Original Article

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Meaning in Life, Self-Esteem, and Self-Harm Among Adult Depressive Patients at a Thai University Hospital

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Abstract:

Objective: We aimed to study the prevalence of self-harm in the adult population with depressive disorder and its association with risk and protective factors; especially self-esteem and meaning in life.

Material and Methods: This cross-sectional study recruited 128 depressive outpatients that visited Siriraj Hospital from July to October 2021 and were willing to participate. Data was collected through self-reports via six online questionnaires; including sociodemographic data, a self-harm behavior questionnaire, the Patient Health Questionnaire-9 (PHQ-9), the Screening Instrument for Borderline Personality Disorder (SI-Bord), the Revision of Rosenberg Self-Esteem Scale (Revised RSES) and the Meaning in Life Questionnaire (MLQ). Data was analyzed using bivariate and multivariate logistic regression.

Results: The one-year prevalence of self-harm in adult depressive patients was 39.84% (N=51). Significant risk factors for self-harm included: younger age (Mann-Whitney U= 828.0, p-value<0.001), low education (X2=4.337, p-value=0.037), substance use (X2= 9.862, p-value=0.002), more depressive symptoms (X2=9.407, p-value=0.009), suicidal ideation (X2=17.212, p-value<0.001) and borderline personality disorder traits (X2=10.334, p-value=0.001). Protective factors included: high self-esteem (Mann-Whitney U=1315.5%, p-value=0.002) and meaning in life (X2=15.633, p-value=0.001).

Conclusion: The high prevalence of self-harm in adults with depressive disorder emphasizes the need for greater awareness. Identifying significant risk factors is crucial for effective intervention. Promoting self-esteem and meaning in life should be considered a key protective strategy to reduce the risk of self-harm and suicide in this population.

Keywords: depressive disorder, self-esteem, self-injurious behavior, value of life

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Introduction

Depression and suicide are major health problems throughout the world today. According to the World Health Organization (WHO) in 2023, approximately 3.8% of the population suffers from depression, and more than 700,000 people per year die from suicide. Suicide is classified as the fourth leading cause of death among adolescents and the working-aged population[1].

Self-harm behavior is associated with depression and can be a predictor of suicide[2]. The Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (DSM-5), defines self-harm as behavior that leads to intentional nonfatal injury and damage to bodily tissue, which is not socially acceptable; such as cutting, scratching, beating, or burning and so forth. According to Hooley et al.[3], self-injury behaviors (SIBs) can be divided into two subtypes: suicidal behavior and self-harm behavior without the intent to die, or non-suicidal self-injury (NSSI). However, we noticed both subtypes are related and can coexist.

Although self-harm behaviors are found across all ages, they are mostly found in adolescents and early adulthood[4], and more commonly in females than males. The prevalence of self-harm increases among individuals with psychiatric disorders, including depressive disorder[5], and borderline personality traits[6] and is associated with more severe symptoms of depression[7]. Other risk factors include substance use, especially alcohol and cigarettes[4]. Studies have shown that individuals with low levels of education, those who are unemployed, and single are at a higher risk of repetitive self-harm[8]. Additionally, the presence of physical illness is a significant risk factor in adulthood[9].

Researchers are also interested in protective factors against self-harm behavior, as suggested by *'The Buffer Hypothesis'*[10]. There is a particular focus on two factors: perception of self-esteem and meaning of life or reasons for living.

Self-esteem is a significant protective factor for mental health, defined as an individual's attitude, perception, self-worth, and appreciation of oneself. One study[11] found that self-esteem is significantly, negatively associated with self-harm behaviors, which indicates that high self-esteem is considered a significantly positive factor in preventing self-harm behavior[12,13].

Meaning in life (MiL) refers to recognizing that one's existence is valuable and important[14]. Recently, MiL has garnered interest for its role as a positive factor in preventing suicidal and self-harm behaviors in both the general population[15,16] and individuals diagnosed with borderline personality disorder[17]. Studies[16] have also found that a high perception of meaning in life is associated with well-being, life satisfaction, happiness, and positive effects. Furthermore, a high level of perceived meaning in life can help reduce risky behaviors among adolescent populations. "I feel worthless" "I don't know what to live for…"

These common quotes from depressed patients inspired our research question. We studied the prevalence of self-harm behaviors among adults with depressive disorders. Our goal was to provide valuable data for future studies, as there is still limited information on this topic in Thailand and other Southeast Asian countries.

