±5.4	0.002*
Informational	13.5	±3.7	11.9	±3.8	11.9	±3.5	0.026*
Tangible or material	17.7	±4.8	16.6	±4.7	15.9	±4.1	0.065
Family relationships and functioning	25.5	±6.5	21.1	±6.2	21.2	±6.3	<0.001*

Note: * p<0.05 **Abbreviations:** BDI-II, Beck Depression Inventory II

Table 3: Factors associated with suicidal ideation and suicide attempt.

3.4 Multivariable analysis

After performing the univariate analysis, statistically significant factors ($p < 0.05$) were entered into the multinomial logistic regression analysis. Compared with patients without suicidality, those with suicidal ideation tended to be unemployed (OR 4.30; 95% CI 1.16 – 15.92) and have poor family relationship and functioning (OR 0.93; 95% CI 0.86 – 0.99). (Table 4).

Patients with suicide attempt were found to have more severity of depressive symptoms (OR 1.07; 95%CI 1.02 – 1.12), receive benzodiazepines (OR 2.71; 95% CI 1.05 – 7.03), and have interpersonal deficits (OR 3.85; 95% CI 1.03 – 14.45) compared with those who have suicidal ideation without suicide attempt. (Table 5).

Factors	Absence of suicidality† vs Suicidal ideators			
	Adjusted OR	95% CI		p-value
		lower	upper	
Male sex	0.72	0.28	1.89	0.506
Age	0.96	0.90	1.01	0.113
Single / divorced / widowed	2.04	0.46	9.09	0.350
Employed (base)	1.00	-	-	-
Unemployed	4.30	1.16	15.92	0.029*
Student	0.45	0.10	2.03	0.300
BDI-II scores, not include suicidality	1.04	0.99	1.08	0.094
Benzodiazepines use	1.62	0.63	4.17	0.313
Social support	0.97	0.93	1.02	0.225
Family relationships and functioning	0.93	0.86	0.99	0.045*
Interpersonal role disputes	1.37	0.36	5.16	0.644
Interpersonal deficits	1.10	0.31	3.89	0.878

Note: *p < 0.05, † reference group **Abbreviations:** OR, odds ratio; BDI-II, Beck Depression Inventory II

Table 4: Multinomial logistic regression analysis between the absent suicidality group and the suicide ideation group.

Factors	Suicidal ideators† vs Suicide attempters			
	Adjusted ORs	95% CI		p-value
		lower	upper	
Male sex	1.11	0.44	2.79	0.827
Age	0.98	0.92	1.04	0.414
Single / divorced / widowed	0.46	0.10	2.09	0.313
Employed (base)	1.00	-	-	-
Unemployed	0.30	0.08	1.06	0.062
Student	1.50	0.38	5.97	0.566
BDI-II scores, not include suicidality	1.07	1.02	1.12	0.005*
Benzodiazepines use	2.71	1.05	7.03	0.040*
Social support	1.00	0.96	1.04	0.956
Family relationships and functioning	1.02	0.95	1.09	0.550
Interpersonal role disputes	1.21	0.29	5.09	0.798
Interpersonal deficits	3.85	1.03	14.45	0.046*

Note: *p < 0.05, † reference group **Abbreviations:** OR, odds ratio; BDI-II, Beck Depression Inventory II

Table 5: Multinomial logistic regression analysis between the suicide ideation group and the suicide attempt group.

4. Discussion

Based on the demographic data, most of the patients in this study were single, female, in early adulthood, educated, Buddhist, and unemployed. With regard to the clinical characteristics, most of the patients were diagnosed as having first episode MDD with severe depression, had a median treatment duration of eight weeks, and received a number of medications. A total of 76.4% of the participants in this study were shown to present suicidality, which is higher than past reports in Thailand and other countries. One study found a 62.3% rate of suicidality [9], whereas another one found only 32.1% of suicidality [7] in Thai MDD patients. A study in Europe [8] found only 46.67% of suicidality in MDD patients. Prevalence of suicidal ideation (62.4%) and suicide attempt within a month (35.4%) that were found were higher than past studies in Asia. Rates of suicidal ideation reported in China [25, 26] and Singapore [27] ranged from 49 - 55% among MDD patients and a recent meta-analysis showed a 24% one-month prevalence of Chinese MDD patients having suicide attempts [28]. The variation of the prevalence may be influenced by the different tools using to evaluate suicidality. The variety of inclusion criteria is another important factor.

