

DEVELOPMENT OF THE MENTAL HEALTH STIGMA AND DISCRIMINATION SCALE

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Abstract

This study aimed to develop a valid and reliable measurement scale for assessing stigma and discrimination related to mental health among young adults in the specific context of Pakistan. The Mental Health Stigma Scale was developed through four stages, beginning with domain identification and item pooling, followed by expert content validation, pilot testing, and exploratory factor analysis. Data were collected from 300 young adults (150 male and 150 women) aged between 18 to 30 years ($M\text{ Age} = 20.76$, $S.D = 2.15$) using a convenient sampling method. Strong internal consistency, reliability was indicated by the 11-item Mental Health Stigma and Discrimination Scale's Cronbach's alpha coefficient of 0.702. The validity of the scale was established by exploratory factor analysis. Mental Health stigma and Discrimination scale is first scale, developed in Pakistan, that evaluates stigma and discrimination related to mental health. The scale consists of 11 items, with two culturally relevant sub-scales, i.e., "Mental Health Stigma and Discrimination" and "Stigma and Supernatural Attributions". The scale will prove to be a valuable tool in assessing the impact of stigma on individuals' mental well-being and in facilitating the development of tailored treatment plans that address the specific challenges associated with stigma in Pakistan.

Keywords: Mental Health Stigma, Discrimination, Supernatural attributions, Scale development

Introduction

Stigma is an attribute that people possess, that conveys an undervalued sense of self within a certain context (Crocker et al., 1998). Research has demonstrated that the adverse consequences of discrimination and stigma associated with psychological conditions exceeds the severity of the symptoms itself. The devaluation of mental illness is associated with wide range of social factors such as working conditions, access to health care, social and personal relationships (King et al., 2007; Link et al., 1997; Ritsher et al., 2003; Wahl, 1999). Ignorance, bias, and acts of discrimination against those who are mentally ill are characteristics of mental health stigma (MHS) (Thornicroft, 2006). Negative consequences of MHS could result in unfairness, marginalisation, and prejudice (Corrigan, 1998). Low confidence is associated with the stigma around psychological health, which can make it more challenging for an individual to secure housing, employment, or social opportunities (WHO, 2015). Allport (1954) defined discrimination as treating an individual or group of individuals unfairly in spite of their preferences. Prejudice towards people who suffer from severe psychological illnesses is a worldwide issue. Relatives and close friends (Henderson et al., 2012), the general population (Thornicroft, 2006), psychological

care experts (Wahl & Aroesty, 2010), doctors (Van Nieuwenhuizen et al., 2012), and organisations (Corrigan et al., 2004) are all potential sources of discrimination.

Stigma, defined as social discrimination and prejudice, has a significant impact on mental health care, hindering early identification and management of mental illnesses (Sartorius, 2007). The Surgeon General's 1999 study on mental health focuses on the significance of seeing mental health as a component of one's general well-being and health. According to the report, society cannot continue to treat mental health as a distinct and separate entity from physical health (US Department of Health and Human Services, 1999). This viewpoint emphasises the importance of a comprehensive approach to health care that includes mental health as a key component. The report emphasises the detrimental effects of the stigma on people with psychological illnesses. People who are stigmatized have less value in society and are unable to engage in social activities. This led to unfair treatment, isolation, and they face difficulties in receiving support and care they deserved (Link et al., 2004).

Assessing stigma and discrimination is necessary to comprehend stigma associated with psychological health conditions. Emphasising the significance of mental health can contribute to the development of programmes that lessen the stigma and negative beliefs related to mental health and raise people's understanding of psychological health. This can also help in persuading people to seek help when they need it which could result in early diagnosis and treatment which are crucial for betterment of people's wellbeing (Ahad et al., 2023). Social Identity Theory, proposed by Tajfel and Turner (1979), explains how group membership influences individuals' sense of self, behavior, and attitudes toward in-group and out-group members. This theory posits that individuals derive confidence and self-worth from their social identities, often leading to biases favoring in-groups and stigmatization of out-groups. Mental health stigma arises from social classification processes that marginalize individuals with psychological conditions, labeling them as abnormal and unfit for societal inclusion. Such perceptions foster discrimination, rejection, and alienation, further reinforcing negative stereotypes. Measures to assess mental health stigma, such as CAMI and OMI, have evolved since the 1960s, yet cultural adaptation of these scales remains limited, particularly in non-Western contexts. Research emphasizes the need for culturally valid stigma measures, either by adapting existing scales or developing new ones rooted in local experiences, to address the diverse manifestations of stigma and enhance their relevance across cultural settings.