Furthermore, we investigated the risk factors for self-harm behaviors and explored the association between the perception of meaning in life and self-esteem as potential protective factors. We hypothesized that a depressed patient with higher levels of self-esteem and a strong perception of MiL would have a lower prevalence of self-harm behaviors. The results from this study are expected to be useful in raising awareness regarding the prevalence of self-harm within the depressive population. It is crucial to concurrently monitor risk factors and promote protective factors; especially self-esteem and MiL. This approach may lead to the development of better guidelines and interventions in the future for the treatment and prevention

of self-harm behaviors, which often accompany suicidal tendencies in depressive patients.

Material and Methods

Participants and procedures

This research was conducted using a cross-sectional descriptive method. Participants were recruited from adult outpatients aged 18 to 65 years, having received telemedicine services (due to Covid-19) in the psychiatric department of Siriraj Hospital; from July to October 2021. All participants had been diagnosed with depression by a physician and coded ICD-10 as F32 (Major depressive disorder, single episode) to F33 (Major depressive disorder, recurrent episode). A total of 128 subjects met the inclusion criteria and voluntarily enrolled in this study. This calculation was based on a target number calculated from a previous study[18] and statistical methods (participants' characteristics are shown in Table 1). Participants with psychotic symptoms, active self-harm or high suicidal risk were excluded, as these patients first needed to be evaluated by a psychiatrist to address active psychiatric problems. After this step, participants received a link to answer an online questionnaire; consisting of six self-reporting questionnaires. For their convenience and safety, participants could contact the research team directly for additional care or advice if they felt uncomfortable completing the questionnaire. The collected data were analyzed using statistical methods. All study procedures were reviewed and approved by the Human Research Protection Unit, Siriraj Hospital, Faculty of Medicine.

Measures

Sociodemographic questionnaire

We collected demographic characteristics that could be potential risk factors for self-harm, including gender, age, educational level, employment, marital status, history of psychiatric disease, substance use and physical illness.

Self-harm behavior questionnaire

Participants were asked: 'Did you have any self-harm behavior in the past 1 year?' This time period was based on the diagnostic criteria for Nonsuicidal Self-Injury in the DSM-5 (conditions for further study). If patients answered: 'Yes', we evaluated the data for the prevalence of self-harm in this study. Additionally, we collected data on frequency (episodic and repetitive self-harm), intention (intention to die and other reasons)as well as severity (minor and moderate/severe methods).

Thai version of the Patient Health Questionnaire-9 (PHQ-9)[19]

This measure included nine questions regarding symptoms and severity of depression. The scoring criteria ranged from: no symptoms at all (0 points) to almost daily symptoms (3 points). The total score was divided into mild (9-14 points), moderate (15-19 points) and severe. (equal or greater than 20 points). This measurement has good internal consistency (Cronbach's alpha=0.79).

Screening instrument for borderline personality disorder (SI-BORD)[20]

This instrument screens patients with a tendency for borderline personality disorder (BPD). It consists of five questions regarding personality; each rated on a 4-point Likert scale ranging from 0 (not at all) to 3 (to a great extent). A total score of more than nine points indicates a tendency toward BPD: Cronbach's alpha was 0.76.

Thai version of the Rosenberg Self-Esteem Scale (RSES)[21]

This scale consists of 10 questions assessing the perception of self-worth, rated on a 4-point Likert scale ranging from 0 (strongly disagree) to 3 (strongly agree). The total score ranges from 10 to 40 points. Self-esteem levels are interpreted from the total score divided into three

categories: high (26-40 points), moderate (16-25 points), and low (1-15 points): Cronbach's alpha was 0.84.

Meaning in Life Questionnaire (MLQ)

Developed by Steger[14], and translated into Thai by Nada Ngammoh[22], the MLQ has a Cronbach's alpha of 0.84. It includes 10 questions on the perception of self-worth, rated on a 7-point Likert scale ranging from 1 (absolutely untrue) to 7 (absolutely true), with question nine being reverse-scored. The MiL assesses two dimensions: presence of MiL (MLQ-P) (Questions 1, 4, 5, 6, 9) and the search for MiL (MLQ-S) (Questions 2, 3, 7, 8, 10). A sum of 24 points or higher in both dimensions indicates a higher level of presence and search for meaning in life, participants can then be categorized into four domains: M1, M2, M3, and M4. Additionally, qualitative data concerning meaning in life were collected with open-ended questions: "Your value or meaning in life is ...?" These responses were categorized according to Frankl's view[23], which includes meaning derived from living for something or someone, overcoming and learning from suffering and creating or achieving something significant.