Earlier mentioned studies recruited patients in various phases of illness including active, remission and recovery leading to less severe symptoms of depression, which was probably the reason for having lower rates of suicidality. This study included patients who were treated within the six-month period of being diagnosed or of a recurrent episode, which was considered as an active episode of depression [12-14]. For this reason, patients were currently suffering from an active illness, which may have led to a higher severity of depression and resulted in the higher suicidality rate.

Regarding the sociodemographic data, unemployment was found to be a significant factor associated with suicidal ideation in the current study as well as previous studies. [29] Not only employment status, but also employment protection legislation and economic recession period have been reported to be associated with suicide [30, 31]. Therefore, government support for employment and financial assistance should be an important part of helping to reduce suicide especially during the economic crisis.

Higher severity of depression was a potential predictor of suicide attempt among suicidal ideators in this current study. Consistent findings were reported in previous studies. [15, 16], One study, conducted in India, showed increased agitation and paranoid symptoms among attempters whereas hypochondriasis and general somatic symptoms were more often present in non-attempters [32]. Depressive symptoms which can distinguish between suicidal ideators and suicide attempters should be further investigated and might be beneficial in clinical practice.

The interesting finding in terms of the associated clinical characteristics was that of benzodiazepines use which was more prevalent in patients with suicide attempt compared with those with suicidal ideation. Benzodiazepine use may be the consequence of severe depression because benzodiazepines are anxiolytics that are prescribed for relief of several symptoms, including insomnia. Recent studies

reported that somatic symptoms such as insomnia are associated with suicide [33, 34]. In addition, receiving benzodiazepines may be associated with increased aggression [35] and may result in disinhibition [36], which may be the factors that contribute to suicidal behavior. While several observational studies found association between benzodiazepines use and suicidal behavior, some did not [37]. Since the causality of benzodiazepines and suicidal behavior has not been clearly understood, suicide risk in patients who were prescribed benzodiazepines should be adequately monitored.

Regarding the remarkable social factors, poor family relationships and functioning were associated with suicidal ideation. This shows that family issues are the social problems that need to be focused on. In a previous study, poor family communication was associated with a history of suicide attempts in depressive disorder patients [5]. Consistent data was found in research on adolescents, in which perceptions of family functioning were associated with suicidal ideation and suicide attempts [38].

Moreover, Interpersonal deficits, such as lack of social skills, loneliness, or paucity of attachments which had been previously proved to be associated with depression [39], was found to be the important issue for the suicidal attempters in this study. According to the Interpersonal Theory of Suicide proposed by Joiner [40], thwarted belongingness is one of the determinants leading to suicidal behaviors. The results of our study emphasized the importance of social connectedness and suicide. Therefore, the problems of interpersonal relationships, for example, an argument with their family members, close friends, colleagues, partners, or feeling detached from others should be appropriately intervened.

According to the results of the present study, suicidality is common among depressive disorder patients, especially in the initial six-month period of treatment. Depressive severity and various factors including family and interpersonal problems should be assessed, particularly in early adulthood patients, when these issues are crucial. Adequate treatment of depression should be prompt, and early intervention in family and interpersonal problems may be helpful in reducing the risk of suicide.

There were several limitations in this study. First, due to the descriptive design, the associations identified did not indicate a causal relationship. Second, the samples were collected from only one hospital in Thailand, which may result in the findings not being representative of all depressive disorder patients. The influence of different sociocultural characteristics should also be considered. Lastly, other factors that may affect suicidality, such as psychiatric comorbidity and personality disorders, were not evaluated. Further investigation should be conducted in order to determine when the suicidality may decrease during the course of treatment and what types of interventions that will help to reduce the suicidality can be applied.

