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Internalised stigma and self-esteem among adult outpatients with major depressive disorder: A cross-sectional correlational study

Internalised Stigma and Self-Esteem in MDD Outpatients

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Abstract

Objective: The study aimed to evaluate the internalised stigma and self-esteem in adult outpatients with major depressive disorder (MDD) attending a psychiatric outpatient clinic in Iraq, and to explore the relationship between these variables.

Methods: A cross-sectional correlational study among 120 adults with MDD who attended psychiatric outpatient clinics of Azadi Teaching Hospital in Kirkuk, Iraq. All participants filled out a sociodemographic and clinical questionnaire, the Internalised Stigma of Mental Illness Scale (ISMI), and the Rosenberg Self-Esteem Scale (RSES). Data were analysed using descriptive statistics, Pearson's correlation coefficient and simple linear regression.

Results: The overall mean ISMI score was 2.90 (SD = 0.42), with the highest scores for stereotype endorsement (M = 3.16) and alienation (M = 3.14) and the lowest for stigma resistance (M = 2.19). The overall mean RSES score was 2.29 (SD = 0.38). There was a negative correlation between internalised stigma and self-esteem ($r = -0.338$, $p < 0.001$). Self-esteem was statistically associated with internalised stigma ($\beta = -0.338$, $t = -3.897$, $p < 0.001$), explaining 11.4% of the variance ($R^2 = 0.114$) in simple linear regression.

Conclusions: In this single-centre sample of adults with MDD, internalised stigma and self-esteem were inversely related. Since the study is a cross-sectional design, the association observed cannot be considered a causal relationship. The results provide a basis for consideration of the psychosocial aspects of routine psychiatric care (stigma and self-esteem) and for further longitudinal and multicentre research to establish temporal relationships and to determine potentially modifiable factors.

Keywords: Major Depressive Disorder, Internalised Stigma, Self-Esteem, Outpatients, Mental Health

Plain English Summary

This study examined if individuals who experience greater stigmatising feelings are more likely to have lower self-esteem among those receiving outpatient treatment for MDD. We surveyed 120 adults at a psychiatric clinic in Kirkuk, Iraq, on stigma and self-worth, asking them to fill out questionnaires while they were there. We observed participants' internalised stigma as relatively high, defined as accepting negative societal attitudes regarding mental illness as part of our own identity. They also had relatively low self-esteem. Importantly, there was an association between higher levels of internalised stigma and lower self-esteem. However, we gathered all information at one point, so we cannot determine whether one causes the other. The results of this study indicate that mental health care providers should routinely strive to reduce self-stigmatising beliefs and support self-esteem in the treatment of depression.

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Introduction

Major depressive disorder (MDD) is a frequent and devastating psychiatric illness defined by a prolonged state of sadness and loss of interest or enjoyment, along with cognitive, emotional and functional impairments. In addition to the clinical manifestations, MDD can also have a significant impact on one's perception of oneself and one's relationships and functioning. Depressive experiences are often accompanied by feelings of inadequacy, worthlessness and decreased self-confidence, which further hinder psychological and social functioning. Therefore, holistic management of MDD should not only focus on the alleviation of symptoms, but also on the psychological aspects which could affect recovery and quality of life (1).

People with MDD are also at risk of internalised stigma, which involves internalising and accepting negative societal stereotypes about mental illness. Negative self-evaluation often seen in depression can reinforce negative beliefs about mental illness, leading to a vicious cycle of self-evaluation and social isolation. Outpatient samples of MDD patients have provided proof of the clinical significance of internalised stigma. Alemayehu et al. (2) used a cross-sectional study of 415 patients with MDD who attended an outpatient department in Ethiopia to report that 33.5% of the participants had high levels of internalised stigma. Longer illness duration was significantly related to higher internalised stigma, as were a history of suicide attempts, treatment non-adherence, poor social support, and poorer quality of life. The results suggest that internalised stigma can have implications beyond those of patients' views on their illness, and that it is linked to relevant clinical and psychosocial outcomes in people seeking treatment for MDD. Another psychological dimension of importance for the individuals with MDD is that of self-esteem. Reflects a person's global assessment of his/her importance and worth, and is affected by a person's negative self-appraisal and low mood. Among patients who were diagnosed with MDD at psychiatric outpatient clinics, Canli and Karaşar (1) found that self-esteem was one of the significant factors associated with depression, which suggests that self-esteem may be a psychological function of MDD patients.