Data analysis

Demographic data and prevalence of self-harm behaviors were described using descriptive statistics: presenting the number and percentage of depressive patients with self-harm compared to all depression patients in the study. Additional information on self-harm (frequency, intention, and severity) is also provided. The correlation between each factor and self-harm behavior was analyzed using the Chi-square test for categorical variables and the T-test for continuous variables. Correlation levels were reported using the odds ratio and a 95% confidence interval (CI). Multivariate analysis was performed using the logistic regression method. Additionally, several binary logistic regressions were performed to examine the variables that differentiate between self-harmers and non-self-harmers as well as between self-harm frequency and severity subgroups. All data analysis was performed using Statistical Package for the Social Sciences (SPSS) version 26.

Results

A total of 128 individuals from psychiatry's telemedicine service met the eligibility criteria and consented to participate in this research. Most of the participants were female (84.38%) and of middle age (mean age=32.21). The majority held a Bachelor's degree or more, were employed, single, and had physical illnesses (79.69%, 68.75%, 49.22%, and 52.35%, respectively). In addition, more than half of the participants had a history of substance use, including alcohol (26.56%), tobacco (12.50%), cannabis (7.03%) or other substances (1.56%) (Table 1).

From the PHQ9 scores, it was found that severe and moderate depression were present in equal portions (18.75%), which was relevant to the high rate of suicidal ideation in this study (62.50%). Only a small portion showed tendencies toward borderline personality according to the SIBORD (17.97%). Surprisingly, two-thirds of the population (58.59%) exhibited a high level of self-esteem, based on the RSES score (mean score=27.09). Finally, the results from the MLQ were categorized into four groups: low-MLQ-P/high-MLQ-S (35.16%), high-MLQ-P/high-MLQ-S (29.69%), low-MLQ-P/low-MLQ-S (28.13%) and high-MLQ-P/low-MLQ-S (7.03%).

Prevalence and self-harm behavior

As shown in Table 2, the prevalence of self-harm behavior in depressive patients within the past year was 39.84% (N=51). The data shows a higher prevalence in females (n=44, 86.3%) more so than males (n=7, 13.7%). The mean age in the self-harm group was 26.25 years

Table 1 Patient characteristics (n=128)

Characteristics	n (%)	Risk factor	n (%)	Did you have any self-harm behavior in the past 1 year?	n (%)
Sex		PHQ9		Frequency	
Male	20 (15.63)	Mild depression	80 (62.50)	No self-harm	78 (60.94)
Female	108 (84.38)	Moderate depression	24 (18.75)	Episodic self-harm	29 (22.66)
Age		Severe depression	24 (18.75)	Repetitive self-harm	21 (16.41)
Mean (S.D.)	32.21 (10.31)	Suicidal idea from PHQ9		Intention	
Median (Q1-Q3)	29.0 (24.0-37.75)	No	48 (37.50)	Non-self-harm	77 (60.16)
Min-Max	18-65	Yes	80 (62.50)	To suicide	6 (4.69)
Educational level		SIBORD		To relieve emotions/stress	25 (19.53)
Undergraduate	26 (20.31)	non-BORD (≤9 points)	105 (82.03)	To punish yourself	4 (3.13)
Bachelor's degree & postgraduate	102 (79.69)	BORD (>9 points)	23 (17.97)	To feel pain	13 (10.16)
Employment		**Protective factor**	**n (%)**	To solve/avoid some problems	3 (2.34)
Unemployed/students	40 (31.25)	RSES score		Severity	
Employed	88 (68.75)	Mean (S.D.)	27.09 (6.58)	No self-harm	79 (61.72)
Marital Status		Median (Q1-Q3)	27.50 (22-33)	Moderate to severe methods	32 (25.00)
Single	63 (49.22)	Min-Max	13-38	Minor methods	16 (12.50)
Married	58 (45.31)	Self-esteem		Other (drug overdose)	1 (0.78)
Divorced	7 (5.47)	Low	3 (2.34)	Methods	
Physical illness		Moderate	50 (39.06)	No self-harm	79 (61.72)
No	61 (47.66)	High	75 (58.59)	Cutting	19 (14.84)
Yes, only 1 disease	45 (35.16)	MLQ-P score		Scratching/scraping/pinching	11 (8.59)
More than 1 disease	22 (17.19)	Mean (S.D.)	20.25 (7.87)	Erasing/rubbing	1 (0.78)
History of substance use		Median (Q1-Q3)	20.0 (14-27)	Tattooing	1 (0.78)
No	88 (68.75)	Min-Max	5-35	Hitting	15 (11.72)
Yes	40 (31.25)	MLQ-S score		Biting	1 (0.78)
- Alcohol	34 (26.56)	Mean (S.D.)	24.8 (6.29)	Other (drug overdose)	1 (0.78)
- Tobacco	16 (12.50)	Median (Q1-Q3)	26 (21-29)		
- Cannabis	9 (7.03)	Min-Max	5-35		
- Other	2 (1.56)	Meaning in life			
		M1=High-MLQ-P/High-MLQ-S	38 (29.69)		
		M2=High-MLQ-P/Low-MLQ-S	9 (7.03)		
		M3=Low-MLQ-P/High-MLQ-S	45 (35.16)		
		M4=Low-MLQ-P/Low-MLQ-S	36 (28.13)		
		Your value or meaning in life is ...?			
		No	19 (14.84)		
		To passed and learn the suffering	34 (26.56)		
		To live for something or someone	53 (41.41)		
		To create something or succeed	22 (17.19)		

