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## Introduction

According to the World Health Organization (WHO), 450 million people worldwide suffer from mental illnesses, and one in every four people will be affected at some point in their lives. This stigma can have a negative influence on the lives of people with mental disorders, such as judgment, social isolation, and an increased risk

of suicide. Stigma towards mental disorders can be defined as negative and discriminatory attitudes towards people with mental disorders. This stigma can come from various sources, including family, friends, society, and mass media. The stigma against mental disorders in Indonesia has become a serious concern for the government and society (Davies, 2022).

Numerous universities worldwide have implemented admissions policies to support students with disabilities and promote an inclusive learning environment. Sustainable Development Goal 3 (SDG3) emphasizes the importance of mental health as a critical component of overall well-being at all stages of life, which is consistent with these policies (Davies, 2022).

While poor mental health creates difficulties in day-to-day living and impacts one's emotional, social, financial, and physical well-being, good mental health empowers people to make constructive contributions to society. Consequently, mental health remains a significant global public health concern (Liu et al., 2024). Research has shown that younger college students are more likely than older students to suffer from mental health problems, which emphasizes the need for increased support in educational settings (Moudatsou et al., 2020; Staiger et al., 2018). In social psychiatry, the term stigma refers to a set of negative factors associated with individuals with a mental disorder. Specifically, according to the World Health Organization, stigma represents "a mark of shame, disgrace, or disapproval that leads to rejection, discrimination, and exclusion from social contexts and situations" (Ekman & Krasner, 2017; Thornicroft, 2018).

Attitudes regarding mental disease are greatly influenced by the stigma associated with mental health, especially among students. Numerous students have stigmatizing views about people with mental diseases, according to research (Ekman & Krasner, 2017). Such stigma can have a detrimental effect on the academic and social experiences of students who are dealing with mental health issues. A critical determinant of the well-being of students with severe mental illness is peer interactions (Thornicroft, 2018). This emphasizes how student populations have a significant impact on how mental illnesses are treated and how society views them more broadly. Students who are sympathetic and inclusive are more likely to help those who suffer from mental illnesses and support initiatives that make it easier for them to get the care and services they need. Due to social, political, and cultural considerations, stigma can be a significant deterrent for students seeking help (Carrara et al., 2019).

Even though the number of students with disabilities has increased dramatically worldwide, they nevertheless face more obstacles in school than their peers without

impairments. These difficulties restrict access to postsecondary education and career possibilities, and they also contribute to disparities in academic achievement (Lien et al., 2021). Eleven percent of undergraduate students say they have a condition or impairment that limits their capacity to engage in social and academic activities fully. Students' quality of life (QOL) is significantly impacted by mental health disorders in particular (Holmqvist, 2020).

A person's physical health, social relationships, academic achievement, and general well-being are all impacted by psychotic disorders. Symptoms like delusions and hallucinations frequently cause social exclusion and misunderstanding. Patients' willingness to seek help is influenced by several factors, including stigma, attitudes, and the empathy of mental health experts, even in the face of excellent therapies (Gonzalez et al., 2017).

A higher level of internalized stigma was associated with greater perceived discrimination, lower social support, lower family income, older age, and distancing coping. These factors may be essential to consider for developing tailored interventions in the future. (Yanos et al., 2001)

In patient care, empathy—the capacity to comprehend and experience another person's life on an emotional and cognitive level (Corrigan et al., 2014)—is essential. An empathic therapist can increase participation in treatment, promote hope, and lessen feelings of loneliness (Corrigan et al., 2014). According to research, patient outcomes improve and treatment effectiveness and quality of care are enhanced when mental health care workers have positive attitudes and higher levels of empathy (Dalky et al., 2020; Derksen et al., 2013). However, because people with psychotic disorders are frequently associated with negative stereotypes such as "unpredictable," "violent," or "aggressive," stigma among healthcare workers can still be problematic (Rössler, 2016). People may be deterred from obtaining therapy due to this stigma, as they fear discrimination (Koschorke et al., 2021).