Pakistan, home to over 200 million people, faces a significant mental health crisis, with over 10% of the population suffering from psychological disorders (Nisar et al., 2019). Poor awareness about mental health, compounded by cultural and religious beliefs, contributes to the stigma surrounding mental illnesses (Lauber & Rössler, 2007). Many Pakistanis attribute psychological disorders to supernatural causes, such as divine punishment, curses, or jinn possession, and rely on indigenous remedies rather than seeking professional help (Waqas, 2014; Zafar et al., 2008). Social stigma often prevents individuals from accessing mental health services due to fears of discrimination and breaches of confidentiality (Shafiq, 2020).

Research shows that the stigma attached to mental illnesses is deeply ingrained in Pakistani society, manifesting in derogatory terms like "pagal" and social isolation of affected individuals (Patel et al., 2008). Systematic reviews and studies also highlight a lack of understanding of biopsychosocial factors contributing to mental health issues, even among healthcare professionals, with over 50% of medical students holding negative attitudes towards mental illnesses (Javed et al., 2006). This stigma is exacerbated by the inadequate availability of psychological services, with only 800 practitioners serving the population and limited accessibility in rural areas (Sultan, 2011).

Existing scales, such as the Mental Illness Stigma Scale (Day et al., 2007), Perceived Devaluation and Discrimination Scale (Link et al., 2001), and Attitude Scale for Mental Illness (Jalan, 2018), have been validated for measuring mental health stigma. However, these tools are often limited by cultural specificity, having been developed in Western contexts, and may not accurately capture the unique cultural and social nuances of mental health stigma in Pakistan.

This study aims to address the gap by developing a culturally relevant scale to assess mental health stigma and discrimination in Pakistan. Guided by scale development methodologies (Morgado et al., 2017) and theoretical frameworks such as Social Identity Theory (Tajfel & Turner 1979), this research seeks to create a reliable tool tailored to the Pakistani context. This initiative is vital, as stigma remains the greatest barrier to improving mental health care and awareness (DHHS, 1999), particularly in culturally diverse and underserved settings like Pakistan. The main objective of this research is to develop a culturally relevant measure of Mental Health Stigma and Discrimination Assessment Scale for Pakistan based on the Social Identity Theory, developed by Henri Tajfel and John Turner, 1979

Methodology and Results

Stage 1

Domain Identification and Item Pooling

In the first stage, a focus group interview with ten young adults (5 men and 5 women) was carried out to address the topic of mental health stigma and discrimination. The purpose of this interview was to gain such knowledge about mental health stigma and discrimination that is culturally relevant. In this interview, participants were asked to share their opinions, point of view, experiences, and their beliefs related to mental health stigma and discrimination. Ten participants aged 18-30 were selected conveniently for the interview from COMSATS University Islamabad, Lahore Campus. A semi-structured questionnaire of 10 questions was designed to be used through out the interview session. The session lasted hour and a half and was audiotaped. A moderator along with the researcher was present during the interview to facilitate the process and highlight key aspects. Before the interview, the participants were given the brief Urdu explanation about the phenomenon. This Qualitative analysis was conducted through semi structured interview, notes, and audio. This analysis generated total of 26 items.

Stage 2

Content Expert Validation

When 26 culturally relevant items were generated, the assessment scale was typed out in the form of five-point Likert scale with the values ranging from 1-5 where, 1= Very weak and 5= Very Strong. The Scale was then presented to experts so they could evaluate the question's content validity. Two of experts held Ph.D.'s, one held an M.S., and two held MPhils in various fields of psychology. They were requested to assess the items based in their level of difficulty, accuracy, and applicability to the relevant construct. Psychologists were also asked to modify the items that were confusing, unclear, inappropriate, or having two meanings. After content validation, item numbers 6, 17, 23, 24 and 25 were discarded and Scale finalize for Pilot testing had 21 items.

Stage 3

Pilot Testing

Participants

A sample of 150 young adults aged 18 to 30 (M Age = 20.76, S.D = 2.15), were selected from different departments of COMSATS University Islamabad, Lahore Campus through convenient sampling for pilot testing.

