Exploring the Mediating Effect of Perceived Social Support on Psychological Capital and Mental Health in Higher Education Students

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ABSTRACT

Recent studies in Positive Psychology have established an empirical relationship between Psychological Capital (PsyCap) and Mental Health (MH). However, the mediating relationship between Perceived Social Support (PSS) and this association has received limited attention, especially in the context of higher education. Therefore, this study aimed to examine how PSS might mediate the relationship between PsyCap and the students' mental health. Based on a cross-sectional research design, the study selected 332 undergraduate and graduate students from the Punjab, Lahore, Pakistan. PLS-SEM analysis of the findings showed that both PsyCap and PSS supported the students' mental health. Further, PSS was revealed as a useful variable that could help to find a relationship between PsyCap and mental health. Thus, these findings emphasize the necessity of building PsyCap and PSS promotion in the learning context to enhance students' quality of life. The findings benefit university faculty, psychologists, and curriculum developers, which should inform incorporating these elements into education and support systems. Thus, the strategic enhancement of PsyCap and social support results in the development of the environment, enhancing students' mental health and achievements. Given the rising interest in student psychological health in academic contexts, it is also timely and provides direction for actionable positive Psychological intervention. The outcome of this study adds insight into the interplay of psychological and social factors, providing directions to similar academic settings regarding research prospects and practice.

INTRODUCTION

Mental health (MH) is critical to students' overall well-being and quality of life, particularly in rapidly changing environments. Students with positive MH are more prepared to improve their quality of life and effectively cope with life processes (Han & Hyun, 2019). As postulated by the WHO, MH includes optimal functioning, which depicts a state of health through which the affected person can make sound and fulfilling decisions, deal with everyday life challenges constructively as

wells and engage in meaningful, productive activity (Acarturk et al., 2022).

MH encompasses psychological, emotional, and social, which play chief roles in thinking, feeling, and acting. Another fact to support SDG from the WHO is that about one in four people within a given population will have to deal with a mental disorder at least once throughout their lives (WHO, 2022). Even though mental health disorders are a common problem, very few people seek help from a professional. In 2001, data from WHO showed that about 67 % of those affected with mental illness do not seek treatment. This has been a result of prejudice, lack of interest or concern, abandonment and finding itself on the wrong side of the bipolar stick by swollen populations, which are significant constraints to care (WHO, 2001).

Moreover, The GBD study also presents the global portfolio of mental health concerns, showing that in 2016, almost one billion people experienced some kind of mental disorder (Vigo et al., 2016). These statistics highlight how mental health matters are not limited in their impact and importance to any particular region but concern the entire world. Therefore, it becomes paramount to approach mental health to improve individual health and, by extension, social and economic returns. As a result, there is a need to improve mental health promotion and combat-related stigmatization, simultaneously increasing access to competent care for patients suffering from mental disorders.

Pakistan is one of the most populated countries globally, and this country has experienced extensive MH issues, especially throughout the COVID-19 crisis (Abbas et al., 2021). This revenue generated suggests that while there has been a push for better MH publicity and services, the scarcity of facilities still prevents proper MH support in the country (Paul et al., 2020). Snyder et al. (1991) findings were that common MH issues like anxiety and depression are higher among students in institutions of higher learning in Pakistan. This is in line with other studies showing that, for university students, there is generally a higher prevalence of MH problems than for students who are not in university (Caldarelli et al., 2024). Several aspects of students' lives may contribute to MH difficulties in higher education students, such

as life stress (Singh & Thapa, 2023). These stressors have a significant influence on students' MH state, and therefore, such students are vulnerable to developing MH issues. Also, MH issues tend to appear in youth, a stage at which people complete their education and develop their first careers (Westerhof& Keyes, 2010). Thus, university students may be at risk for mental health issues. As a result, it can hardly be overemphasized that the problem of students' mental health in higher education institutions deserves proper solutions. This involves raising awareness for MH issues and improving access to MH resources and other systems. This knowledge enables stakeholders to develop a less hostile environment that the group faces in order to prevent the occurrence of mental health issues among university students.

