

Social and psychosocial factors associated with mood states among adolescents: A questionnaire-based study

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SUMMARY

Promoting adolescent mental health is essential for long-term well-being. While cultivating supportive social environments and psychological resilience is critical for the early prevention of internalizing symptoms, particularly within the family as a core support system, research remains limited on how family support interacts with stigmatizing environments to jointly influence internalizing symptoms. To clarify how experiences of stigma in the family context influence internalizing symptoms among adolescents, we drew on the stress-buffering model and emotion socialization perspectives, and we conceptualized internalized stigma as “toxic shame.” We hypothesized that the perceived lack of social support indirectly exacerbates adolescents’ internalizing symptoms by elevating levels of internalized stigma. In this process, internalized stigma not only mimics pressures associated with stigmatizing environments but also undermines the protective role of social support for mental health. Furthermore, public stigma may increase barriers to seeking help by being internalized, directly exacerbating psychological distress. Using cross-sectional survey data from 98 adolescents, we used linear regression analysis to test these hypotheses. Our results indicated that internalized stigma mediated the relationship between family support and internalizing symptoms. Additionally, we observed a marginal, non-significant moderation effect, which suggested that social support might have mitigated the impact of internalized stigma on internalizing symptoms. Overall, our findings identified internalized stigma as a key vulnerability factor that both transmits stress from stigmatizing environments and undermines social support resources. This underscores the critical importance of fostering supportive family environments and alleviating shame-induced self-deprecation in promoting adolescent mental health and combating stigma.

INTRODUCTION

Global estimates suggest that one in seven (14.3%) of 10–19-year-olds experience mental health conditions (1). Emotional disorders are more common among adolescents, particularly anxiety disorders and depression (1). The trauma-informed perspective posits that adolescents’ internalizing symptoms are not merely isolated psychological disorders, but adaptive responses to their psychosocial environment (2). Traditional stress buffering models indicate that high-quality social support can mitigate psychological stress (3). It is

noteworthy that the quality of life in the family environment is one of the determining factors for adolescents’ mental health (1). Existing research identifies harsh parenting, including behaviors such as physical punishment, verbal humiliation, emotional neglect, and excessive control, as a key risk factor, and the etiology of complex post-traumatic stress disorder (C-PTSD) reflects this correlation (4).

Toxic shame is closely associated with the negative self-concept characteristic of C-PTSD, manifesting as persistent feelings of worthlessness and self-loathing. It typically originates in childhood or adolescence when an individual’s self-esteem is shattered by trauma, abuse, neglect, or other mistreatment from those around them. Although toxic shame and internalized stigma are conceptually distinct constructs, both involve persistent negative self-evaluations and may be closely related. As early socialization environments, families may provide a context for chronic emotional invalidation, which may foster toxic shame and other forms of negative self-evaluation (5). Lower quality of family support is not merely a matter of resource scarcity: according to emotional socialization theory, parents’ emotional expressions influence children’s emotional socialization processes (6). Emotional neglect and devaluation within the family foster the development of toxic shame. The formation of toxic shame mirrors the process of internalizing public stigma: individuals perceive society’s stigmatizing views toward themselves or their group, gradually come to identify with these evaluations, and incorporate them into their self-perception (7). Internalized stigma causes individuals to adopt negative public stereotypes, diminishing their sense of personal efficacy and heightening expectations of discrimination. This significantly impedes seeking professional mental health assistance, a phenomenon known as help-seeking barriers (8). All of these factors synergistically undermine adolescents’ positive self-worth, leaving them unable to build protective barriers against public stigma and thereby facilitating the internalization of stigma.

Accordingly, we hypothesized that social support would moderate the association between internalized stigma and internalizing symptoms. In addition, we hypothesized that internalized stigma would mediate the effect of family support on internalizing symptoms. Finally, we hypothesized that public stigma would indirectly predict internalizing symptoms through a serial mediation pathway involving internalized stigma and barriers to help-seeking.

This study found that stigma experiences influenced internalizing symptoms through internalized stigma and increased help-seeking barriers. Notably, social support played a stronger protective role among adolescents with higher levels of internalized stigma.