Procedure

For the pilot testing, a 21-item scale on 5 point-Likert Scale ranging from 1-5 where 1- Totally disagree, 2- Disagree, 3-Neither Agree nor Disagree, 4- Agree and 5- Totally Agree, was used to evaluate the mental health stigma and discrimination. The participants were given consent form explaining the purpose of research before the scale was administered. The participants were asked to sign the consent form after being briefed about the purpose and nature of study. Age, gender, date of birth, birth order, religion, employment status, family structure, number of siblings, mother language, place of residence, and monthly income were all listed on the demographic sheet which was given with the 21-item measure. Participants were asked to rate the items according to them and were also informed that they could withdraw from the research at any moment.

Results

Cronbach's Alpha reliability measure was used to evaluate the scale's reliability. Results were computed using IBM SPSS Software version 26. The 21-item scale's reliability analysis yielded a Cronbach's alpha of 0.61, which was insufficient for a scale that could be considered reliable. Ten items were discarded as a result of this analysis: items 4, 5, 6, 7, 8, 16, 17, 18, 19, and 20. After eliminating these items, 11 items in total were remained and the Cronbach's Alpha of 11-item Scale is 0.702, indicating strong reliability.

Table-1

Internal consistency of the Mental Health Stigma and Discrimination Scale after Pilot Study

Cronbach's Alpha Based on standardized		
<i>Cronbach's Alpha</i>	Items	No. of Items
.702	.706	11

Note. N = 150

Table-2

Item-total Statistics of Mental Health Stigma and Discrimination Scale

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Item 1	26.89	41.626	.281	.179	.697
Item 2	27.45	41.886	.412	.264	.672
Item 3	27.47	42.116	.406	.314	.673
Item 9	26.27	45.462	.253	.265	.695
Item 10	27.02	42.127	.438	.361	.669
Item 11	26.75	43.919	.293	.243	.690
Item 12	26.87	42.653	.327	.153	.685
Item 13	27.49	40.815	.471	.265	.662
Item 14	27.33	40.183	.402	.216	.672
Item 15	27.37	42.449	.381	.256	.676
Item 21	26.43	45.065	.196	.122	.705

Note. N = 150

Stage 4

Exploratory Factor Analysis

Participants

The sample comprised of three hundred young adults (150 men and 150 women) aged 18 to 30 years (M Age = 20.76, S.D = 2.15). Convenient sampling technique was used to collect data from different private and government universities of Lahore, Pakistan.

Inclusion Criteria

- Participants must be presently residing in Lahore, Pakistan, or have a close connection with the city.
- Participants should come from a variety of socio-economic backgrounds, ethnicities, and urban and rural areas in Lahore to gather a wide range of perception and experiences of stigma regarding mental illness.
- Participants should express a voluntary and informed willingness to participate in the research study.
- To take part in the study, participants must be cognitively capable of understanding and giving informed permission.

Exclusion Criteria

- Individuals with severe cognitive impairments that affects the capacity to understand the research's purposes and give informed consent.
- Individuals who fail to meet the defined requirements for inclusion, such as those who do not reside in Lahore.

Procedure

First, consent for collecting data was requested from different government and private universities. An 11-item scale on Likert scale, with following options: 1-Totally Disagree, 2-Disagree, 3-Neither Agree nor Disagree, 4- Agree, and 5-Totally Disagree, was used which was finalized after pilot testing. Before the scale was given out, Participants were asked about their willingness to participate in research and were informed about the purpose of the study. Age, gender, date of birth, birth order, religion, employment status, family structure, number of siblings, mother language, place of residence, and monthly income were all listed on the demographic sheet which was given with the 11-item measure. The items were asked to be rated by the participants, who were also told that they could withdraw from the study at any time.

Results

The factor analysis is the final step in the process of scale development, verifying the item structure and finalising the items for scale. Exploratory factor analysis was performed on Mental Health Stigma and Discrimination Scale to confirm the scale's items. Through Exploratory Factor Analysis 11 items were assessed. First step for EFA, was to check the sampling adequacy, for this purpose the Kaiser-Meyer-Olkin measure of Sampling Adequacy was used, which showed a KMO value of .806, indicating a high level of adequacy. This demonstrated that factor analysis can be performed on completed sample. Every item displayed some variance with the others because most of the commonalities had values greater than 0.3. Hence, factorial analysis was carried out on 11 items.