The MH continuum ranges from positive MH, a state of positive wellness, to adverse MH, a state of mental disease (Visser &Wyk, 2021). The WHO proposes positive MH as an essential component of human beings into their productive working world to be productive in various fields (Peñalveret al., 2019). Even though most studies have focused on MH risks, such as disorders and unpleasant behaviours (Ciby et al., 2020), building up positive MH is not conceptualized (WHO, 2001). It is the same way we have shifted our focus to diet and exercise to avoid diseases (WHO, 2005).

The papers derived from the positive psychology perspective have claimed that an optimistic psychological worldview can enhance well-being (Jackman & Sisson, 2022). PsyCap, built on positive psychology, corresponds with the theoretical concept of arrays of psychological resources of hope, self-efficacy, resilience and optimism described as the 'HERO (Luthans and Avoutine, 2014). Hope enables the individual to work towards the achievement of specific goals and change strategies any time there is an obstacle, resiliency allows the person to rebound in the event of adversity, optimism enables the individual to expect the best in life, and self-efficacy increases confidence in the individual in completing tasks, The elements of PsyCap work in synergy to produce a better result than any single factor individually; they improve personal and organizational outcomes (Luthans et al., 2008).

Prior meta-analyses and reviews indicated that psychological capital (PsyCap) is positively connected to diverse individual and organizational outcomes (Roche, 2023). PsyCap is one of the most critical areas of research advanced by Fred Luthans, who pointed out that it is an agentic research area that affects mental health (Maurya & Srivastava, 2022). Research indicates that PsyCap increases academic achievement in students (Salavou et al., 2023) and that PsyCap is related to well-being in college samples (Ciby et al., 2020). In a study conducted by Wang et al. (2023) revealed a negative relation between students' PsyCap and their feelings of sadness and stress during the COVID-19 situation; consequently, it proves that the improvement of PsyCap can help to reduce students' negative emotions.

A group intervention for a boost in PsyCap enhances mental health and alleviates depression among Pakistani university students (Qian et al., 2022). This shows that there is an opportunity to infuse PsyCap into mental health intervention plans in higher education in Pakistan. Additionally, the impact of SHS is significant, whereas higher PSS is essential for health and moderate stressors (Ferber et al., 2022) besides increased PsyCap (Prasath et al., 2022).

LITERATURE REVIEW
Perceived social support (PSS) is the extent of available and supportive relationships from the recipient's viewpoint, whereas received social support measures the amount of received help (Permatasari et al., 2021). PSS is often associated with reducing perceived stress (PS) (Ozmete and Pak, 2020), with most research on the impact of PSS on MH being done (Poudel et al., 2020). A study suggests that efforts to enhance MH must consider social support as a modifiable resource that can independently cause MH enhancement or detriment, particularly among stressed people (Chen et al., 2020). Some self-efficacy has a noticeable correlation with MH and social support; self-efficacy can boost happiness through MH. Moreover, social support modifies this relationship (Huang& Wang, 2023). Moreover, PSS enhances the psychological well-being of elderly careers (Bermejo et al., 2020). Although PsyCap has been established to have a solid connection to MH (Bedaso et al., 2021), MH still requires further

investigation concerning its applicability to diversification among different population groups.

PsyCap is a relatively new conceptual area, with available research data being scarce, especially about its impact on MH of students from higher education in Pakistan (Luthans et al., 2010). While prior research has examined the co-variance model of PsyCap and MH, little work has been done on the mediating role of PSS. Therefore, this research aims at filling this gap by adopting the proposition that PsyCap ways affect MH with PSS as moderator. The study is critical concerning the context of higher education in Pakistan, where social support is known to influence the mental health of students in a very stressful environment. This research makes several contributions: it analyzes the impact of PsyCap on MH, investigates the moderation of this relationship, and incorporates PSS as a moderator variable. In addition, it expands the few existing studies that examined these variables about higher education enrollment by shedding light on the mechanisms through which PsyCap influences MH.