A relationship between internalised stigma and self-esteem has been a growing interest in psychiatric research. Lim et al. (3) reported that psychiatric in-patients scored higher on the internalised stigma scale than psychiatric outpatients, and that there was a significant relationship between the two. On a larger scale, Du et al. (4) systematically reviewed and analysed 56 studies involving 11,549 depression patients, revealing that the global prevalence of

self-stigma is about 29% in depression patients. More importantly, depression-related self-stigma scores were significantly and negatively correlated with self-esteem, which emerged as a protective factor. This result suggests that self-esteem may have a mitigating effect on the negative psychological impacts of internalised stigma in people with depression.

Aydin and Taşkın (5) recently investigated internalised stigma, self-esteem, and MDD in patients with active and remitted depression in a psychiatric outpatient clinic, reporting that MDD patients with active depression had higher levels of internalised stigma and lower self-esteem than their remitted counterparts. Moreover, self-esteem was negatively related to internalised stigma, and depression severity was positively related to internalised stigma. Shi et al. (6) assessed internalised stigma in people with MDD and determined that higher internalised stigma was correlated with lower medication adherence, suggesting it may be relevant to treatment and recovery in MDD. Findings from the Middle East healthcare context further suggest that internalised stigma is a pervasive issue for psychiatric outpatient care recipients, impacting negatively on their self-esteem and mental health (7, 8).

Although research evidence on the relationship between stigma and self-esteem in depression is increasing, additional research is necessary to better delineate this relationship in outpatients with MDD. While some studies have explored stigma in diverse psychiatric samples and others have examined individual psychological outcomes, studies that have investigated internalised stigma and self-esteem in a single population of outpatient MDD in the Iraqi context are limited. Enhancing understanding of the relationship between these factors can help mental health practitioners identify patients at risk for negative self-perceptions, social withdrawal, and challenges with treatment engagement, and can inform interventions to address self-stigma and improve self-esteem.

The present study aimed to examine the level of internalised stigma and self-esteem in people attending outpatient settings for MDD and also to investigate the relationship between internalised stigma and self-esteem in these patients. The specific aims were: (1) To assess the extent of internalised stigma amongst adult outpatients with MDD; (2) To measure the levels of self-esteem amongst adult outpatients with MDD; and (3) To explore the relationship between internalised stigma and self-esteem in adult outpatients with MDD.

Materials and Methods

Study Design and Setting

A cross-sectional correlational design was used to evaluate the relationship between internalised stigma and self-esteem among outpatients suffering from MDD. This study was carried out at the psychiatric outpatient clinics of Azadi Teaching Hospital in the city of Kirkuk, Iraq, from 17 May 2025 to 20 September 2025. It was chosen for the study because it permits the analysis of correlations between variables at one time and is suitable for the description of psychological phenomena in terms of their prevalence or distribution within a specific clinical population.

Study Population and Eligibility Criteria

The subjects of this study were adult outpatients who visited psychiatric outpatient clinics of Azadi Teaching Hospital during the study period and were diagnosed with MDD. Patients included were adults (18 years or older) with an established clinical diagnosis of MDD for at least 6 months and were clinically stable at the time of data collection, as judged by the treating clinician. Exclusion criteria included: (1) presence of comorbid psychotic disorders; (2) cognitive impairment that would interfere with questionnaire comprehension and/or completion; and (3) active substance use disorders.