RESULTS

We employed questionnaires to separately examine individuals' perceived attitudes toward mental illness stigma, perceived quality of social support, internalizing symptoms (including anxiety and depression), internalized stigma, and barriers to seeking help. High school students ($n = 98$) from six different schools volunteered to participate in the questionnaire, including 36 males (36.7%) and 62 females (63.3%). Their ages ranged from 15–18 years, including 4 aged 15 (4.1%), 33 aged 16 (33.7%), 48 aged 17 (49%), and 13 aged 18 (13.3%).

Reliability and validity

To assess the validity of the questionnaire, we conducted reliability tests on Parts A and B of the self-developed Brief Attitude Questionnaire (BAQ) scale, which demonstrated good reliability (BAQ-A: Cronbach's $\alpha = 0.831$; BAQ-B: Cronbach's $\alpha = 0.825$). Second, we used Exploratory Factor Analysis (EFA) to examine construct validity, revealing strong validity (BAQ-A: KMO = 0.824, $\chi^2 = 171.581$, $df = 10$, $p < 0.001$; BAQ-B: KMO = 0.753, $\chi^2 = 151.822$, $df = 6$, $p < 0.001$), confirming data suitability for analysis. The extracted factors had eigenvalues exceeding the Kaiser criterion of 1.0, indicating that each factor accounted for a meaningful proportion of variance (BAQ-A = 3.001; BAQ-B = 2.630; **Table 1**). The cumulative variance explained exceeded the commonly accepted 60% threshold, suggesting adequate explanatory power (BAQ-A = 60.01%; BAQ-B = 65.76%; **Table 1**). Item factor loadings were substantial, and communalities exceeded the recommended threshold, indicating that the items were robustly represented by the extracted factors and supporting strong construct validity (loadings = 0.681–0.871; $h^2 > 0.40$; **Table 1**).

Descriptive statistics and correlation analysis

Prior to testing the hypotheses, we conducted normality tests on all variables. Although the Kolmogorov-Smirnov test for internalizing symptoms was significantly deviated from normality ($p = 0.001$), the skewness (0.680) and kurtosis

Variables	<i>M</i>	<i>SD</i>	Skewness	Kurtosis	<i>p</i>
Internalizing Symptoms	17.54	10.349	.680	-.216	.001
Family Support	18.54	6.065	-.486	-.380	.086
Public Stigma	34.68	6.592	.329	-.291	.089
Internalized Stigma	11.94	4.518	.445	-.250	.084
Help-seeking Barriers	11.85	4.222	-.144	-.871	.086

Table 2: Descriptive statistics and normality tests for study variables. The Kolmogorov-Smirnov test was applied to examine the mean (*M*), standard deviation (*SD*), skewness, and kurtosis of each construct.

(-0.216) were well within the acceptable ranges (9). Therefore, all variables met the criteria for normal distribution (**Table 2**) and were suitable for parametric analysis.

We examined correlations among all variables, with all correlations found to be significant (**Table 3**). Specifically, the results indicated that internalizing symptoms were positively correlated with internalized stigma ($r = 0.545$, $p < 0.001$) and help-seeking barriers ($r = 0.508$, $p < 0.001$). Conversely, internalizing symptoms were negatively correlated with public stigma (inverse scoring, where higher scores indicate lower perceived public stigma, $r = -0.234$, $p < 0.05$), and family support ($r = -0.464$, $p < 0.001$). Additionally, public stigma was positively correlated with family support ($r = 0.230$, $p < 0.05$).

Moderating effect of internalized stigma

We conducted a moderation analysis (**Table 4**), which revealed that social support negatively predicted internalizing symptoms ($B = -0.218$, $p = 0.004$), while internalized stigma positively predicted internalizing symptoms ($B = 0.808$, $p = 0.001$). The interaction between social support and internalizing symptoms showed a marginally negative effect, but this was not statistically significant ($B = -0.020$, $p = 0.094$).

To further elucidate this moderation effect, we conducted a simple slope analysis examining the association between social support and internalizing symptoms across high ($M + 1$ *SD*) and low ($M - 1$ *SD*) levels of internalized stigma (**Figure 1**). Results indicated that social support negatively correlated with internalizing symptoms at both levels of internalized stigma. Specifically, this negative correlation was stronger among individuals with higher levels of internalized stigma ($B = -0.321$, $p < 0.001$). In contrast, for individuals with lower levels of internalized stigma, this correlation was weaker and did not reach statistical significance ($B = -0.118$, $p = 0.224$).