Conceptual Model and Hypotheses
MH and the wellbeing of the general population and university students were significantly determined by the proposed PsyCap constructs, such as hope, self-efficacy, resilience, and optimism (Prasath et al.). This relationship agrees with COR theory that individuals with higher levels of a particular resource, PsyCap, have a higher potential of having several other resources to countercheck stresses and other negative impacts on mental health (Kuijpers et al., 2020). However, the previous study already shows that PsyCap has a positive association with MH (Luthans and Youssef-Morgan, 2017); no previous study assesses what variables can mitigate or enhance this PsyCap-MH relationship. Therefore, it is helpful to explore social support as a mediator to meet this gap. This study is similar to other studies that have been done in the past, and its uniqueness is that help from friends, families, and the public has time and again served as a buffer to mental health problems, as identified in the findings of Silva (2005). One sigma confirmation noted that social support decreases stress, psychological disorders, and self-rated health in any age group. Ahlborg et al. (2022) showed that family, friends, and neighbors influenced the youth's mental health.

They suggested it is a potential support framework through which aspects of… psychological issues may be highly influenced.

Castillo & Lopez-Zafra's (2022) study showed that the positive impact of PsyCap on mental health is more significant if people have good social support to back them. Correlates of PsyCap and mental health of participants and mediate, perceived social support demonstrated that participants with higher perceived social support were significantly more likely to exhibit better mental health than participants with lower perceived social support regardless of having higher PsyCap. This implies that social support acts as a reinforcement factor, helping to boost the efficiency of psychological assets such as PsyCap. Therefore, social support is not a mere form of protection against adverse results but a resource that enhances the impact of favorable resources. This relationship between PsyCap, social support, and mental health may be explained more fully by reference to COR theory. Self-reported coping can be predicted by numerous stressors based on COR theory, where resources offer information about the appraisal of pressure. According to Hobfoll (1989), resources may be described as an object, condition, personal attribute, or energy that is wanted by people or helps attain other valued commodities. PsyCap as a construct comprises hope, resilience, self-efficacy as well as optimism, and it is believed that PsyCap is a personal resource which determines an individual's ability to face stress levels or aeration and maintain psychological health (Ciby&Sahai, 2020).

On the other hand, social support can be conceptualized as a situational or contextual resource, and more importantly, a resource from outside the person, but a resource critical to stress coping. The occurrence of supportive people in one's life can add to one's resource stock, which protects against the adverse effects of stressors on mental health (Silva, 2005). Most importantly, the COR theory also postulates that more resourceful individuals are less exposed to the jeopardy of resource loss and are more capable of gaining more resources. In this regard, PsyCap and social support can be viewed as cross-reinforcing assets that, as a whole, enhance positive psychosocial well-being.

The interaction between PsyCap and social support for predicting the given indicators can have vast theoretical implications for studying mental health dynamics (Slåttenet al., 2023). PsyCap affords inward coping strengths, and social supports supplement and strengthen the efficacy of these internal assets. Hence, this research posits that social support interferes with PsyCap and mental health such that an individual's internal psychological resources influence his or her outside environment. Based on this article's theoretical and empirical foundations, this study attempts to test a conceptual model that hypothesizes that PSS mediates the relationship between PsyCap and mental health. The conceptual model comprises three primary constructs: PsyCap as the independent variable, effected through the mediator PSS to improve mental health, as the dependent variable (see Fig. 1). The current model assumes that the relationship between PsyCap and mental health is mediated in part by the amount of social support one feels they have. Therefore, it is hypothesized that higher levels of PsyCap should lead to better mental health status, and a high level of perceived social support should mediate this relationship.
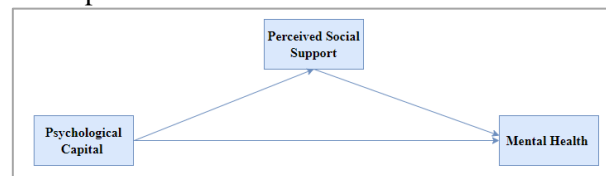
H1: PsyCap has significant effect on MH.

H2: PsyCap has significant effect on PSS.

H3: PSS has significant effect on MH.

H4: PSS mediates between the relationship of PsyCap and MH.

Figure 1
Conceptual Model

METHODOLOGY

The current research study was cross-sectional because data was collected at a single point in time. The participants must seek ethical approval to ensure they give appropriate time and energy to their responses. It is also dangerous to 'fill in the gaps', which would invalidate the research. There were two survey modes, online and face-to-face, and each student filled it in independently. In total, respondents spent approximately 20 minutes filling out the questionnaire. The questionnaire began by briefly outlining the purpose of the research and then the participant consent form. Participants were

ensured they were free to participate voluntarily and could drop out of the research exercise at any one time without any explanation. Even though the course credits were offered to students, the respondents had no other inducements to respond. Following the ethical standards of the University, the established procedures of the study and the chosen instruments were entirely consistent with the ethical norms of the study. This compliance maximized the possibility of conducting the research with ethical propriety and strictly respecting the participants' rights.