Even among medical experts, psychotic disorders are one of the most stigmatized mental health problems, according to a systematic evaluation of 38 studies (Yanos et al., 2001). Although stigma is often lower among mental health professionals (Corrigan et al., 2014), this is frequently because they deal directly with patients

(Derksen et al., 2013). On the other hand, professionals who experience associated stigma are more depersonalized, emotionally spent, and less satisfied with their jobs. Additionally, it may make patients feel more ashamed of themselves, which would make their recuperation much more difficult (Dalky et al., 2020). Notwithstanding these results, it is still unknown how stigma and factors like age, occupation, education, and years of experience among mental health practitioners relate to one another (Yanos et al., 2001).

Cultural differences have a profound impact on people's perceptions and experiences with severe mental disorders (SMI), including schizophrenia. According to research, social and environmental factors influence both the risk and outcome of psychotic diseases. Individuals with schizophrenia in developing countries, such as Nigeria and India, frequently have better prognoses—characterized by lower mortality rates, fewer hospitalizations, and improved overall functioning—than those in developed countries, such as the United Kingdom and the United States (Rössler, 2016). Furthermore, non-affective acute remitting psychosis (NARP), a subtype of schizophrenia characterized by prolonged symptom-free intervals, is more prevalent in developing countries. This indicates that cultural influences, particularly gene-environment interactions, have a substantial impact on mental health outcomes. An aspect not to be underestimated is "diagnostic overshadowing," the underestimation of physical ailments in people with mental disorders (Jablensky & Sartorius, 2008). Without appropriate intervention measures, such as content moderation and psychological support, social media can become an echo chamber for these behaviors, exacerbating problems instead of providing a way out (Silva et al., 2017).

The presence of stigma among classmates frequently hinders students from getting the mental health care they require, owing to fear of being judged. Addressing the root causes of stigma and adopting interventions in student populations can help eliminate obstacles to mental health care (Lien et al., 2021). Fostering an open and tolerant campus environment can lead to improved support networks, allowing students to access needed mental health resources without fear of prejudice.

Universities can play a crucial role in creating a more inclusive environment that encourages students to seek

help, thereby enhancing their academic and social well-being.

This study aims to assess the extent of mental disease stigma among students, providing insight into how they perceive mental health concerns and their prevalence.

2. Identify variables contributing to mental illness stigma among students. This entails identifying the key factors—whether psychological, social, or physical—that contribute to the stigma associated with mental illness.

3. Investigate the association between psychological, social, and physical aspects and the stigma of mental illness among students.

## Methods and Materials

### Study Design and Participants

A cross-sectional study, a descriptive design was used for this investigation. This design is ideal for determining the link between variables at a specific point in time, enabling a comprehensive description of the level of stigma and its associated components within the student population.

The study was carried out at the University of Baghdad in Iraq, which provides an essential backdrop for understanding how university students in Iraq perceive and react to mental illness stigma.

The sample includes both male and female students, with a higher proportion of females (61.7%) compared to males (38.3%). Regarding marital status, the majority of participants are married (91.7%), while 7.9% are single and 0.3% are divorced. In terms of financial status, 70.6% report having sufficient income, while 29.4% find their income inadequate.

The majority of students (87.8%) are enrolled in morning study programs, whereas 12.2% attend evening studies. Regarding employment status, most students (69.0%) are full-time students, 25.7% are self-employed, and 5.3% are formally employed.

To determine the appropriate sample size, Slovin's formula was used:

$$n = N / (1 + Ne^2)$$

Where  $n$  represents the required sample size,  $N$  is the total student population, and  $e$  is the margin of error (set at 0.05). This method ensures that the sample is representative of the target population.

$$n=1+1200\times0.0521200=1+31200=41200=300$$

A non-probability convenience sampling technique was employed to pick 300 University of Baghdad students. This strategy provides a realistic and representative sample, but it may limit generalizability. The sample size is sufficient to yield relevant results.

### *Instruments*

The Research and Ethics Committee approved the study involving students in the College of Nursing at the University of Baghdad. Tools include the interviewing questionnaire (Tool I).

The interview questionnaire was explicitly designed to collect data relevant to the study's objectives. The questionnaire has two parts:

1. Part 1 includes socio-demographic information such as age, education level, monthly household income, number of siblings, and other critical personal factors.

2. In Part 2, the WHOQOL-BREF scale (World Health Organization, 2004) was used to assess quality of life, which includes physical and psychological well-being.

#### *Social relationships. Environmental factors.*

- Respondents rated satisfaction on a 5-point Likert scale (1 = dissatisfied, 5 = fully satisfied). The scale's good internal consistency ( $\alpha = .91$ ) indicates that it accurately measures quality of life.