The size of the sample and the number of samples required.

A purposive sampling technique was employed, and 120 adult outpatients with MDD were recruited. The G*Power software (version 3.1.9.7) was used to determine the sample size. A minimum sample size of 55 participants was calculated using a simple linear regression analysis with a medium effect size ($f^2 = 0.15$), an α level of 0.05 and a statistical power of 0.80. To boost statistical power and to cover the possibility of non-response or incomplete questionnaires, 120 participants were successfully enrolled.

Data Collection Instruments

A self-administered composite questionnaire was used to collect data, which comprised three major parts:

The Sociodemographic and Clinical Questionnaire collected the demographic and clinical data, such as age, sex, place of residence, marital status, educational attainment, and status of monthly income.

The second instrument is the Internalised Stigma of Mental Illness (ISMI) Scale developed by Ritsher et al. (9), which includes 29 items comprising alienation (6 items), stereotype endorsement (7 items), discrimination experience (5 items), social withdrawal (6 items),

and stigma resistance (5 items). A 4-point Likert scale (1 = "Strongly Disagree" to 4 = "Strongly Agree") is used to rate each item. The higher the mean score, the higher the internalised stigma. The overall mean score was computed by reversing the items related to stigma to ensure that the scores were positive. Subscale mean scores and the overall mean scores were computed. The overall ISMI scale in the current study had an internal consistency (Cronbach's alpha) of $\alpha = 0.89$.

The Rosenberg Self-Esteem Scale (RSES): This is a 10-item self-esteem scale that was originally developed by Rosenberg and has subsequently been widely used with patients suffering from MDD (10). A 4-point Likert scale, from 1 ("Strongly Disagree") to 4 ("Strongly Agree"), is used to score each item. Higher mean scores reflect higher self-esteem because negatively worded items (items 3, 5, 6, 8 and 9) were reverse-coded before scoring the global mean score. In the present sample, the RSES had an $\alpha = 0.84$.

Data Collection Procedures

The psychiatrist who treated the patients identified eligible patients at a routine outpatient visit. Subjects who fulfilled the inclusion criteria and verbally agreed to participate were asked to fill the composite questionnaire. The questionnaire was completely self-administered.

Identify variables and operational definitions.
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The main variables of interest were: internalised stigma (ISMI scale) and self-esteem (RSES scale). The total score of the ISMI was used as an operationalisation of internalised stigma, with higher scores representing higher internalised stigma. Self-esteem was measured as the overall mean score on the RSES, with higher scores reflecting higher self-esteem.

Statistical Analysis

IBM SPSS Statistics version 26.0 was used to code, enter and analyse the data. Frequencies and percentages were computed for sociodemographic variables. The ISMI and RSES were analysed at both the item and domain level using means and standard deviations ($M \pm SD$). Pearson's correlation coefficient (r) was used to analyse the bivariate relationship between internalised stigma and self-esteem. Simple linear regression analysis was used to check the relationship between self-esteem and internalised stigma. A p -value < 0.05 was considered statistically significant.

Results

Participant Characteristics

The 120 individuals participated in this study, and their sociodemographic data are presented in Table 1. The largest age group was 32–38 years (29.2%). The majority of participants were female (68.4%) and living in rural areas (63.4%). 62.5% of the participants were married. In terms of

education, 49.1% of the respondents have only completed primary school, and 10.0% have completed college or higher. Regarding monthly income, 18.3% of them said that their income was insufficient, 65.8% said that their income was barely enough, and 15.9% said that their income was sufficient.

