The Role of Self-Esteem in Mediating the Relationship between Perceived Discrimination and Depression of University Students

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Perceived discrimination is the unfair biased treatment of individuals by social institutions based on their unique characteristics. This has contributed to an individual's self-esteem and resulted in adverse psychological effects such as depression. The objective of the current study is to better understand the relationship between perceived discrimination, self-esteem, and depression, as well as to investigate whether self-esteem could moderate the relationship between perceived discrimination and depression. The Perceived Discrimination Scale, Rosenberg's Self-Esteem Scale, and Beck's Depression Inventory were used to collect data from 120 university students aged 18 to 30 (Mean =20.6, SD = 2.19) primarily residing in Kolkata. The correlation matrix and mediation analysis were performed and results were created using the Jamovi (version 2.3) tool. The level of significance was set at 0.05. In support of the study's objective, we observed a positive correlation between perceived discrimination, depression, and self-esteem. The interaction between perceived discrimination, self-esteem, and depression revealed a significant indirect effect of self-esteem acting as a mediator between perceived discrimination and depression (β = 0.60, SE = 0.17, 95% CI [.26, .95], p < .001) which indicates that changes in self-esteem can explain some of the influence of perceived discrimination on depression. Hence, the study revealed that the effect of self-esteem fully mediates the relationship between perceived discrimination and depression.

Keywords: Perceived discrimination, depression, self-esteem, mediation, students, mental health.

Discrimination is a type of social behavior that influences young adults' quality of life and academic achievement. Academics years are a time of developing intellectual horizons and discovering new social freedoms. Simultaneously, college-attending young adults must deal with the stress of rising academic demands (Misra & McKean 2000) as well as the obstacles of new flexibility and expanded social duties (Crosnoe & Johnson 2011). Several of these difficulties may be intensified for racial/ethnic minority students, who must also navigate the frequently hostile social environment at predominantly racial schools and universities (Cabrera et al.,, 1999; Swim et al.,, 2003). Discrimination is defined as the unjust or prejudiced treatment of individuals or groups based on traits such as race, gender, age, or sexual orientation (American Psychological Association, 2022). Many psychological, social, emotional, physiological, and economical obstacles confront young adults at various stages of their lives. According to Jochman et al., (2019), the collegiate years are a time of fresh academic prospects as well as significant emotional hurdles based on expectations and preconceived notions. As a result, in order to forecast major mental health difficulties, it is vital to diagnose and help pupils in the early stages.

Perceived discrimination is defined as the notion that one has received biased treatment from individuals and social institutions because of personal attributes such as race, gender, or weight (Williams, & Mohammed, 2009). Discrimination limits access to resources such as employment, income, housing, education and medical care, compromises physical well-being excludes individuals from many domains of social life and often exposes targets to physical violence. Hence stigmatization and its accompanying prejudice and discrimination exert a substantial, negative impact on the

quality of life of its targets leading to lower self-esteem.

Rosenberg (1965) defines self-esteem as one's positive or negative attitude toward oneself, as well as one's overall judgment of one's own beliefs and emotions in connection to oneself. The higher the self-esteem the more positive will be the overall impression of these qualities and characteristics. A person with high self-esteem and a person with low self-esteem may respond similarly to good feedback, but they may respond differently to negative input. People with low self-esteem are more likely to exhibit negative responses, whereas those with high self-esteem are less likely to be influenced because they are more likely to reject or limit the scope of negative feedback (Brown & Mankowski, 1993).

According to Eccleston, and Major (2006), identifying oneself as a victim of discrimination has a direct and negative impact on self-esteem among members of stigmatized groups. Other scientists, on the other hand, claim that attributing results to discrimination might boost personal self-esteem by allowing people to disregard intrinsic, stable, global components of self as responsible. These inconsistencies demonstrate that not all people react the same way to perceived discrimination. As a result, identifying personal and situational factors that influence the inclination to ascribe unfavorable events to discrimination, as well as the relationship between considering oneself as a victim of discrimination and self-esteem, is critical.