- The Stigma Scale captures the feelings and experiences of persons suffering from psychiatric conditions, with a focus on society's reactions. This measure was developed through qualitative research, which included in-depth interviews with persons who had faced mental health issues. It comprises 28 questions, each of which is graded on a scale of 0 to 4, with higher scores indicating greater stigma.

- Questions are scored as "A" for agreement and "D" for disagreement.

- The scale evaluates the social and psychological effects of stigma, offering insights into societal views towards individuals with mental health disorders.

Participants are advised to respond based on their initial perceptions, ensuring honesty in their representation of their experiences with stigma. This measure can help identify areas for intervention and guide future efforts to reduce mental health stigma in society and healthcare settings.

A committee of five mental health nursing professionals from the College of Nursing at the University of Baghdad assessed the study tools to ensure their validity. The tools were revised based on expert comments to ensure their relevance and correctness.

Cronbach's Alpha test was used to assess the internal consistency and dependability of the study tools, yielding a reliability coefficient of 0.84. This suggests that the instruments are highly consistent and reliable. Cronbach's Alpha scores greater than 0.7 are deemed acceptable, and a coefficient of 0.84 indicates that the questionnaire accurately measures the target constructs. This level of reliability improves confidence in the accuracy of the collected data and supports the study's findings.

### *Data Analysis*

During the preliminary phase, the researcher conducted a thorough evaluation of relevant literature, which included books, scholarly articles, and both local and international journals. The goal was to build upon existing knowledge and identify gaps in the literature.

This review helps to modify the study methodology and ensure that the research is anchored in existing knowledge of mental illness stigma.

#### *Pilot Study.*

A pilot study was conducted using 10% of the target sample (30 students) to determine the applicability and effectiveness of the research tools. The feedback from this pilot study was used to make required changes to the study instruments, ensuring that they are relevant and accurate for the full-scale study.

The fieldwork was carried out between October 2023 and January 2024. During this time, the researcher introduced themselves to the students of the University of Baghdad. The interview process included discussing each item on the questionnaire to verify that the students understood the questions and could reply correctly. Assistance was offered when needed, and each interview lasted around 30-40 minutes.

### *Findings and Results*

The findings of the data analysis are presented systematically in the following (Table 1):

**Table 1***Distribution of Students in the University of Baghdad by their Socio-demographic Variables (SDVs)*

SDVs	Classification	No.	%
Age (years)	$M \pm Std. Deviation$	$22.21 \pm 3.540$	
Sex	Male	116	38.3
	Female	187	61.7
Marital Status	Single	24	7.9
	Married	278	91.7
	Divorced	1	0.3
Monthly Income	Enough	214	70.6
	Not Enough	89	29.4
Type of Study	Morning	266	87.8
	Evening	37	12.2
Employment Status	Employed	16	5.3
	Self-employed	78	25.7
	Students	209	69.0

No. Number; % = Percentage; M = Mean; Std. Deviation = Standard deviation

**Table 2** presents the distribution of students at the University of Baghdad based on their socio-demographic variables (SDVs). The mean age of the students is  $22.21 \pm 3.540$  years, indicating that most participants are in their early twenties.

In terms of sex distribution, females (61.7%) constitute a larger proportion of the sample compared to males (38.3%). Regarding marital status, the majority of students are married (91.7%), while a small percentage are single (7.9%) or divorced (0.3%). In terms of

monthly income, 70.6% of students report having enough income, whereas 29.4% find their income insufficient.

The type of study is predominantly morning programs (87.8%), with a smaller portion enrolled in evening studies (12.2%). In terms of employment status, most students (69.0%) are full-time students, while 25.7% are self-employed, and a small fraction (5.3%) are formally employed.