S.D.=standard deviation, MLQ=meaning in life questionnaire, MLQ-P=presence of meaning in life, MLQ-S=search for meaning in life, Q1=first quartile, Q3=third quartile

(S.D.=10.31). According to Table 1, there were 39.2% repetitive self-harm cases and 56.9% episodic self-harm cases. The top three reasons for self-harm were alleviation of emotions/stress (49.0%), feeling pain (25.5%) and suicide (11.8%). Furthermore, participants engaged in self-harm using moderate/severe methods (n=31, 60.8%) more so than minor methods (n=15, 29.4%). The most common methods were self-cutting (35.3%), hitting (27.5%) and scratching/scratching/pinching (21.6%).

Factors associated with self-harm behavior

Table 2 shows the association of various factors with self-harm behavior, comparing depressed patients who did and did not resort to self-harm over the past year. Statistically significant risk factors for self-harm behavior included: younger age (Mann-Whitney U=828.0, p-value<0.001), low educational levels (X^2=4.337, p-value= 0.037), history of substance use (X^2=9.862, p-value=0.002), greater severity of depression (X^2=9.407, p-value=0.009), suicidal ideas on the PHQ-9 (X^2=17.212, p-value<0.001), and borderline personality traits as measured by the SI-BORD BPD (X^2=10.334, p-value=0.001).

Conversely, protective factors for self-harm included: high self-esteem (Mann-Whitney U=1315.5%, p-value=0.002) and a strong sense of meaning in life (X^2=15.633, p-value=0.001). Qualitative data on meaning in life among depressive patients were classified into three groups: living for something or someone (n=53, 41.41%), learning and growing from suffering (n=34, 26.56%) and creating or achieving something significant (n=22, 17.19%).

Furthermore, statistically significant variables identified in Table 3. were analyzed using the multivariate logistic regression method. The risk factors that remained associated with self-harm behavior were age (AOR=0.86, 95% CI=0.80-0.93) and suicidal ideation (AOR=5.63, 95% CI=1.34–23.76). The protective factor was a high score in both groups of the MLQ (AOR=0.13, 95% CI=0.03–0.64)

Discussion

This study examined the one-year prevalence of self-harm among patients with depression, its risk factors, and protective factors; including self-esteem and meaning in life. Among the 128 participants, 39.84% reported self-harm behaviors. Given the limited research on the prevalence of self-harm behavior among adults with depression, this study may be the first of its kind in Thailand. Our results are consistent with a previous study in the adult population[24], which found that the lifetime prevalence of NSSI among people with depression and bipolar disorder was 37% and 52%, respectively. Additionally, Fang and Li[25] found that 38.6% of depression patients in China had engaged in NSSI within the past year. However, our findings differ from a Norwegian study[18], which reported that only 7.45% of depression patients engaged in self-injury behaviors. The variation in prevalence rates may be due to differences in sample characteristics, definitions, and time frames of NSSI, as well as variations in methodology or the presence of comorbidities that can contribute to NSSI' such as eating disorders, anxiety disorders, and personality disorders.