Self-esteem is a person's subjective assessment of their own worth as a person (Donnellan, Trzesniewski, & Robins, 2011; MacDonald & Leary, 2012). Notably, self-esteem does not always represent an individual's objective aptitudes and capabilities, or even how others perceive them. Furthermore, because self-esteem is typically characterized as a sense of not being 'good enough,' those with high self-esteem do not necessarily believe that they are superior to everyone (Rosenberg, 1965). As a result, self-esteem includes sentiments of self-acceptance and self-respect, as opposed to the excessive self-esteem and their own glory that characterizes narcissistic people (Ackerman et al., 2011).

Self-esteem is thought to modulate the impact of stress on depression, so that when confronted with major stresses, those with poor self-esteem are more likely to develop depression (Brown & Harris, 1978). Fisher and Shaw (1999) found that when they tested for the moderating impact of personal self-esteem in the relationship between perceived racism and overall mental health in an African American sample, the results contradicted their hypotheses that African Americans with higher levels of self-esteem had poorer mental health as perceptions of discrimination increased, while African Americans with lower self-esteem had no such change in mental health.

The impact of perceived discrimination on well-being have been examined in a variety of ways, with some focusing on mental health symptoms (anxiety, depression, and other types of psychological discomfort) and others on mood, self-esteem, control perceptions, and life satisfaction. There is strong evidence that perceived discrimination negatively affects psychological well-being in in its entirety. Perceived discrimination may influence specific dimensions of well-being differently (Williams et al.,, 2003). According to Paradies (2006) review, negative outcomes (depression, anxiety) had twice as many substantial adverse effects as positive outcomes (e.g., self-esteem). According to the attribution-ambiguity viewpoint, the implications of perceived discrimination differ for self-directed affect (self-esteem and depressive affect) as opposed to other types of emotional and psychological outcomes.

According to Harrell (2000), experiences of racism constitute a distinct source of chronic stress for ethnic minorities, apart from other general life stressors. For the following reasons, the sense of discrimination may have a different impact than other negative life events or daily hassles: (a) Discrimination prevents access to resources necessary for responding to various stressors at all levels, as well as possibilities for personal growth and well-being (Clark et al., 1999); (b) discrimination can occur through individual interactions as well as through

institutional policy (Harrell, 2000); and (c) the perception of both individual animosity and institutional discrimination can represent a particularly significant combination that leads to the development of acquired feeling of helplessness, damaged self-esteem, or depression (Alvarez et al., 2006).

Clark et al., (1999) have defined self-esteem as a moderator for perceived discrimination and sadness in their bio-psycho-social model. Dion et al., (1992) discovered that in people of Chinese heritage, hardiness (a combination of strong personal self-esteem and high personal control) reduced the link between perceived discrimination and distress. As a result, we predicted that strong self-esteem would mitigate the link between reported discrimination and depressed symptoms among Asian international students.

In the present study, university students (aged between 18 to 30 years old) were considered to explore the association between perceived discrimination, self-esteem and depression.

Objectives and hypotheses

The objectives and the hypotheses (H 1 to H 7) of this research study are:

a) To explore the relationship between perceived discrimination, self-esteem and depression.

H_1. Perceived discrimination is positively correlated with Depression.

H_2. Perceived discrimination is positively correlated with Self-Esteem.

H_3. Self-Esteem is positively correlated with Depression.

b) The extent to which self-esteem is mediating the relationship between perceived discrimination and depression.

H_4. Perceived Discrimination (independent) will be associated with Depression (outcome).

H_5. Perceived Discrimination (predictor) will be associated with Self-Esteem (mediator).

H_6. Self-Esteem will be associated with Depression (dependent).

H_7. Self-Esteem will mediate the relationship between Perceived Discrimination and Depression.