**Table 2***Distribution of Mental Illness Stigma and Its Influencing Factors among Students in the University of Baghdad*

Factors	Mean $\pm$ Std. Deviation
Mental Illness Stigma	$48.79 \pm 6.811$
Physical Factors	$23.17 \pm 4.398$
Psychological Factors	$20.00 \pm 4.459$
Social Factors	$10.04 \pm 2.740$
Environmental Factors	$26.99 \pm 5.897$
Overall Factors	$84.96 \pm 14.439$

M: Mean for total score, Std. Deviation = Standard Deviation for total score

**Table 2** presents the distribution of mental illness stigma and its influencing factors among students at the University of Baghdad. The mean score for mental illness stigma is  $48.79 \pm 6.811$ , indicating a moderate level of stigma among students. Among the influencing factors, environmental factors have the highest mean ( $26.99 \pm 5.897$ ), suggesting that environmental conditions play a significant role in shaping stigma. Physical factors have a

mean of  $23.17 \pm 4.398$ , while psychological factors have a slightly lower mean of  $20.00 \pm 4.459$ , indicating their substantial influence. Social factors show the lowest mean ( $10.04 \pm 2.740$ ), suggesting a relatively minor but still notable contribution to stigma. The overall influencing factors have a mean score of  $84.96 \pm 14.439$ , reflecting the combined impact of these variables on mental illness stigma among university students.

**Table 3**

*Factors Influencing Mental Illness Stigma among Students in the University of Baghdad*

Variables	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error			
Physical factors	-.305	.088	-.197	-3.487	.001
Psychological factors	-.457	.084	-.299	-5.438	.000
Social factors	-.223	.052	-.241	-4.316	.000
Environmental factors	-.049-	.065	-.016-	-0.836-	.079
Overall Factors	-.135	.026	-.287	-5.189	.000

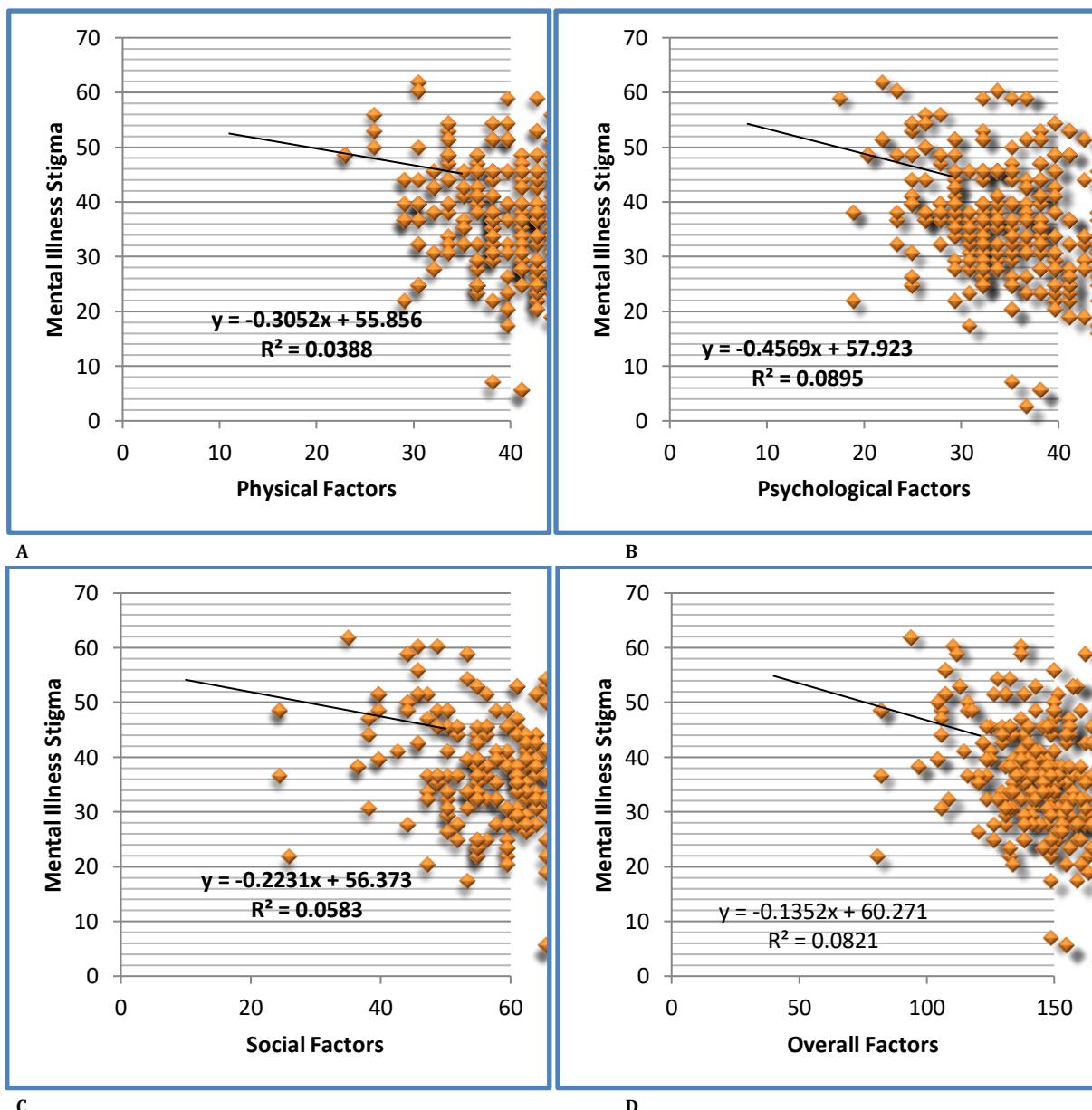
*Dependent Variable: Mental Illness Stigma*