The scree plot of 11 items illustrates the variances among items and showed that two factors should be kept in Scale. To find the factor underlying the Mental Health Stigma and Discrimination Scale, rotated factor matrix was carried out by suppressing values below .30. Results show that there are two factors, factor one named as Mental Health Stigma and Discrimination, having 7 items i.e.,

1, 2, 3, 7, 8, 9, and 10 and factor 2 named as Stigma and Supernatural Attribution, having 4 items i.e., 4, 5, 6, and 11.

Table-3

KMO and Barlette's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy. .81		
Bartlett's Test of Sphericity	Approx. Chi-Square	539.35
	df	55
	Sig.	.000

Note. N= 300

The Measure of Samling Adequacy was performed to assess whether the data was acceptable for factor analysis. The value of KMO Measure of Sampling Adequacy is .81, indicating a high level of adequacy. This result is within the range of 0 to1, shows that factor analysis can be performed on data.

Table-4

Communalities for the Mental Health Stigma and Discrimination Scale through Principal Component Analysis

	Initial	Extraction
Item 1	.18	.18
Item 2	.28	.36
Item 3	.32	.41
Item 4	.25	.35
Item 5	.32	.44
Item 6	.26	.35
Item 7	.11	.11
Item 8	.28	.34
Item 9	.26	.30
Item 10	.16	.20
Item 11	.13	.13

Note. Extraction Method: Principal Component Analysis., N= 300

The table demonstrates that after extraction, the communalities for most of the items are significant than .3, while very few items have communalities less than .3, indicating that factorial analysis can be performed on this data.

Table-5

Percentages of Variance and Eigen Values Explained by 11 Items of Mental Health Stigma and Discrimination Scale obtained through Principal Component Analysis

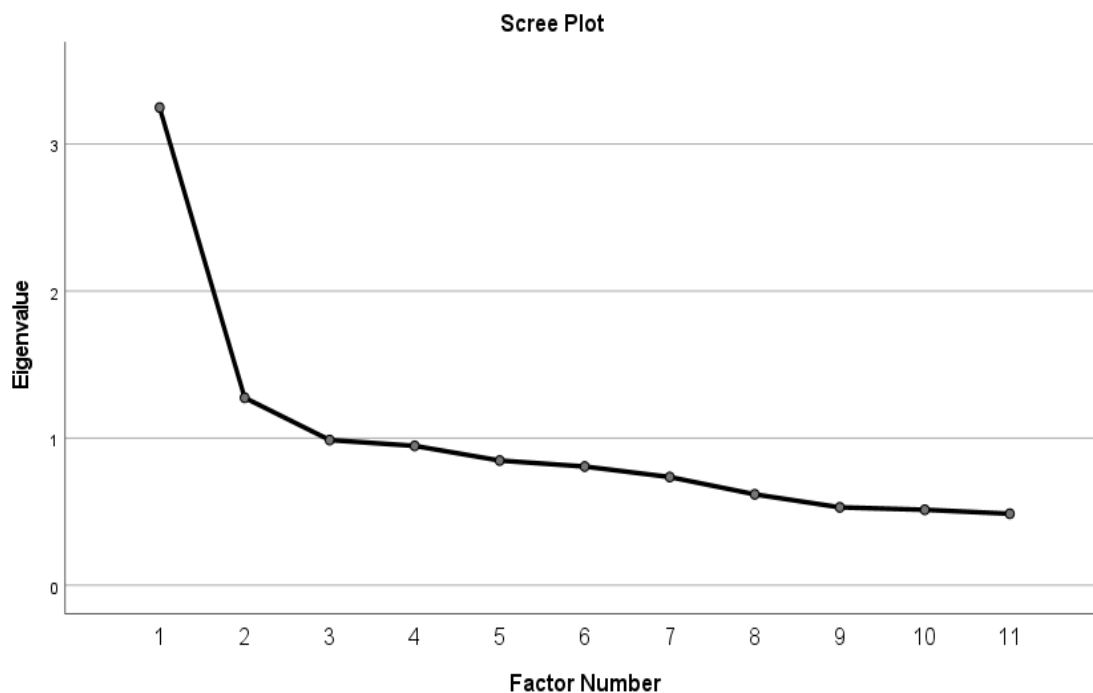
Factor	Total Variance Explained								
	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %

1	3.25	29.532	29.532	2.57	23.355	23.355	1.79	16.340	16.340
2	1.27	11.593	41.126	.608	5.527	28.883	1.38	12.543	28.883
3	.988	8.979	50.104						
4	.948	8.619	58.723						
5	.848	7.711	66.434						
6	.808	7.342	73.776						
7	.736	6.693	80.469						
8	.618	5.622	86.091						
9	.530	4.818	90.909						
10	.513	4.668	95.577						
11	.486	4.423	100.000						

Note. Extraction Method: Principal Axis Factoring., N= 300

Scree

Plot



This scree plot demonstrates how many factors should be kept in exploratory factor analysis. The plot shows that first two factors account for most of variations in data (as indicated by eigenvalue). The eigenvalue for the first two factors is greater than one. This signifies that these two factors are above elbow point (when the curve levels off) and should be retained. The other variables account for a very small part of variability and are most likely insignificant.