Method

Participants

This study included 120 adults ranging in age from 18 to 30 years old (Mean =20.6, SD = 2.19) who primarily resided in Kolkata. Majority of the participants were university students randomly sampled. The participants agreed that their involvement in this research was entirely voluntary and that they might opt out at any moment. They were additionally assured that their identities would be remained anonymous. There were not much stringent inclusion and exclusion criteria, participants having a diagnosis of intellectual disability were excluded.

Instruments

Keeping in mind the objectives of the study, following instruments were used. The questionnaire booklet started with the demographic questionnaire including age, sex, present educational status and whether they were pursuing their studies or had completed their studies and were working. According to the demographics of the total sample (N=120), there were 92 (76.7%) female participants and 28 (23.3%) male participants. In terms of educational qualification, 31 (25.8%) were postgraduate, 16 (13.3%) were school high school graduates, and 73 (60.8%) were undergraduate students, both male and female. Only 22 (18.3%) of the participants have completed their studies and have an occupation, whereas 98 (81.7%) were students.

Perceived Discrimination Scale: The 20-item Perceived Discrimination Scale, developed by Williams et al.,, (1997) assesses how frequently people believe others treat them poorly or unfairly because of their race, ethnicity, gender, age, religion, physical appearance, sexual orientation, or other traits. This scale is a 4-point Likert type scale. The Lifetime Discrimination Scale and the Daily Discrimination Scale are two subscales. Respondents fill out the 11-item Lifetime Discrimination scale by noting how many times they have been treated unfairly in their lives. The answer format for these items is:

1 = often, 2 = sometimes, 3 = rarely, 4 = never. Respondents complete the 11-item Lifetime Discrimination scale by indicating how many times they have been treated unfairly over the course of their lives (e.g., "You were discouraged by a teacher or advisor from seeking higher education"). The Lifetime Discrimination subscale demonstrates a high internal consistency, with Cronbach's coefficient alpha ranging from .62. The 9-item Daily Discrimination subscale captures respondents' experiences with unfair treatment in their day-to-day lives (e.g., "You are treated with less courtesy than other people"). This subscale was reversed scored items. The answer format for these items is: 4 = often, 3 = sometimes, 2 = rarely, 1 = never. The Daily Discrimination subscale demonstrates a high internal consistency, with Cronbach's coefficient alpha ranging from .88 to .93. The reliability coefficient of the Perceived Discrimination Scale is .87 for this study.

Rosenberg's Self-esteem Scale (RSE): Morris Rosenberg (1979) developed the scale. Rosenberg (1965) defines self-esteem as one's positive or negative attitude toward oneself, as well as one's overall judgment of one's own beliefs and emotions in connection to oneself. A 10-item scale that measures global self-worth by measuring both positive and negative feelings about the self. The scale is believed to be uni dimensional. All items are answered using a 4-point Likert scale format ranging from strongly agree to strongly disagree. Low self-esteem responses are "disagree" or "strongly disagree" on items 1, 3, 4, 7, 10, and "strongly agree" or "agree" on items 2, 5, 6, 8, 9. The RSE demonstrates a Guttman scale coefficient of reproducibility of .92, indicating excellent internal consistency. Test-retest reliability over a period of 2 weeks reveals correlations of .85 and .88, indicating excellent stability. Demonstrates concurrent, predictive and construct validity using known groups. The RSE correlates significantly with other measures of self-esteem, including the Coopersmith Self-Esteem Inventory. In addition, the RSE correlates in the predicted direction with measures of depression and anxiety. The reliability coefficient of the Rosenberg's Self-esteem Scale is .88 for this study.