Table 1: Sociodemographic characteristics of participants (n = 120)

Variable	Category	Frequency	Percentage (%)
Age (years)	18–24	18	15.0
	25–31	23	19.2
	32–38	35	29.2
	39–45	14	11.7
	46–52	11	9.2
	53–59	10	8.3
	60–66	6	5.0
Gender	Male	38	31.6
	Female	82	68.4
Residence	Urban	44	36.6
	Rural	76	63.4
Marital status	Single	20	16.6
	Married	75	62.5
	Divorced	14	11.7
	Widowed	11	9.2
Educational status	Illiterate	21	17.5
	Primary education	59	49.1
	Secondary education	28	23.4
	College and above	12	10.0
Monthly income	Sufficient	19	15.9
	Barely sufficient	79	65.8
	Insufficient	22	18.3

Percentages may not sum to 100 due to rounding

Internalised Stigma Scores

Table 2 presents the domain-level scores for the ISMI. The overall mean score for internalised stigma was 2.90 (SD = 0.42), reflecting a relatively high level of self-stigma among outpatients with MDD. Among the subdomains,

stereotype endorsement (M = 3.16) and alienation (M = 3.14) recorded the highest scores, followed by discrimination experience (M = 3.10) and social withdrawal (M = 2.78). Stigma resistance demonstrated the lowest mean score (M = 2.19).

Table 2: Domain-level scores for the Internalised Stigma of Mental Illness (ISMI) scale (n = 120)

Domain	Mean	SD	Interpretation
Alienation	3.14	—	High stigma
Stereotype endorsement	3.16	0.674	High stigma
Discrimination experience	3.10	0.738	High stigma
Social withdrawal	2.78	—	Moderate–high stigma
Stigma resistance	2.19	—	Low resistance
Overall ISMI mean score	2.90	0.42	High stigma

The item-level ISMI data are presented in Table 3. Notable item-level findings included high agreement with statements reflecting stereotype endorsement and alienation, such as feeling that others believe one's mental disorder will hinder

accomplishments (M = 3.07, SD = 0.683) and feeling disregarded or perceived as less credible due to one's mental health condition (M = 3.10, SD = 0.738).

Table 3: Item-level scores for the Internalised Stigma of Mental Illness (ISMI) scale (n = 120)

Internalised Stigma Domain	Mean Score (M)	Std. Deviation
Alienation		
I perceive myself as incongruous within the world owing to my psychological disorder	3.03	.679
I get feelings of shame or embarrassment regarding my mental illness	3.28	.624
I perceive myself as lesser than those without a mental health condition	3.17	.626
I feel let down by myself for experiencing a mental disorder	3.08	.751
Individuals devoid of mental disease are incapable of comprehending my experiences	3.12	.688
Experiencing a mental condition has adversely affected my existence	3.17	.714
Stereotype endorsement		
Stereotypes of individuals with mental illness pertain to my experience	3.18	.661
I am unable to make any contributions to society due to my mental health condition	3.07	.618
Due to my mental health condition, I require others to make the majority of decisions on my behalf	3.17	.613
People can tell by the way I look that I suffer from a mental disease	3.09	.722
People who suffer from mental illness are unable to lead fulfilling lives	3.20	.740
Individuals with mental disorders may exhibit aggressive behaviour	3.17	.760
Individuals with mental health disorders ought not to enter into matrimony.	3.27	.707
Discrimination Experience		
Individuals frequently condescend to me or regard me as juvenile just due to my mental health condition	3.16	.674
Individuals disregard me or perceive me as less credible only due to my mental health condition	3.10	.738
Some others believe that my mental disorder will hinder my accomplishments in life	3.07	.683
No one would choose to form a connection with me due to my mental disorder	3.14	.770
Individuals exhibit bias toward me due to my mental health condition	3.03	.607
Social Withdrawal		
I avoid social gatherings to shield my family or friends from humiliation	2.81	.792
Interacting with someone devoid of mental health issues renders me feeling alienated or insufficient	2.73	.867
My mental illness may make me appear or act "weird"; therefore, I don't mingle as much as I used to	2.85	.795
To prevent rejection, I stay away from those who don't suffer from mental illness	2.83	.748
Because I don't want to burden people with my mental illness, I don't talk about myself a lot	2.77	.914
I am kept apart from the "normal" world by negative misconceptions about mental illness	2.68	.769
Stigma Resistance		
I don't mind being in public with someone who is clearly mentally ill	2.35	.682
Individuals who suffer from mental illness contribute much to society	2.24	.789
Having a mental condition has helped me become a strong survivor	2.11	.868
I can generally live my life as I see fit	2.20	.856
Despite my mental condition, I can lead a happy and meaningful life	2.07	.780