5. Conclusions

The prevalence of suicidality in patients in the first six-month period of treatment for depressive disorders was 76.4%. Unemployment and poor family relationship were associated with suicidal ideation. Among those with suicidal ideation, higher severity of

depression, interpersonal deficits and benzodiazepines use were found to be associated with suicide attempt. Adequate treatment of depression, monitoring suicide risk, assessment of family and interpersonal problems in conjunction with proper psychosocial interventions are recommended to prevent suicidal behaviors in patients with depressive disorder.

Declaration of Conflicting Interests

The authors declare that there is no conflict of interest.

Funding

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

References

1. Global Health Observatory (GHO) data, suicide rates [Internet]. World Health Organization (2018).
2. Rate of suicide per one thousand population in 2015 (updated 2016-10-21) [Internet] (2017).
3. Turecki G, Brent DA, Gunnell D, et al. Suicide and suicide risk. Nat Rev Dis Primers 5 (2019): 74.
4. Park S, Hatim Sulaiman A, Srisurapanont M, et al. The association of suicide risk with negative life events and social support according to gender in Asian patients with major depressive disorder. Psychiatry Res 228 (2015): 277-282.
5. McDermut W, Miller IW, Solomon D, et al. Family functioning and suicidality in depressed adults. Compr Psychiatry 42 (2001): 96-104.
6. World Health O. The global burden of disease : 2004 update. Geneva: World Health Organization (2008).
7. Thaipisuttikul P, Ittasakul P, Waleeprakhon P, et al. Psychiatric comorbidities in patients with major depressive disorder. Neuropsychiatr Dis Treat 10 (2014): 2097-2103.
8. Dold M, Bartova L, Fugger G, et al. Major Depression and the Degree of Suicidality: Results of the European Group for the Study of Resistant Depression (GSRD). Int J Neuropsychopharmacol 21 (2018): 539-549.
9. Wongpakaran T, Wongpakaran N, Pinyopornpanish M, et al. Baseline characteristics of depressive disorders in Thai outpatients: findings from the Thai Study of Affective Disorders. Neuropsychiatr Dis Treat 10 (2014): 217-223.
10. Abdullah M, Khalily MT, Ahmad I, et al. Psychological autopsy review on mental health crises and suicide among youth in Pakistan. Asia Pac Psychiatry 10 (2018): e12338.
11. Kodaka M, Matsumoto T, Takai M, et al. Exploring suicide risk factors among Japanese individuals: The largest case-control psychological autopsy study in Japan. Asian Journal of Psychiatry 27 (2017): 123-126.
12. Haarasilta L, Marttunen M, Kaprio J, et al. The 12-month prevalence and characteristics of major depressive episode in a

representative nationwide sample of adolescents and young adults. Psychol Med 31 (2001): 1169-1179.