**Table 3** presents the factors influencing mental illness stigma among students at the University of Baghdad. Among these factors, psychological aspects have the strongest negative association with mental illness stigma ( $B = -0.457$ ,  $Beta = -0.299$ ,  $T = -5.438$ ,  $p < 0.001$ ), indicating that better psychological well-being significantly reduces stigma. Overall factors also show a substantial negative influence ( $B = -0.135$ ,  $Beta = -0.287$ ,  $T = -5.189$ ,  $p < 0.001$ ), suggesting that a combination of various determinants contributes to lowering stigma levels. Additionally, social aspects demonstrate a significant negative relationship ( $B = -0.223$ ,  $Beta = -0.241$ ,  $T = -4.316$ ,  $p < 0.001$ ), implying that stronger social support plays a key role in reducing stigma. Lastly, physical aspects have the least impact but remain significant ( $B = -0.305$ ,  $Beta = -0.197$ ,  $T = -3.487$ ,  $p = 0.001$ ), highlighting the role of physical health in influencing stigma.

The figures illustrate the negative relationships between various influencing factors and mental illness stigma among university students. Figure 1 illustrates the relationship between physical factors and stigma, indicating a moderate adverse effect ( $R^2 = 0.0388$ ), suggesting that improved physical well-being is associated with reduced stigma. Figure 2 presents the strongest negative correlation, highlighting the impact of psychological factors ( $R^2 = 0.0895$ ), which indicates that better psychological health significantly reduces stigma. Figure 3 illustrates the role of social factors ( $R^2 = 0.0583$ ), highlighting that stronger social support is associated with lower stigma levels. Finally, Figure 4 represents the overall influence of all factors combined ( $R^2 = 0.0821$ ), reinforcing the idea that a holistic approach incorporating physical, psychological, and social well-being plays a crucial role in reducing mental illness stigma.

**Figure 1**

A) Physical Factors & Mental Illness Stigma B) Psychological Factors & Mental Illness Stigma C) Social Factors & Mental Illness Stigma D) Overall Factors & Mental Illness Stigma



### Discussion and Conclusion

Our study's socio-demographic characteristics share numerous similarities with those investigated in "Perceived Stigma Towards Mental Illness Among College Students of Western Nepal" by Pokharel and Pokharel (2017). Both studies acknowledge the impact of gender, marital status, wealth, and employment on perceptions of mental illness stigma. In all research, gender and socioeconomic level were identified as

significant factors in stigma, while marital status and employment also played crucial roles in determining views toward mental health. These findings indicate that the impact of socio-demographic characteristics on stigma may be similar across contexts, emphasizing the importance of culturally responsive approaches to addressing mental health stigma.

In addition to socio-demographic factors, Pokharel & Pokharel (2017) underline the role of awareness and education in reducing mental health stigma. They

discovered that those with higher levels of education have more positive attitudes regarding mental health, as opposed to people who know little about mental health disorders (Pokharel & Pokharel, 2017). This finding supports the value of educational interventions in reducing stigma, since increasing information can break down preconceptions and build empathy for persons with mental health issues.

. Furthermore, Pokharel & Pokharel emphasized that personal or family experience with mental illness is essential in developing perspectives. According to their findings, pupils who had personal or familial experiences with mental health concerns were more likely to have a favorable attitude regarding mental illness. This finding emphasizes the need to encourage open discussions about mental health, as personal exposure to mental illness appears to play a significant role in eliminating stigma. These findings are essential to our study because they highlight the importance of including educational programs and fostering conversation about mental health to confront and change deeply ingrained stigmatizing attitudes.