Self-Esteem Scores

Table 4 presents the overall self-esteem score. The overall mean score on the RSES was 2.29 (SD = 0.38). Item-level analysis (Table 5) showed

higher agreement with negatively worded items, including wanting to have more self-respect (M = 3.07, SD = 0.753) and feeling useless at times (M = 2.88, SD = 0.758).

Table 4: Overall Rosenberg Self-Esteem Scale (RSES) score (n = 120)

Scale	Mean	SD	Possible range
Rosenberg Self-Esteem Scale	2.29	0.38	1–4

Higher scores indicate higher self-esteem

Table 5: Item-level scores for the Rosenberg Self-Esteem Scale (RSES) (n = 120)

Scale Component	Mean	Std. Deviation
I am generally happy with who I am	1.92	.693
I sometimes feel like I'm completely useless	2.32	.648
I think I have a lot of positive traits	1.93	.796

I can perform tasks just as well as the majority of individuals	2.08	.668
I don't think I have much to be proud of	2.62	.688
Yes, there are moments when I feel worthless	2.88	.758
I consider myself to be a valuable individual	2.02	.722
I wish I could treat myself with more dignity	3.07	.753
Overall, I tend to believe that I am a failure	2.23	.796
I have a good outlook about myself	1.87	.673

Negatively worded items were reverse-coded before computing the global mean self-esteem score

Association between Internalised Stigma and Self-Esteem

Pearson correlation analysis was conducted to examine the association between internalised stigma and self-esteem. As shown in Table 6, a

statistically significant inverse correlation was found between internalised stigma and self-esteem ($r = -0.338$, $p < 0.001$). Higher levels of internalised stigma were associated with lower self-esteem scores.

Table 6: Pearson correlation between internalised stigma and self-esteem (n = 120)

Variable	Internalised Stigma	Self-Esteem
Internalised stigma	1	-0.338**
Self-esteem	-0.338**	1

* $p < 0.001$ (2-tailed)

Regression Analysis

Simple linear regression was performed to evaluate whether self-esteem was statistically associated with internalised stigma (Table 7). The regression model was statistically significant, $F(1, 118) = 15.187$, $p < 0.001$, accounting for 11.4% of the variance in

internalised stigma ($R^2 = 0.114$, adjusted $R^2 = 0.107$). Self-esteem was a significant negative predictor of internalised stigma ($B = -0.910$, $SE = 0.234$, $\beta = -0.338$, $t = -3.897$, $p < 0.001$). The regression constant was 104.934 ($SE = 5.375$, $t = 19.523$, $p < 0.001$).

Table 7: Simple linear regression analysis predicting internalised stigma from self-esteem

Predictor	B	SE	β	t	p
Constant	104.934	5.375	—	19.523	< 0.001
Self-esteem	-0.910	0.234	-0.338	-3.897	< 0.001

Model statistics: $R = 0.338$, $R^2 = 0.114$, adjusted $R^2 = 0.107$, $F(1, 118) = 15.187$, $p < 0.001$

Discussion

This study examined internalised stigma and self-esteem among adult outpatients with MDD attending a psychiatric clinic in Kirkuk, Iraq. The principal findings were that participants reported relatively high levels of internalised stigma (overall mean ISMI score = 2.90) and that internalised stigma was inversely associated with self-esteem ($r = -0.338$, $p < 0.001$). In simple linear regression, self-esteem was statistically associated with internalised stigma, accounting for approximately 11.4% of the variance. These findings contribute to the growing body of literature examining the psychosocial correlates of internalised stigma in MDD and highlight the potential importance of addressing self-stigmatising beliefs in routine psychiatric care. The sociodemographic profile of the sample showed that females constituted 68.4% of participants, nearly half (49.1%) had completed only primary education, 17.5% were illiterate, 65.8% reported barely sufficient monthly income, and 29.2% belonged to the 32–38 age group. These findings describe the social and economic characteristics of outpatients with MDD in this