Regarding sociodemographic risk factors, the results show that younger depressed patients were more likely to engage in self-harm behaviors, with an average age of 26.25 years (S.D.=10.31). This finding is similar to previous research[4], which found that the prevalence of self-harm is more common in adolescents and young adults; particularly in the 22-25-year age group[26]. This may be due to immaturity in adolescent brain development, leading to poor decision-making skills, impulsivity, and a tendency to engage in risky behaviors compared to other age groups. Additionally, we found that substance use was related to the frequency and severity of self-harm. This finding aligns with prior studies[4,27]. Substances can impair cognitive function and impulse control. However, other factors, such as marital status, employment, and physical illness, did not show significant differences in this

Table 2 Factors associated with self-harm behavior

Variables	No self-harm (N=77; 60.2%)	Self-harm (N=51; 39.8%)	Statistics	p-value
	N (%)	N (%)		
Sex			X^2=0.232	0.630
Male	13 (16.9)	7 (13.7)		
Female	64 (83.1)	44 (86.3)		
Age			Mann-Whitney U= 828.0	0.000*
Mean (S.D.)	36.16 (10.96)	26.25 (5.19)		
Median (Q1-Q3)	36 (27-43)	25 (22-29)		
Min-Max	19-65	18-40		
Educational level			X^2=4.337	0.037*
Undergraduate	11 (14.3)	15 (29.4)		
Bachelor's degree & postgraduate	66 (85.7)	36 (70.6)		
Employment			X^2=1.423	0.233
Unemployed/students	21 (27.3)	19 (37.3)		
Employed	56 (72.7)	32 (62.7)		
Marital Status			X^2=0.425	0.808
Single	37 (48.1)	26 (51.0)		
Married	35 (45.5)	23 (45.1)		
Divorced	5 (6.5)	2 (3.9)		
Physical illness			X^2=2.881	0.090
No	32 (41.6)	29 (56.9)		
Yes, only 1 disease	30 (39.0)	15 (29.4)		
More than 1 disease	15 (19.5)	7 (13.7)		
History of substance use			X^2=9.862	0.002*
No	61 (79.2)	27 (52.9)		
Yes	16 (20.8)	24 (47.1)		
PHQ9			X^2=9.407	0.009*
Mild depression	56 (72.7)	24 (47.1)		
Moderate depression	12 (15.6)	12 (23.5)		
Severe depression	9 (11.7)	15 (29.4)		
Suicidal idea from PHQ9			X^2=17.212	0.000*
No	40 (51.9)	8 (15.7)		
Yes	37 (48.1)	43 (84.3)		
SIBORD			X^2=10.334	0.001*
non-BORD (<=9 points)	70 (90.9)	35 (68.6)		
BORD (>9 points)	7 (9.1)	16 (31.4)		
RSES			Mann-Whitney U=1315.5	0.002*
Mean (S.D.)	28.56 (6.50)	24.88 (6.11)		
Median (Q1-Q3)	30.0 (22-34)	24.0 (20-30)		
Min-Max	13-38	14-37		
Self-esteem			X^2=6.869	0.032*
Low	2 (2.6)	1 (2.0)		
Moderate	23 (29.9)	27 (52.4)		
High	52 (67.5)	23 (45.1)		
MLQ			15.633	0.001*
M1=High-MLQ-P/High-MLQ-S	31 (40.3)	7 (13.7)		
M2=High-MLQ-P/Low-MLQ-S	7 (9.1)	2 (3.9)		
M3=Low-MLQ-P/High-MLQ-S	25 (32.5)	20 (39.2)		
M4=Low-MLQ-P/Low-MLQ-S	14 (18.2)	22 (43.1)		

*statistic significant data, S.D.=standard deviation, Q1=first quartile, Q3=third quartile, RSES=rosenberg self-esteem scale, MLQ-P=presence of meaning in life, MLQ-S=search for meaning in life

Table 3 Logistic regression analysis of risk & protective factors of self-harm behavior