Table-7

Rotated Factor Matrix for Mental Health Stigma and Discrimination Scale

	Factor	
	1	2
Item 3	.611	
Item 2	.585	
Item 8	.523	
Item 9	.475	

Item 1	.419	
Item 10	.413	
Item 7	.323	
Item 5		.613
Item 4		.580
Item 6		.576
Item 11		.312

Note. Extraction Method: Principal Axis Factoring., N= 300
Rotation Method: Varimax with Kaiser Normalization.^a

a. Rotation converged in 3 iterations.

Table shows items on two factors after rotation of factor structure. Factor 1 contains seven items, whereas Factor 2 has four items.

Discussion

The purpose of this study was to develop a Mental Health Stigma and Discrimination Scale that is culturally relevant. The outstanding results of the exploratory factor analysis validate the created measure. Therefore, the measure is appropriate for the target population, i.e., young adults. Individuals with mental disabilities experience discrimination and stigma, which is detrimental to their mental health. This research was conducted to establish a scale that specifically measure mental health stigma and discrimination in Pakistan. The final Mental Health Stigma and Discrimination Scale has 11 items total, divided into two subscales: Subscale 1 (Mental Health Stigma and Discrimination) has seven items i.e., 1, 2, 3, 7, 8, 9, and 10 and Subscale 2 (Stigma and Supernatural Attribution) has four items i.e., 4, 5, 6, and 11. This measurement scale was created in Pakistan to measure stigma and discrimination associated with mental health in the general public while taking cultural nuances into account. It is becoming more and more vital to analyse and evaluate this phenomenon because it can be highly beneficial in therapy and future research. Pakistan's official language, Urdu, was employed in the development of this scale.

A special initiative by the World Health Organisation (WHO) on mental health states that nearly four out of five people globally who experience psychological illness, including drug abuse and neurological disorders, do not have access to affordable, high-quality mental health care (World Health Organisation [WHO], 2019). According to research, those who suffer from mental disorders are at a high risk of facing several negative effects such as violation of human rights, stigma, prejudice, rejection, and humiliation (Thornicroft et al., 2009). It has been supported by the research that stigma and discrimination adversely affect the mentally ill individuals more than their illness itself and cause problems which make them feel helpless and hopeless in their life (Semrau et al., 2015). Being more religious was linked to more authoritative ideas, which indicated hostility against those with mental illnesses. According to a related study conducted in Benin Muslim clergy members had more authoritative views (Igbinomwanhia et al., 2013). This finding is consistent with the possibility that supernatural beliefs have an impact on the stigma associated with mental illness. The notion that mental illness could be a sign of spiritual failure heightens stigma and deters people from getting psychiatric help (Trice & Bjorck, 2006). The Mental Health Stigma and Discrimination Scale results shows that supernatural attributions are related to mental health stigma and discrimination, which is consistent with the literature above.

People believe that superstitious beliefs such as demonic possession, black magic, the evil eye, and divine punishment are the root causes of mental diseases (Waqas et al., 2014). A study conducted in 2023 to assess the supernatural attitude toward mental health found that people hold a higher supernatural attitude toward mental illnesses (Ali et al., 2023). Studies have revealed that non-Western cultures are far more likely than Western cultures to have supernatural causal explanations. People in Asian and African countries often have magical, religious, and spiritual explanations, according to a systematic evaluation of relevant studies conducted among laypeople (Hagmayer & Engelmann, 2014). According to a recent survey of Pakistani university students ($n = 527$), nearly a third mentioned black magic as a cause of mental illness, while about a quarter of participants thought that demonic possession, the evil eye, or God's punishment was the reason behind mental illness (Waqas et al., 2014). Support for supernatural ideas was linked to more stigmatising and unfavourable views towards mental health issues. Examining the beliefs of various ethnic groups residing in Western countries reveals that these explanations are maintained despite acculturative influences: a survey conducted in East London ($n = 364$) comparing the beliefs of White people and Bangladeshi participants about the causes of depression found that the latter group, regardless of age, frequently held supernatural explanations like black magic (McClelland et al., 2014).