Beck's Depression Inventory (BDI) : The scale was developed by Aaron T. Beck revised in 1996. According to Beck (1979), persons who are depressed have a negative self-schema, which causes them to process personal information in a negatively biased and skewed manner. They fixate on the bad parts of their lives and interpret occurrences in self-defeating ways. The BDI- is a 21-item self-report measure that taps major depression symptoms according to diagnostic criteria listed in the Diagnostic and Statistical Manual for Mental Disorders. The BDI test includes using a four-point scale ranging which ranges from 0 (symptom not present) to 3 (symptom very intense) reflecting their severity and are totaled linearly to get a score ranging from 0 to 63. The 21 items cover a wide range of symptoms and attitudes common in clinically depressed people (e.g., Mood, Self-dislike, Social Withdrawal, Sleep Disturbance). The BDI administration is simple, and it can be done as a clinician interview or as a self-report instrument (requiring a fifth or sixth grade reading level). Beck Depression Inventory, which has an excellent reliability coefficient of .92. Its content validity is ensured because most of its items are equivalent to the DSM-IV criteria for depression. Its construct validity has also been tested successfully by comparing scores with other measures for depression. The reliability coefficient of the Beck's Depression Inventory is .93 for this study.

Procedure

The study relies on primary data. Data were gathered from a sample of young adults who are students as well as those who have completed their schooling. Each participant was requested to consent to their voluntary participation in completing out the questionnaire. Google forms were circulated among the participants as the mode of data collection.

Analysis

The mean and Standard Deviation (SD) were computed and reported for the continuous variables. We conducted a correlation matrix between perceived discrimination, self-esteem and depression. The Pearson's correlation and mediation analysis were performed using this application. Mediation analysis was conducted to

understand the mediation of self-esteem between Perceived Dis.crimination and depression. The statistical calculation was performed using the Jamovi (version 2.3) application. The level of significance was set at 0.05. Shapiro-Wilk was employed to evaluate the normality test.

Results

Descriptive data for all the measures were calculated. Table 1 presented the means, and SD and of all the measured variables.

Table 1: The mean and SD of the variables

Descriptives	N	Mean	SD
Age	120	20.6	2.19
Perceived Discrimination	120	56.1	4.86
Daily Discrimination	120	17.5	5.69
Lifetime Discrimination	120	38.6	4.71
Self-Esteem	120	26.9	6.08
Depression	120	20.3	12.71

Of the total sample (N=120), the continuous variable indicated age (Mean = 20.6, SD = 2.19), Perceived Discrimination (Mean = 56.1, SD = 4.86), Daily Discrimination (Mean = 17.5, SD = 5.69), Lifetime Discrimination (Mean = 38.6, SD = 4.71), Self-Esteem (Mean = 26.9, SD = 6.08), and Depression (Mean = 20.3, SD = 12.71).

To test the interrelationships between the measured variables Pearson's correlation was conducted. Table 2 presented the correlation matrix.

Based on the table 2, hypothesis H1 was accepted as it appears that there is a positive correlation between perceived discrimination and depression (r = 0.99, p < 0.001), indicating that individuals who had perceived more discrimination were more likely to experience symptoms of depression. The H2 hypothesis was also accepted as there was a positive correlation between self-esteem and perceived discrimination (r = 1.00, p < 0.001). The H3 hypothesis was again found to be accepted as self-esteem and depression (r = 0.99, p < 0.001) shown positive correlation between them. Hence, it can observe that there was a significant association between self-esteem and depression and perceived discrimination.

The effect of perceived discrimination on the outcome variable depression via self-esteem as the mediating variable was tested. Table 3.1 and 3.2 presented the path estimates and mediation estimates of the mediation model respectively. Figure 1 shows the mediation pathway.