Complementary mediation analysis of internalized stigma

We conducted a mediation analysis to examine whether family support predicts internalizing symptoms via the mediating role of internalized stigma (**Table 5**). The results indicated that family support served as a significant negative predictor of internalizing symptoms ($B = -0.792$, $p < 0.001$, 95% CI [-1.098, -0.486]). Specifically, family support directly and indirectly associated with a reduction in internalizing symptoms by lowering levels of internalized stigma, suggesting that part of the protective effect of family support occurs through this mechanism. Even after including the mediator in the model, the direct effect of family support on internalizing symptoms remained significant ($B = -0.402$, $p = 0.021$, 95% CI [-0.741, -0.063]). The bootstrapping results

Items	Factor Loading	h^2
BAQ-A		
A1	.817	.667
A2	.782	.611
A3	.681	.464
A4	.793	.629
A5	.794	.630
BAQ-B		
B1	.741	.549
B2	.858	.736
B3	.871	.759
B4	.766	.587
Eigenvalues	A: 3.001 / B: 2.630	
% of Variance	A: 60.01% / B: 65.76%	
Cumulative %	A: 60.01% / B: 65.76%	

Table 1: Factor loadings and communalities for the BAQ. Factor loadings for all items were extracted using principal component analysis with varimax rotation. Abbreviations: Brief Attitude Questionnaire (BAQ); Internalized stigma subscale (BAQ-A); Barriers to help-seeking subscale (BAQ-B); Communalities values (h^2).

	Internalizing Symptoms	Internalized Stigma	Help-seeking Barriers	Public Stigma	Family Support
Internalizing Symptoms	1				
Internalized Stigma	.545***	1			
Help-seeking Barriers	.508***	.462***	1		
Public Stigma	-.234*	-.332***	-.213*	1	
Family Support	-.464***	-.550***	-.475***	.230*	1

Table 3: Pearson correlation matrix among study variables. The intercorrelations between internalizing symptoms, internalized stigma, help-seeking barriers, public stigma, and family support. Positive and negative associations were consistent with the theoretical expectations, * $p < 0.05$, *** $p < 0.001$.

further confirmed a significant indirect effect of family support on internalizing symptoms through internalized stigma ($B = -0.390$, 95% CI [-0.633, -0.193]).

Serial mediation analysis

We employed a serial mediation model to analyze how public stigma influences internalized stigma and help-seeking barriers to predict internalizing symptoms (Table 6, Figure 2). Results indicated that public stigma had a significant total effect on internalizing symptoms ($B = -0.367$, $p = 0.020$, 95% CI [-0.677, -0.058]). However, when mediators were not included in the model, the direct effect of public stigma on internalizing symptoms was not significant ($B = -0.060$, $p = 0.661$, 95% CI [-0.328, 0.209]). This indicated that the relationship between public stigma and internalized symptoms was fully mediated by the included variables.

The total indirect effect of public stigma on internalizing symptoms was significant ($B = -0.308$, 95% CI [-0.516, -0.128]). Specific path tests revealed three key findings. First, the indirect path from public stigma to internalizing symptoms via internalized stigma only was significant ($B = -0.200$, 95% CI [-0.385, -0.060]). Second, the indirect path through help-seeking barriers alone was not significant ($B = -0.034$, 95% CI [-0.165, 0.056]). Finally, the sequential mediation path from public stigma through internalized stigma and help-seeking barriers to internalizing symptoms showed a significant negative effect ($B = -0.074$, 95% CI [-0.154, -0.021]).

DISCUSSION

Most existing studies examine internalized stigma or social support as isolated variables, confirming the protective effect of social support on adolescents' internalizing symptoms and the detrimental impact of internalized stigma (10, 11).

	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>
Social Support	-.218	.073	-2.987	.004
Internalized Stigma	.808	.228	3.533	.001
Social Support × Internalized Stigma	-.020	.012	-1.694	.094

Table 4: Moderation analysis of social support on the relationship between internalized stigma and symptoms. The moderating effect analyzed using Hayes' PROCESS macro (Model 1). It examined the interaction between internalized stigma (X) and social support (W) on internalizing symptoms (Y). Abbreviations: Unstandardized coefficient (B); Standard Error (SE).