Variables	Bivariate analysis			Multivariate analysis		
	B (S.E.)	OR (95%CI)	p-value	B (S.E.)	Adjust OR (95%CI)	p-value
Age	-0.15 (0.03)	0.86 (0.81-0.92)	0.000	-0.15 (0.04)	0.86 (0.8-0.93)	0.000*
Undergraduate	0.92 (0.45)	2.50 (1.04-6.01)	0.041	0.17 (0.63)	1.18 (0.35-4.03)	0.792
History of substance use	1.22 (0.40)	3.39 (1.56-7.38)	0.002	0.79 (0.51)	2.21 (0.82-5.95)	0.117
Suicidal idea	1.76 (0.45)	5.81 (2.42-13.97)	0.000	1.73 (0.73)	5.63 (1.34-23.76)	0.019*
PHQ9 (ref: Mild depression)						
Moderate depression	0.85 (0.48)	2.33 (0.92-5.93)	0.075	-0.04 (0.67)	0.96 (0.26-3.57)	0.954
Severe depression	1.36 (0.49)	3.89 (1.50-10.10)	0.005	0.52 (0.75)	1.68 (0.38-7.32)	0.492
SIBORD: BORD	1.52 (0.50)	4.57 (1.72-12.14)	0.002	0.55 (0.69)	1.73 (0.45-6.75)	0.428
RSES score	-0.09 (0.03)	0.91 (0.86-0.97)	0.002	0.10 (0.06)	1.10 (0.98-1.24)	0.106
MLQ (ref: Low-presence, Low-search)						
High-presence, High-search	-1.94 (0.54)	0.14 (0.05-0.41)	0.000	-2.05 (0.82)	0.13 (0.03-0.64)	0.012*
High-presence, Low-search	-1.71 (0.87)	0.18 (0.03-1)	0.050	-1.82 (1.06)	0.16 (0.02-1.29)	0.086
Low-presence, High-search	-0.68 (0.46)	0.51 (0.21-1.24)	0.138	-1.14 (0.62)	0.32 (0.09-1.08)	0.066

*statistic significant data, S.E.=standard error, MLQ=meaning in life questionnaire, CI=confidence interval, OR=odd ratio

study. These findings contrast with previous studies[9], and this discrepancy may be attributed to limitations, such as a small sample size, demographic and cultural differences, and potential misunderstandings of the questionnaires.

We also found that greater severity of depressive symptoms was associated with more incidents of self-harm behaviors. This is consistent with previous studies[5,7,27]. The PHQ-9 includes a question regarding suicidal ideation, which we found to be associated with self-harm behavior. This result aligns with our hypothesis and is consistent with prior research[2]. As suggested by Marshall et al.[28], self-harm may be a way to reduce depressive symptoms, such as negative emotions and numbness and the relief it provides may reinforce its continuation. Furthermore, depressive symptoms and self-harm often co-occur because they share similar risk factors and influence each other.

Our finding that depressed patients with self-harm have higher SI-BORD scores than those without self-harm indicates an association between BPD traits and self-harm. This is in agreement with previous research[6]. Repetitive self-harm and/or suicidal attempts are among the DSM-5 diagnostic criteria for BPD. A previous study[29] in adolescents found that certain BPD symptoms are associated with self-harm, such as impulsivity, aggression, and emotional instability. Muehlenkamp et al.[6] examined specific BPD criteria and found that symptoms like identity disturbance and unstable interpersonal relationships are related to NSSI without suicide attempts. Higher levels of confusion were linked to more frequency of self-harm episodes. Future studies should use superior diagnostic tools for BPD; such as SCID-II-BPD or clinical interviews, instead of self-reporting measurements for a more reliable diagnosis of BPD.

Our study provides preliminary data on the one-year prevalence of self-harm behavior among the adult depressive population in Thailand and examines the association between self-harm and its risk factors. We anticipate that our findings can be used to estimate the prevalence of self-harm behaviors in adults with depression, which may be advantageous for future studies.

In terms of clinical implications, our results suggest that clinicians should take self-harm more seriously, evaluate its incidence, monitor its risk factors and implement strategies to prevent suicide, which can occur concurrently with self-harm behavior. However, clinical management of depression and suicide must also encompass other effective approaches, such as improving the service system, optimizing psychotropic drug use, and providing psychosocial interventions and psychoeducation[30]. This foundational process requires less specialized skill but offers significant benefits.