13. Ten Have M, de Graaf R, van Dorsselaer S, et al. Recurrence and chronicity of major depressive disorder and their risk indicators in a population cohort. Acta Psychiatr Scand 137 (2018): 503-515.
14. Spijker J, de Graaf R, Bijl RV, et al. Duration of major depressive episodes in the general population: results from The Netherlands Mental Health Survey and Incidence Study (NEMESIS). Br J Psychiatry 181 (2002): 208-213.
15. Aaltonen K, Näätänen P, Heikkinen M, et al. Differences and similarities of risk factors for suicidal ideation and attempts among patients with depressive or bipolar disorders. J Affect Disord 193 (2016): 318-330.
16. Lalthankimi R, Nagarajan P, Menon V, et al. Predictors of Suicidal Ideation and Attempt among Patients with Major Depressive Disorder at a Tertiary Care Hospital, Puducherry. J Neurosci Rural Pract 12 (2021): 122-128.
17. Paul E. Proximally-occurring life events and the first transition from suicidal ideation to suicide attempt in adolescents. J Affect Disord 241 (2018): 499-504.
18. Wiebenga JX, Eikelenboom M, Heering HD, et al. Suicide ideation versus suicide attempt: Examining overlapping and differential determinants in a large cohort of patients with depression and/or anxiety. Aust N Z J Psychiatry 55 (2021): 167-179.
19. Kittirattanapaiboon P, Khamwongpin M. The validity of the mini international neuropsychiatric interview (MINI)-Thai version. Journal of Mental Health Thailand 13 (2005): 125-135.
20. Beck AT, Steer RA, Brown GK. Manualfor the Beck Depression Inventory—II. San Antonio: TX: The Psychological Corporation (1996).
21. Lueboonthavatchai P, Thavichachart N, Lertmaharit S. Relationship Between Interpersonal Problem Areas and Depressive Disorders in Thai Depressed Patients: A Matched Case-control Study. J Med Assoc Thai 53 (2008): 69-80.
22. Weissman MM, Markowitz JC, Klerman GL. Comprehensive guide to interpersonal psychotherapy. New York: Basic Books (2000).
23. Lueboonthavatchai P. Prevalence and psychosocial factors of anxiety and depression in breast cancer patients. J Med Assoc Thai 90 (2007): 2164-2174.
24. Schaefer C, Coyne JC, Lazarus RS. The health-related functions of social support. J Behav Med 4 (1981): 381-406.
25. Li H, Luo X, Ke X, et al. Major depressive disorder and suicide risk among adult outpatients at several general hospitals in a Chinese Han population. PLoS One 12 (2017): e0186143.
26. Fang X, Zhang C, Wu Z, et al. The association between somatic symptoms and suicidal ideation in Chinese first-episode major depressive disorder. J Affect Disord 245 (2019): 17-21.

27. Subramaniam M, Abdin E, Seow EL, et al. Suicidal ideation, suicidal plan and suicidal attempts among those with major depressive disorder. Ann Acad Med Singapore 43 (2014): 412-421.
28. Dong M, Zeng LN, Lu L, et al. Prevalence of suicide attempt in individuals with major depressive disorder: a meta-analysis of observational surveys. Psychol Med 49 (2019): 1691-1704.
29. Platt S. Unemployment and suicidal behaviour: a review of the literature. Soc Sci Med 19 (1984): 93-115.
30. Milner A, Morrell S, LaMontagne AD. Economically inactive, unemployed and employed suicides in Australia by age and sex over a 10-year period: what was the impact of the 2007 economic recession? Int J Epidemiol 43 (2014): 1500-1507.
31. Kim C, Cho Y. Does Unstable Employment Have an Association with Suicide Rates among the Young? Int J Environ Res Public Health 14 (2017).
32. Srivastava AS, Kumar R. Suicidal ideation and attempts in patients with major depression: Sociodemographic and clinical variables. Indian J Psychiatry 47 (2005): 225-228.
33. Fang X, Zhang C, Wu Z, et al. The association between somatic symptoms and suicidal ideation in Chinese first-episode major depressive disorder. J Affect Disord 245 (2018): 17-21.
34. Lin HT, Lai CH, Perng HJ, et al. Insomnia as an independent predictor of suicide attempts: a nationwide population-based retrospective cohort study. BMC Psychiatry 18 (2018): 117.
35. Albrecht B, Staiger PK, Hall K, et al. Benzodiazepine use and aggressive behaviour: a systematic review. Aust N Z J Psychiatry 48 (2014): 1096-1114.
36. Deakin JB, Aitken MR, Dowson JH, et al. Diazepam produces disinhibitory cognitive effects in male volunteers. Psychopharmacology (Berl) 173 (2004): 88-97.
37. McCall WV, Benca RM, Rosenquist PB, et al. Hypnotic Medications and Suicide: Risk, Mechanisms, Mitigation, and the FDA. Am J Psychiatry 174 (2017): 18-25.
38. Lipschitz JM, Yen S, Weinstock LM, et al. Adolescent and caregiver perception of family functioning: Relation to suicide ideation and attempts. Psychiatry research 200 (2012): 400-403.
39. Lueboonthavatchai P, Thavichachart N. Universality of interpersonal psychotherapy (IPT) problem areas in Thai depressed patients. BMC psychiatry 10 (2010): 87.
40. Van Orden KA, Witte TK, Cukrowicz KC, et al. The interpersonal theory of suicide. Psychol Rev 117 (2010): 575-600.