The mechanisms through which public stigma permeates individuals and transforms into internalized stigma, thereby affecting the protective role of social support, remain unclear. Our study aimed to examine the association between social support, stigma, and internalizing symptoms and to construct a model of the stigma internalization process. This model explored how social factors such as public stigma and family support influence an individual's internalizing symptoms. Our findings indicated that experiences related to stigma are not only directly associated with internalizing symptoms but may also exert effects through a sequential process involving internalized stigma and help-seeking barriers, with family support playing a potential protective role in this dynamic. Notably, internalized stigma served as a key link between the experience of stigma and help-seeking barriers, ultimately influencing internalizing symptoms.

To begin with, this study examined the boundary conditions under which social support exerts its protective influence on internalizing symptoms. Although the moderation effect was not statistically significant, simple slope analysis provided nuanced insights: the negative correlation between social support and internalizing symptoms was more pronounced among individuals with higher levels of internalized stigma. These findings suggested that internalized stigma led individuals to rely more heavily on external emotional resources, thereby amplifying the protective value of social support. This pattern aligns with the concept of social support as a protective resource that buffers the psychological impact of internalized stigma (3).

While internalized stigma determined the effectiveness of external supportive resources, it also served as the internalized pathway through which the family environment shaped adolescent internalizing symptoms. Specifically, this study found that internalized stigma played a complementary mediating role between family support and internalizing symptoms. The findings indicated that family support alleviated internalizing symptoms not only by reducing individuals' internalized stigma, but also through other potential protective mechanisms, as indicated by its significant direct effect. These mechanisms may include fostering attachment security within the family, which provides a psychological safety net that may

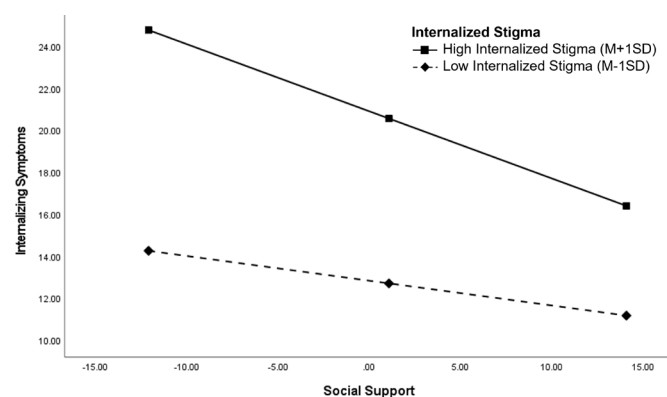


Figure 1: Simple slope analysis of the moderation effect of social support on the relationship between internalized stigma and internalizing symptoms. The relationship between social support and internalizing symptoms at high ($M + 1$ SD) and low ($M - 1$ SD) levels of internalized stigma. Abbreviations: Mean (M); Standard deviation (SD).

Effect Type	Path	B	SE	t	p	95% CI	
						LLCI	ULCI
Total effect	Family Support → Internalizing Symptoms	-.792	.154	-5.13	<.001	-1.098	-.486
Direct effect	Family Support → Internalizing Symptoms	-.402	.171	-2.35	.021	-.741	-.063
Indirect effect	Family Support → Internalized Stigma → Internalizing Symptoms	-.390	.114	-	-	-.633	-.193

Table 5: Complementary mediation analysis of internalized stigma between family support and symptoms. Using Hayes' PROCESS macro (Model 4), we analyzed the indirect effect of internalized stigma (M) on internalizing symptoms (Y) as a mediating factor. Abbreviations: Unstandardized coefficient (B); Standard Error (SE); Confidence interval (CI).

operate independently of stigma reduction (12).

Finally, our study also focused on a serial mediation model linking public stigma to internalizing symptoms. Specifically, heightened perceptions of public stigma correlated with increased internalized stigma, which in turn related to help-seeking barriers. These barriers then predicted worsening internalizing symptoms. This model highlighted the internalization process of stigma, where individuals' perceptions of public stigma might influence resource utilization and mediate emotional experiences and behaviors. This finding aligns with the theoretical model of internalized stigma (13).