Results showed that the hypothesis H4 was rejected as perceived discrimination was not found to be associated with Depression (path c') (β = 0.10, SE = 0.15, p = 0.51, 95% C.I.). The H5 was accepted as perceived discrimination was found to be significantly associated with self-esteem (path a) (β = -0.41, SE = 0.11, p < .001, 95% C.I.). The H6 was found to be accepted as self-esteem showed significant effect on depression (path b), (β = -1.43, SE = 0.14, p < .001, 95% C.I.). The hypothesis H7 was again found to be accepted as it showed self-esteem mediated the relationship between perceived discrimination and depression, (β = 0.70, SE = 0.19, p < .001, 95% C.I.). Analysis of the exploration of the interrelationship between perceived discrimination, self-esteem and

Table 2: Correlation Matrix – Perceived discrimination, self-esteem and depression

		Perceived Discrimination	Depression	Self-Esteem
Perceived Discrimination	Pearson's r	—		
	p-value	—		
Depression	Pearson's r	0.998	—	
	p-value	<.001**	—	
Self-Esteem	Pearson's r	1.000	0.997	—
	p-value	<.001**	<.001**	—

Note: * p < .05, ** p < .01

Table 3.1: Path estimates of the mediation model - perceived discrimination, self-esteem and depression

Path Estimates

						95% Confidence Interval			
			Label	Estimate	SE	Lower	Upper	Z	P
Perceived Discrimination	→	Self-Esteem	a	-0.417	0.115	-0.630	-0.190	-3.634	< .001
Self-Esteem	→	Depression	b	-1.438	0.143	-1.726	-1.163	-10.053	< .001
Perceived Discrimination	→	Depression	c'	0.102	0.158	-0.225	0.407	0.644	0.519

Table 3.2: Mediation estimates of the mediation model - perceived discrimination, self-esteem and depression

Mediation Estimates

				95% Confidence Interval				
Effect	Label	Estimate	SE	Lower	Upper	Z	p	% Mediation
Indirect	a × b	0.600	0.178	0.260	0.950	3.365	< .001	85.5
Direct	c'	0.102	0.158	-0.225	0.407	0.644	0.519	14.5
Total	c' + a × b	0.702	0.196	0.317	1.094	3.574	< .001	100.0

depression indicated that the indirect effect of self-esteem acting as the mediator between perceived discrimination and depression was found significant for participants (β = 0.60, SE = 0.17, p <.001). The direct effect of perceived discrimination on depression was found insignificant (β = 0.10, SE = 0.15, p = 0.51). It was also revealed that the total effect of perceived discrimination and depression was significant (β = 0.70, SE = 0.19, p < .001). Thus, the general hypothesis revealed significant full mediation where the self-esteem is mediating the relationship between perceived discrimination and depression.
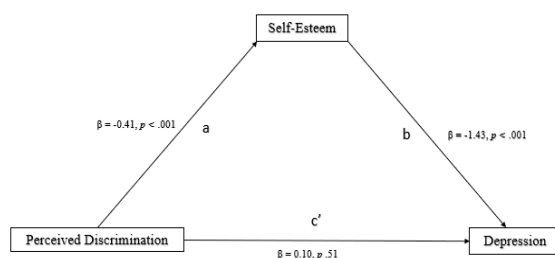

Figure 1: Pictorial representation of the role of self-esteem in mediating the relationship between perceived discrimination and depression.

Discussion

Recent research evidence has established that self-esteem is an important mediator in the relationship between perceived discrimination and depression. When people experience discrimination, it can lower their self-esteem, increasing their sensitivity to depression. For example, Park et al., (2020) investigated the impact of self-esteem as a moderator in the link between racial discrimination and depressive symptoms among Asian American college students. The findings demonstrated that self-esteem partially mediated the impact of racial discrimination on depression, implying that lower self-esteem contributed to individuals who reported discrimination experiencing heightened depressed symptoms.

The current research investigated on the correlation between perceived discrimination, self-esteem, and depression. It also studied the effect of self-esteem mediating the relationship between perceived discrimination and depression. According to the findings of the study, there is a link between perceived discrimination, depression, and self-esteem. The positive correlation between perceived discrimination and depression, as well as between perceived discrimination and self-esteem, lends credence to the hypothesis that discrimination might have a substantial impact on mental health and self-esteem. This is consistent with meta-analyses and longitudinal studies that show discrimination has a detrimental impact on mental health (Pascoe & Smart Richman, 2009; Williams et al., 2021).