Iraqi setting. The higher proportion of female participants is consistent with regional studies in the Middle East, such as research from Turkey by Ünal Aydın and Taşkın (5) and global literature (11), which consistently demonstrate a higher prevalence of depression among women. However, because this was a purposive clinic sample, this finding should be interpreted as descriptive of the study sample rather than as evidence of differential prevalence in the general population. Similarly, the socioeconomic profile described here should be understood as characterising this clinical sample rather than as demonstrating causal links between socioeconomic disadvantage and depression, although previous research has documented associations between socioeconomic adversity and depressive symptoms (12).

Regarding internalised stigma, the overall mean score was 2.90, with the highest domain scores observed for stereotype endorsement ($M = 3.16$) and alienation ($M = 3.14$), followed by discrimination experience ($M = 3.10$) and social withdrawal ($M = 2.78$). Stigma resistance had the lowest mean score ($M = 2.19$). The high

alienation score, reflecting feelings such as shame about having a mental illness, is consistent with findings from other Arab and regional countries, including Egypt (7, 11) and Turkey (5, 13), where cultural misunderstandings of mental illness may lead patients to internalise negative societal attitudes. The relatively high scores for discrimination experience and social withdrawal suggest that patients may perceive prejudicial public attitudes, which in turn may contribute to withdrawal from social interactions, as reported by Shi et al. (6). The low score in stigma resistance indicates limited endorsement of beliefs and behaviours that could buffer against stigmatising attitudes, which is consistent with the overall pattern of high internalised stigma observed in this sample.

The overall mean score on the RSES was 2.29. Item-level analysis showed higher agreement with negatively worded items, including wanting to have more self-respect ($M = 3.07$) and feeling useless at times ($M = 2.88$). These findings suggest considerable self-doubt and reduced self-worth in this sample of MDD outpatients. This is in line with studies conducted in the Middle East on psychiatric patients, which indicate that positive self-evaluation and self-esteem are significantly affected by chronic depression (5, 14). This observation is also consistent with cognitive theories about depression which emphasise negative self-beliefs as a key factor in sustaining a depressive state (1). The RSES score is, however, reported as a continuous score; this is important to note. The statistically significant negative correlation between internalised stigma and self-esteem ($r = -0.338$, $p < 0.001$) is similar to that found in regional and global studies. Lower depression-related self-stigma was also significantly associated with higher SE, which was identified as a potential protective factor by Du et al. (4). Likewise, Lim et al. (3) found that the internalised stigma was positively associated with low self-esteem among psychiatric patients. This inverse relationship between internalised stigma and SE has been reported in the Middle East context (7, 11, 15) for Jordan, Egypt and elsewhere. The regression analysis in the current study revealed that internalised stigma was statistically related to self-esteem, which explained 11.4% of the variance. The present finding indicates that self-esteem might be a relevant factor in the understanding of internalised stigma among MDD outpatients, but we cannot draw causal conclusions due to the cross-sectional design. The observed correlation could be because self-esteem influences the internalisation of stigma, stigma influences self-esteem, or a third factor, such as depression severity or social support,

influences both self-esteem and the internalisation of stigma.

Although preliminary, these results highlight the potential clinical significance of both internalised stigma and self-esteem measures as a routine part of psychosocial assessments for mental health practitioners working with outpatients with MDD. Cognitive behavioural therapy (CBT) and empowerment-based psychoeducation could be useful in reducing self-stigmatising beliefs and enhancing self-esteem. The findings of this study, however, are still too limited to recommend specific interventions without further studies.