This study demonstrated that addressing internalizing symptoms, particularly in contexts such as C-PTSD, requires not only alleviating symptom distress but also prioritizing trauma-informed care and cognitive restructuring, while paying attention to experiences related to stigma. Efforts to enhance the quality of social support, reduce stigmatizing environments, and lower barriers to seeking help—particularly within family contexts—may help mitigate the accumulation of stigma-related risks. For example, international initiatives including the “Helping Adolescents Thrive” (HAT) program, jointly launched by the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF), identify school-based social and emotional learning, caregiver support, and the elimination of stigma as key strategies for promoting adolescent mental health (14).

However, several limitations should be considered when interpreting the findings of this study. First, the research focused exclusively on public stigma related to mental

Path	B	SE	p	95% CI	
				LLCI	ULCI
Total effect	-.367	.156	.020	-.677	-.058
Direct effect	-.060	.135	.661	-.328	.209
Total Indirect effect	-.308	.101	-	-.516	-.128
Ind 1: Public Stigma → Internalized Stigma → Internalizing Symptoms	-.200	.084	-	-.385	-.060
Ind 2: Public Stigma → Help-seeking Barriers → Internalizing Symptoms	-.034	.056	-	-.165	.056
Ind 3: Public Stigma → Internalized Stigma → Help-seeking Barriers → Internalizing Symptoms	-.074	.034	-	-.154	-.021

Table 6: Serial mediation analysis of the stigma internalization process. The chained pathways from public stigma (X) to internalizing symptoms (Y) through internalized stigma (M1) and help-seeking barriers (M2) were tested using PROCESS Model 6. Direct and indirect effects were calculated to illustrate the sequential transmission of stigma-related stress. Abbreviations: Indirect effect (Ind); Unstandardized coefficient (B); Standard Error (SE); Confidence interval (CI)

disorders. Future studies should further examine stigma originating from more proximal contexts, particularly within the family, and how such stigma contributes to the internalization process. Furthermore, we evaluated a relatively small sample size of participants and relied on convenience sampling, which may have introduced selection bias. Additionally, self-report measures may be subject to the influence of individual subjective factors. For example, recent negative experiences may cause individuals to provide more negative self-assessments than usual (15). Social desirability bias refers to the tendency of individuals to present themselves in a way that conforms to social norms or makes them more likable, which may lead to underreporting of negative information (16). Therefore, future research should expand sample sizes and conduct further experimental studies. Finally, although our findings suggested that internalized stigma influenced individuals' utilization of resources and psychological interventions, cross-sectional data did not permit causal conclusions. Future research should conduct longitudinal tracking studies to observe this process in greater detail.

Despite these limitations, this study contributes to a more nuanced understanding of how stigma-related experiences are internalized and shape psychological behaviors. By highlighting the chained pathways involving internalized stigma and barriers to help-seeking, this research provides a conceptual foundation for future studies and interventions targeting stigma-related mental health risks.

MATERIALS AND METHODS

Measures

The Questionnaire on Mental Illness-Related Attitudes (QMIA), Perceived Social Support Scale (PSSS), Patient Health Questionnaire-9 (PHQ-9), Generalized Anxiety Disorder-7 (GAD-7), as well as a self-designed Brief Attitude Questionnaire (BAQ) was used to assess study variables (17-20).

Specifically, the QMIA was employed to assess adolescents' perceived societal attitudes toward mental illness. Reverse scoring was applied, such that a more positive attitude toward mental illness was indicated by a higher QMIA total score.

The quality of perceived social support was assessed using the PSSS. This scale is structured around three dimensions: support from family, friends, and other sources. Higher quality of perceived social support is indicated by higher total PSSS score.

To represent the overarching construct of internalizing symptoms, a composite score was calculated by summing the total PHQ-9 and GAD-7 scores for each participant (21). A greater overall severity of internalizing symptoms is reflected



Figure 2: Statistical model of the serial mediation pathways. The path diagram displays the standardized coefficients for the relationships between public stigma, internalized stigma, help-seeking barriers, and internalizing symptoms. Solid lines represent significant paths (95% CI not straddling zero), and the specific indirect effect through the chained mediators is highlighted, ***p < 0.001, n.s. = non-significant.

by higher scores on this composite index.