Research carried out in Pakistan indicates that sociocultural, religious, and spiritual perspectives on mental illness and strategies for recovery are prevalent (Farooqi, 2006), while the general Pakistani public is ignorant of mental health issues and services (Shafiq, 2020). People who are reluctant to disclose their condition, seek treatment, or interact with others who are mentally ill typically do so because of the stigma that surrounds mental illness in society. It has also been observed that collectivistic norms and a lack of mental health education are significant factors in resolving mental health stigma, even if non-Western concepts of mental disorders and how to overcome it have demonstrated some benefit in illness rates and outcomes. Studies have indicated a correlation between elevated levels of mental health stigma and a lack of mental health literacy. Raising public awareness of mental health issues and the mentally sick may lessen stigma towards mental illness and the mentally ill, which may eventually improve attitudes towards getting professional mental health care. According to the results of a study aimed at assessing how Pakistani emerging adults perceived mental illness, more than half of the participants said that sorcery and spirits (jinn) were the cause of mental illness, and about half agreed that they would consult a religious or faith healer if they thought they were mentally ill. These two viewpoints were linked to increased stigma around mental health (Ahmad & Koncsol, 2022).

In Pakistani society, stigma around mental illness is extremely common. WHO suggests starting widespread awareness campaigns in every nation to increase people's understanding of the prevalence, treatment, and process of recovery for mental diseases in order to lessen stigma, care barriers, and the shame attached to seeking psychiatric assistance (WHO, 2001). These psycho-educational efforts should be tailored to target the attitudes, fears, and worries of particular groups around mental health issues. Not just among medical students in college (Patten et al., 2013), but also among students in other disciplines and grade levels, these educational initiatives and adequate exposure help reduce the stigma related to mental diseases (Huxley, 2003).

The Mental Health Stigma and Discrimination Scale based on social identity theory. The Mental Health Discrimination and Stigma Scale, based in social identity theory. The Social Identity Theory outlines how negative attitudes and discrimination are directed towards individuals with mental health disorders. The theory posits that individuals may perpetuate stigma by linking

mental disorders to supernatural causes, hence strengthening the feeling of "otherness", and preserving societal structures. According to SIT, this phenomenon is consistent with social classification and social comparison processes, in which people compare themselves favourably to others who are thought to be mentally ill, hence sustaining stigma.

Limitations and Recommendations

There are various limitations on this study. The study solely assesses the experiences of a certain demographic, namely young adults in Pakistan who are between the ages of 18 and 30. There is limited and unclear application of the developed scale to other Pakistani population classes. Additionally, because Pakistani young adults today come from a variety of ethnic backgrounds, speak different languages, and come from a range of socioeconomic backgrounds, our sample is not representative of this population. Therefore, it is not possible to draw broad conclusions from this research and translations into widely spoken Pakistani languages including Pashto, Punjabi, and Saraiki are required. The lack of data collection from certain Pakistani universities may make it more difficult to generalise this phenomenon. The lack of time to evaluate the validity and reliability of the scale points to another constraint. For the scale to be validated, the data must be increased, and the information gathered ought to come from numerous sources and young adult Pakistani university students from different Punjabi cities in Pakistan. Failing to do so could affect how the results are interpreted. The scale's development needed additional time, effort, and resources, which was another drawback. This study was carried out by a BS Programme student. It is therefore advised that this kind of research be done by highly qualified and experienced researchers with adequate time and funding, particularly during the data collection phase.

Conclusion

This research aimed to establish a culturally appropriate scale that measures mental health stigma and discrimination in Pakistani young adult population. Numerous measures have been developed to evaluate stigma related to mental health; however, they are not culturally suitable for Pakistani society. Hence Mental Health stigma and Discrimination scale is first scale, developed in Pakistan, that evaluates stigma and discrimination related to mental health. The scale is consisting of 11 items, with two culturally relevant sub-scales, i.e., "Mental Health Stigma and Discrimination" and "Stigma and Supernatural Attributions". The scale can be used to assess how stigma affects people's mental health and to help create individualised treatment plans that consider the difficulties that each person faces because of stigma. Pakistan has not done enough research on this phenomenon. Thus, it is hoped that this study will encourage interest in this issue, which is currently in dire need of attention.

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