Study Limitations

There are important limitations to this study which should be noted when interpreting or making inferences from the results. The cross-sectional design makes it impossible to make inferences about time order or causality. The inverse correlation between internalised stigma and self-esteem that was observed could indicate any of multiple possible directions and/or relationships. Secondly, the findings are only applicable to the single centre where the sample was obtained, and they used non-probability purposive sampling, so they cannot be generalised to other outpatient samples or settings. Third, the language of the administration of the questionnaire and any help to participants who were not very literate were not reported, which would question the standardisation of the data collection procedure. Fourth, important clinical variables (depression severity, illness duration, treatment adherence, social support, and previous history of suicide attempts) were not measured or analysed, which could introduce the possibility of unmeasured confounding. Fifth, this study did not account for any covariates: although some sociodemographic data were gathered, these were not included in the analysis.

Future Directions

There are some restrictions that need to be tackled in future research in this study, and this can be done by the following approaches. Longitudinal studies are required to investigate the temporal association between internalised stigma and self-esteem in MDD outpatients and to understand whether internalised stigma and self-esteem change over time. More studies, using larger and more representative samples across several centres, would improve the generalisability. Other clinically and socio-demographically relevant variables such as validated depression severity scales, duration of illness, adherence to treatment, social support, and additional factors could be investigated as mediators and moderators and adjusted for in future analyses of the relationship between

stigma and self-esteem. A qualitative study may help to gain a deeper understanding of the lived experience of internalised stigma for patients with MDD in the Iraqi context. Finally, there is a need for intervention studies to assess the effectiveness of culturally relevant psychosocial interventions such as CBT and psychoeducation to decrease internalised stigma and improve self-esteem among this population.

Conclusion

In the present single-centre sample of adult outpatients with major depressive disorder, internalised stigma and self-esteem were negatively correlated. The participants' responses to the internalised stigma items indicated relatively high scores on both stereotype endorsement and alienation, and responses on the Rosenberg Self-Esteem Scale showed a high degree of self-doubt. Due to the cross-sectional design of the study, the observed association should not be interpreted as evidence of the direction of causality between the variables (i.e., lower self-esteem leads to higher internalised stigma, or conversely higher self-esteem leads to lower internalised stigma). These findings highlight the importance of thinking of stigma and self-esteem as psychosocial components of routine psychiatric care and suggest the need for longitudinal and multicentre studies to better understand the temporal relationships and to identify modifiable factors.

List of Abbreviations

CBT:	Cognitive Behavioural Therapy
CI:	Confidence Interval
DSM:	Diagnostic and Statistical Manual of Mental Disorders
F:	F-statistic
ICD:	International Classification of Diseases
ISMI:	Internalised Stigma of Mental Illness Scale
MDD:	Major Depressive Disorder
R ² :	Coefficient of Determination
RSES:	Rosenberg Self-Esteem Scale
SD:	Standard Deviation
SE:	Standard Error
B:	Standardised Regression Coefficient

Declarations

Ethics Approval and Consent to Participate
Verbal informed consent was obtained from all participants. The study was approved by the University of Kirkuk Ethics Committee (2025-UOK-NUR-7/2/883). The authors acknowledge that this information should be provided in accordance with journal requirements. Participants were informed that they could

withdraw from the study at any time without affecting their medical care. Confidentiality and anonymity were maintained using anonymous ID codes.

Consent for Publication

All the authors gave consent for the publication of the work under the Creative Commons Attribution Non-Commercial 4.0 license.

Data Availability

The datasets generated and analysed during the current study are available from the corresponding author upon reasonable request.

Competing Interests

The author declares that there are no competing interests.

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Author Contributions

M-AAL worked on the conceptualisation, methodology, investigation, data curation, formal analysis, writing the original draft, writing the review and editing. The author read and approved the final manuscript.

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