The BAQ, a self-assessment scale, was independently developed for this study to evaluate psychological behaviors associated with psychological distress. Two subscales (BAQ-A and BAQ-B) are included in this scale, by which the degree of internalized stigma and help-seeking behaviors are respectively examined. A Likert-type response format was adopted. Higher BAQ-A scores indicate higher levels of internalized stigma, whereas higher BAQ-B scores indicate greater barriers to help-seeking.

Good internal consistency was demonstrated by the BAQ in the present study (BAQ-A: Cronbach's $\alpha = 0.831$; BAQ-B: Cronbach's $\alpha = 0.825$; **Table 1**). Construct validity was supported by exploratory factor analysis. Satisfactory KMO values and significant Bartlett's tests of sphericity were obtained, indicating that the data were suitable for factor analysis.

Participants

The questionnaires were created using Microsoft Forms on forms.office.com and distributed to high school students across different schools via convenience sampling through inter-school social media platforms. Participation in this survey was entirely voluntary. Before beginning, participants were required to read the informed consent form and confirm their agreement to its terms. This study included 98 participants aged 15–18 ($M = 16.71$, $SD = 0.746$), the majority of whom were female (63.3%).

Data analysis strategy

Statistical analyses were performed using SPSS version 27.0. Descriptive statistics and Pearson correlation analyses were first performed to examine relationships among study variables. Normality was assessed using the Kolmogorov–Smirnov test, along with skewness and kurtosis indices. To test the hypothesized moderation, mediation, and serial mediation models, we utilized the PROCESS macro (Model 1, Model 4, and Model 6) developed by Hayes. Significance was determined using 5,000 bootstrap samples to generate 95% bias-corrected confidence intervals.

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APPENDIX

Informed consent form

Thank you very much for taking part in our questionnaire, which is a questionnaire about perceptions and attitudes towards mental health issues, and is intended for academic research only. We have a duty and responsibility to keep all your responses confidential and we will not store your demographic information and your responses will be used for statistical analysis only, when your responses will be anonymously marked.

Participation is purely voluntary and you may withdraw from this study at any time. There are no anticipated personal risks or benefits for all participants. By submitting your responses, you are indicating that you have read the informed consent form and agree to it.

I Demographic information

1. Age (fill in the blanks):
2. Gender identity:
 - a. Male
 - b. Female
 - c. Gender non-binary
 - d. Prefer not to answer
 - e. Other
3. Highest level of education:
 - a. Lower secondary and below
 - b. High school, vocational high school, secondary school
 - c. University specialization
 - d. Undergraduate
 - e. Master's degree and above

II Questionnaire on mental illness-related attitudes (QMIA)

1. Most people are willing to befriend someone who has had a mental illness.
 - a. Completely agree
 - b. Basically agreement
 - c. Neutral
 - d. Basically disagreement
 - e. Totally disagreement
2. Most people believe that people who have been in psychiatric hospitals are of similar intelligence to the general population.
 - a. Completely agree
 - b. Basically agreement
 - c. Neutral
 - d. Basically disagreement
 - e. Totally disagreement
3. Most people believe that people who have suffered from mental illness are as trustworthy as the general population.
 - a. Completely agree
 - b. Basically agreement
 - c. Neutral
 - d. Basically disagreement
 - e. Totally disagreement
4. Most people believe that a fully recovered person with mental illness can work as a public-school teacher.
 - a. Completely agree
 - b. Basically agreement
 - c. Neutral
 - d. Basically disagreement
 - e. Totally disagreement
5. Most people believe that a visit to a psychiatric hospital is a sign of personal failure.
 - a. Completely agree
 - b. Basically agreement
 - c. Neutral
 - d. Basically disagreement
 - e. Totally disagreement
6. Most people would not ask a person with a history of

mental illness to look after their child, even if he or she had been perfectly normal for some time.

- a. Completely agree
- b. Basically agreement
- c. Neutral
- d. Basically disagreement
- e. Totally disagreement

7. Most people do not think much of people who have been in psychiatric hospitals.

- a. Completely agree
- b. Basically agreement
- c. Neutral
- d. Basically disagreement
- e. Totally disagreement

8. Most organizations will employ a fully recovered psychiatric patient.

- a. Completely agree
- b. Basically agreement
- c. Neutral
- d. Basically disagreement
- e. Totally disagreement

9. Most establishments will not consider accepting a job application from a mentally ill person, even if he or she has fully recovered, if other options are available.