Interestingly, the study found that self-esteem mediates the association between perceived discrimination and depression, implying that the influence of discrimination on depression can be explained in part by changes in self-esteem. This conclusion emphasizes the relevance of self-esteem as a component in mental health outcomes and implies that self-esteem therapies may be successful in moderating the harmful effects of perceived discrimination on mental health. This finding is consistent with earlier research that has identified self-esteem as a protective factor against the detrimental impact of stressors on mental health (Orth et al., 2016). Recent research has looked into the function of self-esteem in mediating the relationship between perceived discrimination and depression symptoms in a variety of populations (Li et al., 2022). High self-esteem may protect against depression in difficult circumstances, but its protective benefits may be not significant in the absence of major stressors (Sowislo & Orth, 2013). These data support the proposition that self-esteem is an important intermediary in how discrimination affects mental health. In the present instance, it shows that changes in self-esteem may explain some of the harmful impact of perceived discrimination on depression. Individuals who are subjected to discrimination are more likely to have low self-esteem, which increases their risk of depression. These findings have significant implications for the development of interventions to support individuals who face discrimination and reduce the detrimental impact on their mental health. In a systematic review and meta-analysis, Keng et al., (2011) discovered that mindfulness therapies were related with higher self-esteem and lower depression. Regular physical activity and exercise have been related to higher self-esteem and fewer symptoms of depression. Josefsson et al., (2014) discovered a link between physical activity and self-esteem. Gratitude therapies, such as maintaining a gratitude journal or expressing thankfulness, have also been demonstrated to improve self-esteem and well-being.

The analysis also found that the direct effect of perceived discrimination on depression was not significant, whereas the indirect effect

showed a significant relationship between perceived discrimination and depression when the mediator is self-esteem. Consequently, the general hypothesis revealed significant full mediation where the self-esteem is mediating the relationship between perceived discrimination and depression. This finding may align with recent studies that have reported mixed or indirect effects of discrimination on depression (Gee et al.,, 2019). These studies suggest that the relationship between perceived discrimination and depression can be influenced by various mediating factors, underscoring the complexity of this association. According to a meta-analysis, the link between perceived discrimination and depression was greater for people who had poor levels of social support and coping resources (Pascoe & Smart Richman, 2009).

Overall, these findings emphasize the necessity of taking into account the intricate interplay of perceived discrimination, self-esteem, and mental health consequences. Understanding the mechanisms behind these associations may allow for the development of novel treatments to support people who experience discrimination and reduce the detrimental effects on their mental health and well-being.

Conclusion

The purpose of this study were to determine the interrelationships between perceived discrimination, depression and self-esteem and he extent to which the relationship between perceived discrimination and depression is mediated by self-esteem The study had established a link between perceived discrimination, depression, and self-esteem and showed a full mediation effect of self-esteem between perceived discrimination and depression. According to the findings, people who feel more prejudice are more likely to suffer from depression and have low self-esteem. Furthermore, the study discovered that self-esteem acts as a mediator in the association between perceived discrimination and depression establishing full mediation. These findings emphasize the significance of addressing perceived discrimination and its consequences for self-esteem and mental

health outcomes. Considering the important findings of this study, some limitations should be acknowledged when interpreting the results. The future researchers can approach with a larger sample size. More related research can be done in India. Future researchers could combine self-reported measures with objective measures such as physiological data or behavioral observations to provide a more complete picture of the link between perceived discrimination, self-esteem, and depression. A more diverse and representative sample may provide a more comprehensive assessment of the impact of perceived discrimination on mental health across different cultural and demographic groups. The study's findings can be used to influence initiatives and strategies aiming at decreasing perceived discrimination and enhancing self-esteem and mental health outcomes.

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