These strategies may raise awareness of self-harm by promoting the development of policies within service systems and primary care management. According to the Collaborative Care (CC) model, case managers or patient education managers should be considered key personnel for screening, counseling, and monitoring psychiatric management in primary care[31].

We also aimed to explore the protective factors for self-harm, especially self-esteem and meaning in life. Our study found that depressed patients with high levels of self-esteem are less likely to engage in self-harm (Figure 1), which is consistent with previous studies[12]. According to a systemic review[11], low self-esteem is a risk factor for self-harm. Self-harm often begins and continues due to negative feelings towards oneself; low self-esteem can lead to feelings of shame, disappointment, self-punishment and self-criticism. On the contrary, high self-esteem can positively impact self-worth and self-regard. We may consider implementing self-esteem-related interventions to reduce self-harm and suicide in both clinical and non-clinical populations[32]. Moreover, addressing low self-esteem can help clinicians to understand and empathize with patients' behaviors, allowing for the integration of self-esteem enhancement into the therapeutic process, counseling and psychotherapy.

Regarding meaning in life (MiL), we found that non-self-harmers have higher MLQ scores than self-harmers in both dimensions (Figure 2); the presence (MLQ-P) and the search for MiL (MLQ-S). This finding is consistent with previous research[15,33]. After analyzing this variable with multivariate LR (Table 3.), we have found that MiL is still a protective factor for self-harm behaviors in depressed adult patients; especially in the high-presence, high-search subgroup of total MLQ (M1). This finding contrasts with some previous studies[30,34] wherein MLQ-S and MLQ-P were positively correlated. However, MLQ-P was more beneficial for various psychological resilience, such as well-being, happiness of life and positive affect. In contrast, MLQ-S appeared to have more controversial results. Steger et al.[35] examined 'the search for meaning' as an individual, specific factor that depends on motivation, personality, cognitive style and culture, suggesting that it may act as either a protective or risk factor depending on the individual.

However, we considered MiL to be an important protective factor against self-harm behavior and suicide; including both the presence and search for MiL, which may help patients with tendencies toward self-harm or suicide find a reason to live. Like a psychological anchor, MiL may represent the value that individuals recognize in their lives or the worth of something they aspire or crave to achieve. We hope that increasing awareness of the significance of meaning in life as a protective factor against self-harm and suicide will lead clinicians to incorporate this understanding into their interventions, thereby helping patients regain awareness and a sense of purpose in life.

There are various interventions and treatments aimed at increasing meaning in depressed patients, such as existential-humanistic logotherapy, solution-focused therapy and acceptance and commitment therapy (ACT). Future research should explore the relationship between individual variables of the MLQ, the presence and search for MiL as well as self-harm/suicide.