- a. Completely agree
- b. Basically agreement
- c. Neutral
- d. Basically disagreement
- e. Totally disagreement

10. Most people in my community would treat a person with mental illness as they would any other person.

- a. Completely agree
- b. Basically agreement
- c. Neutral
- d. Basically disagreement
- e. Totally disagreement

11. Most young women are reluctant to date someone who has suffered from a mental illness.

- a. Completely agree
- b. Basically agreement
- c. Neutral
- d. Basically disagreement
- e. Totally disagreement

12. Most people do not take a person's opinion seriously once they know that he or she has been institutionalized.

- a. Completely agree
- b. Basically agreement
- c. Neutral
- d. Basically disagreement
- e. Totally disagreement

III Perceived Social Support Scale (PSSS)

1. There is a special person who is around when I am in need.

- a. Very Strongly Disagree

- b. Strongly Disagree
- c. Mildly Disagree
- d. Neutral
- e. Mildly Agree
- f. Strongly Agree
- g. Very Strongly Agree

2. There is a special person with whom I can share my joys and sorrows.

- a. Very Strongly Disagree
- b. Strongly Disagree
- c. Mildly Disagree
- d. Neutral
- e. Mildly Agree
- f. Strongly Agree
- g. Very Strongly Agree

3. My family really tries to help me.

- a. Very Strongly Disagree
- b. Strongly Disagree
- c. Mildly Disagree
- d. Neutral
- e. Mildly Agree
- f. Strongly Agree
- g. Very Strongly Agree

4. I get the emotional help and support I need from my family.

- a. Very Strongly Disagree
- b. Strongly Disagree
- c. Mildly Disagree
- d. Neutral
- e. Mildly Agree
- f. Strongly Agree
- g. Very Strongly Agree

5. I have a special person who is a real source of comfort to me.

- a. Very Strongly Disagree
- b. Strongly Disagree
- c. Mildly Disagree
- d. Neutral
- e. Mildly Agree
- f. Strongly Agree
- g. Very Strongly Agree

6. My friends really try to help me.

- a. Very Strongly Disagree
- b. Strongly Disagree
- c. Mildly Disagree
- d. Neutral
- e. Mildly Agree
- f. Strongly Agree
- g. Very Strongly Agree

7. I can count on my friends when things go wrong.

- a. Very Strongly Disagree
- b. Strongly Disagree
- c. Mildly Disagree
- d. Neutral
- e. Mildly Agree

- f. Strongly Agree
- g. Very Strongly Agree

8. I can talk about my problems with my family.

- a. Very Strongly Disagree
- b. Strongly Disagree
- c. Mildly Disagree
- d. Neutral
- e. Mildly Agree
- f. Strongly Agree
- g. Very Strongly Agree

9. I have friends with whom I can share my joys and sorrows.

- a. Very Strongly Disagree
- b. Strongly Disagree
- c. Mildly Disagree
- d. Neutral
- e. Mildly Agree
- f. Strongly Agree
- g. Very Strongly Agree

10. There is a special person in my life who cares about my feelings.

- a. Very Strongly Disagree
- b. Strongly Disagree
- c. Mildly Disagree
- d. Neutral
- e. Mildly Agree
- f. Strongly Agree
- g. Very Strongly Agree

11. My family is willing to help me make decisions.

- a. Very Strongly Disagree
- b. Strongly Disagree
- c. Mildly Disagree
- d. Neutral
- e. Mildly Agree
- f. Strongly Agree
- g. Very Strongly Agree

12. I can talk about my problems with my friends.

- a. Very Strongly Disagree
- b. Strongly Disagree
- c. Mildly Disagree
- d. Neutral
- e. Mildly Agree
- f. Strongly Agree
- g. Very Strongly Agree

IV Patient Health Questionnaire-9 (PHQ-9)

Tip: Recall where you've been for the last two weeks and choose the option that works best for you.