Stigma against mental disorders is a critical issue, given, on the one hand, its influence on the well-being and quality of life of people with mental illnesses (Dalky et al., 2020; Jablensky et al., 1992; Koschorke et al., 2021; Linney et al., 2020; Rössler, 2016) Valery & Prouteau, 2020, its influence on Valery & Prouteau, 2020), handhandery aspects & Prout the otherhan 20), Valery & Prouteau, 2020), hand and on t handhandh hande other. To our knowledge, there is currently no multi-component program aimed at reducing stigma associated with mental diseases. The findings of this study are consistent with those of (Ciobanu et. al., 2021), demonstrating the substantial impact of mental illness stigma on individuals, albeit with differences in the elements that have

In contrast, the previous study identified emotional and behavioral factors as the most strongly correlated with reduced quality of life among patients. It revealed moderate to significant negative correlations between the Affect and Behavior domains of the SSS-S scale and all domains of the WHOQOL-BREF ( $r = -0.634$  to  $-0.741$ ,  $p < 0.01$ ). The study found that cognitive elements had no significant impact on quality of life. The physical and psychological components had lower mean scores

(23.17  $\pm$  4.398 and 20.00  $\pm$  4.459, respectively) compared to the social factors.

These data suggest that social factors play a more significant role in generating stigma among students. In contrast, emotional and behavioral elements appear to have a greater impact on quality of life among patients. This disparity may reflect the differences in life experiences between students and those with persistent mental disorders, with students being more impacted by social beliefs and patients being more affected by their emotional and behavioral experiences related to the condition.

As a result, this research lends support to the idea that mental illness stigma spreads beyond patients to other populations, such as students. However, the factors driving stigma differ, emphasizing the importance of focused interventions that address the most significant concerns for each group. Improving social support may be important for students, whilst addressing emotional and behavioral components is critical for patients' quality of life.

The study "Stigma of Psychological Disorder among University Students" sheds light on the elements that influence mental illness stigma among students at the University of Baghdad. The study found a substantial negative correlation ( $B = -0.457$ ,  $B = -0.299$ ,  $t = -5.438$ ,  $p < 0.001$ ) between psychological well-being and stigma related to mental illness. Social elements have a substantial negative connection ( $B = -0.223$ ,  $Beta = -0.241$ ,  $T = -4.316$ ,  $p < 0.001$ ), indicating the need for strong social support in minimizing stigma. Physical elements had a substantial impact ( $B = -0.305$ ,  $B = -0.197$ ,  $t = -3.487$ ,  $p = 0.001$ ), underscoring the importance of physical health in determining stigma.

Our study's socio-demographic characteristics share numerous similarities with those investigated in "Perceived Stigma Towards Mental Illness Among College Students of Western Nepal" by Pokharel and Pokharel (2017). Both studies acknowledge the impact of gender, marital status, wealth, and employment on perceptions of mental illness stigma (Pokharel & Pokharel, 2017). In all research, gender and socioeconomic level were identified as significant factors in stigma, while marital status and employment also played crucial roles in determining views toward mental health. These findings indicate that the impact of socio-demographic characteristics on stigma may be similar

across contexts, emphasizing the importance of culturally responsive approaches to addressing mental health stigma.

These studies demonstrate the multiple nature of mental illness stigma and the need to address psychological, social, and physical issues to minimize stigma and improve quality of life. Interventions aimed at these areas may help reduce stigma and enhance well-being among people with mental health issues.

The stigma associated with mental illness remains a significant barrier to student well-being and access to mental health treatments. This study investigates the impact of psychological, social, and cultural factors on stigma, which can lead to presumptions and a reluctance to seek treatment. To address stigma, educational initiatives must foster understanding, empathy, and inclusivity. Universities play an essential role in creating a supportive atmosphere for students, thereby increasing their mental health and societal acceptance of mental illness.

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### Declaration of Interest

The authors of this article declared no conflict of interest.

### Ethical Considerations

The study protocol adhered to the principles outlined in the Declaration of Helsinki, which provides guidelines for ethical research involving human participants. Ethical considerations in this study included the fact that participation was entirely optional.

### Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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### Authors' Contributions

All authors equally contribute to this study.

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