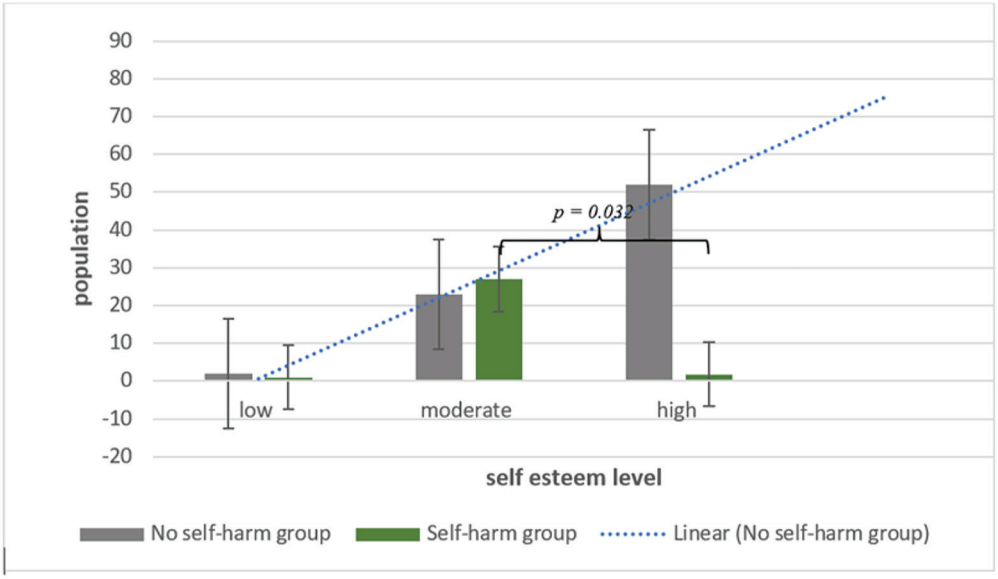
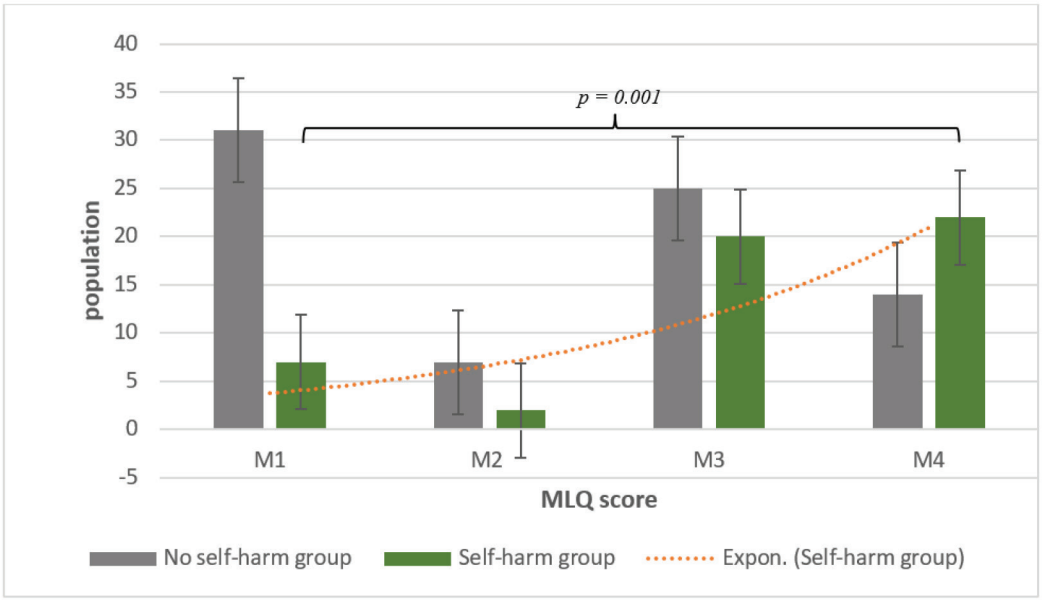


Figure 1 Comparing self-eseem level from RSES score between self-harm and no self-harm group



M1=High-MLQ-P/High-MLQ-S, M2=High-MLQ-P/Low-MLQ-S, M3=Low-MLQ-P/High-MLQ-S, M4=Low-MLQ-P/Low-MLQ-S

Figure 2 Comparing four domains from MLQ score interpretation between self-harm and no self-harm group

Our study has several limitations. First, it examined the relationship between variables using a cross-sectional design: a prospective design would be superior. Second, the sample size was small and the study was conducted in only one center, which may not provide sufficient data to represent a genuine result. For more reliable data in the future, we suggest conducting multicenter studies with larger sample sizes. Third, all information was collected through online self-reports, thus participants may have misunderstood the questions, reported dishonestly, or concealed symptoms, resulting in response bias and recall bias. Future studies should use other evaluation methods; such as face-to-face interviews with clinicians, to ensure reliable data. Fourth, some measurements lacked clear definitions, leading to misunderstandings among the participants. Using more reliable measurements, such as AUDIT for alcohol use disorder, SCID-II-BPD for BPD, and the Thai - SAD PERSONS Scale[36] for suicidal risk, could solve this problem. Future research may investigate the relationship between self-harm behavior, in terms of frequency, intention and methods, with the variables in this study. Additionally, a detailed examination of other risk and protective factors for self-harm, such as loneliness, hopelessness, social support, and adverse childhood experiences, could provide valuable insights.

Conclusion

Self-harm behavior should be recognized as a predictor of suicide in adults with depressive disorder due to the considerable prevalence found in this study. Additionally, risk factors, such as younger age, low educational levels, substance use, depressive symptoms and BPD, should be evaluated and addressed. Finally, attention should also be given to protective factors like self-esteem and meaning in life when developing psychotherapeutic interventions aimed at reducing self-harm and suicide.

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Conflict of interest

The study did not receive any funding, and there are no conflicts of interest.

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