1. Little interest or pleasure in doing things?

- a. Not at all
- b. Several days
- c. More than half the days
- d. Nearly every day

2. Feeling down, depressed, or hopeless?

- a. Not at all
- b. Several days

- c. More than half the days
- d. Nearly every day

3. Trouble falling or staying asleep, or sleeping too much?

- a. Not at all
- b. Several days
- c. More than half the days
- d. Nearly every day

4. Feeling tired or having little energy?

- a. Not at all
- b. Several days
- c. More than half the days
- d. Nearly every day

5. Poor appetite or overeating?

- a. Not at all
- b. Several days
- c. More than half the days
- d. Nearly every day

6. Feeling bad about yourself, or that you are a failure, or have let yourself or your family down?

- a. Not at all
- b. Several days
- c. More than half the days
- d. Nearly every day

7. Trouble concentrating on things, such as reading the newspaper or watching television?

- a. Not at all
- b. Several days
- c. More than half the days
- d. Nearly every day

8. Moving or speaking so slowly that other people could have noticed? Or the opposite - being so fidgety or restless that you have been moving around a lot more than usual?

- a. Not at all
- b. Several days
- c. More than half the days
- d. Nearly every day

9. Thoughts that you would be better off dead, or of hurting yourself in some way?

- a. Not at all
- b. Several days
- c. More than half the days
- d. Nearly every day

V Generalized Anxiety Disorder-7 (GAD-7)

Tip: Recall where you've been for the last two weeks and choose the option that works best for you.

1. Feeling nervous, anxious, or on edge?

- a. Not at all
- b. Several days
- c. More than half the days
- d. Nearly every day

2. Not being able to stop or control worrying?

- a. Not at all
 - b. Several days
 - c. More than half the days
 - d. Nearly every day
3. Worrying too much about different things?
- a. Not at all
 - b. Several days
 - c. More than half the days
 - d. Nearly every day
4. Trouble relaxing?
- a. Not at all
 - b. Several days
 - c. More than half the days
 - d. Nearly every day
5. Being so restless that it's hard to sit still?
- a. Not at all
 - b. Several days
 - c. More than half the days
 - d. Nearly every day
6. Becoming easily annoyed or irritable?
- a. Not at all
 - b. Several days
 - c. More than half the days
 - d. Nearly every day
7. Feeling afraid as if something awful might happen?
- a. Not at all
 - b. Several days
 - c. More than half the days
 - d. Nearly every day
- VI Brief Attitude Questionnaire (BAQ)**
- A. Internalized stigma
1. I feel ashamed because I have to deal with mental health problems.
- a. Completely agree
 - b. Basically agreement
 - c. Neutral
 - d. Basically disagreement
 - e. Totally disagreement
2. If I admit to having mental health problems, others will see me as a failure.
- a. Completely agree
 - b. Basically agreement
 - c. Neutral
 - d. Basically disagreement
 - e. Totally disagreement
3. I believe that people with mental illnesses are less capable than those without.
- a. Completely agree
 - b. Basically agreement
 - c. Neutral
 - d. Basically disagreement
 - e. Totally disagreement
4. I sometimes feel that my psychological distress is my own fault.
- a. Completely agree
 - b. Basically agreement
 - c. Neutral
 - d. Basically disagreement
 - e. Totally disagreement
5. I have or have had psychological distress but did not seek help for fear that others would find out.
- a. Completely agree
 - b. Basically agreement
 - c. Neutral
 - d. Basically disagreement
 - e. Totally disagreement
- B. Barriers to help-seeking
6. I have suspected that I might have a mental illness due to information found online (e.g., social media content).
- a. Completely agree
 - b. Basically agreement
 - c. Neutral
 - d. Basically disagreement
 - e. Totally disagreement
7. I have sometimes strongly suspected that I have a specific disorder (e.g., MDD, BD) and proactively searched online to confirm it.
- a. Completely agree
 - b. Basically agreement
 - c. Neutral
 - d. Basically disagreement
 - e. Totally disagreement
8. Due to noticing my own emotional dysregulation, I have proactively searched online for and used psychological assessment tools (e.g., PHQ-9).
- a. Completely agree
 - b. Basically agreement
 - c. Neutral
 - d. Basically disagreement
 - e. Totally disagreement
9. My mental well-being has been troubled by at least one of the following: mental health stigma, low-quality interpersonal relationships, a dysfunctional family environment, or information about mental health from external sources (including online channels).
- a. Completely agree
 - b. Basically agreement
 - c. Neutral
 - d. Basically disagreement
 - e. Totally disagreement