The study participants were purposively selected from undergraduate and graduate students of the University of the Punjab in Lahore, Pakistan. This University was chosen because of its number of students and its academic performance. The sample size estimation to PLS-SEM, as a measure taken in the present research, has been done according to the general rules of sample size estimation often employed in academic research. One of the most commonly applied rules for sample size assessment is the '10 times rule'. By this rule, the number of participants should be tenfold the number of indicators defining the model's constructs. This is a standard rule when determining the sample size for PLS-SEM, commensurate with other scholarly works. In this manner, the work is intended to provide reliable and valid data free from coercion or undue influence and to be compliant with ethical academic norms. The study also maintained high credibility because participation was voluntary, and the researchers complied with the ethical codes.

We used a 5-point Likert scale from 1 = strongly disagree to 5 = strongly agree. The psychological capital has 12 items taken from the previous study (Sato et al., 2022). The Perceived social support has 12 items taken from the previous study (Zimet et al., 2010). The Mental Health has 12 items taken from the previous study (HU et al., 2007).

Data Analysis
Accurate results depend on eliminating non-normal distributions and multicollinearity during data analysis. The study revealed that Sekaran (2003) detailed analyzed missing values. The personal distribution of questionnaires gave respondents time to recollect their answers and edit any incorrect responses. Applying the stem-and-leaf method, the study located outliers and indicated any inconsistencies within the data. P-plots and histograms were used to determine normality with clear evidence that the frequency distributions nearly fitted a regression line and showed a bell-shaped curve. These results indicate that the data followed the requirements for normality. In addition to this examination, the study analyzed skewness and kurtosis, which were within the recommended range of ±1 and ±3, according to Byrne (2010). These figures added evidence that the data followed a normal distribution. The research reviewed multicollinearity, which emerges when the variables are closely related and may alter the regression equation. They reviewed the correlation coefficients to determine if multicollinearity existed in the dataset (Tabachnick&Fidell, 2007). All correlation coefficients remained below 0.85, showing that this dataset did not face multicollinearity.

Measurement Model
Table 1
Measurement Model

Variables	Cronbach Alpha	Factor Loadings	CR	AVE
Mental Health (MH)	0.796		0.870	0.629
MH9		0.754		
MH10		0.862		
MH11		0.887		
MH12		0.645		
Perceived Social support (PSS)	0.866		0.893	0.584
PSS1		0.641		
PSS2		0.763		
PSS3		0.676		
PSS6		0.783		
PSS7		0.685		
PSS8		0.684		
PSS10		0.636		
PSS11		0.701		
PSS12		0.675		
Psychological Capital (PSY)	0.942		0.952	0.713
PSY1		0.832		
PSY2		0.868		
PSY3		0.836		
PSY4		0.818		
PSY5		0.817		
PSY6		0.881		
PSY7		0.807		
PSY8		0.890		

Constructs were evaluated for reliability and validity using Cronbach's alpha and mean-variance extracted (AVE). It has been reported by Hair et al. (2019) that Cronbach's alpha count of 0.7 or higher is regarded as sufficient for consistency within the construct, while the minimum level of AVE necessary is 0.5 to confirm that the latent construct explains more than half of the indicators' variance. With a Cronbach's alpha of 0.796, the Mental Health (MH) construct meets the minimum acceptable standard of internal consistency. MH item factor loadings vary from 0.645 to 0.887, showing CR and AVE values of 0.870 and 0.629. Results indicate that the MH construct possesses reliability and convergent validity since the AVE is more significant than 0.5.

The reliability of the Perceived Social Support (PSS) construct is shown by a Cronbach's alpha of 0.866. Loadings are between 0.636 and 0.783, with an AVE and CR of 0.584 and 0.893. In Hair et al., the CR of over 0.7 reflects sound composite reliability, and the AVE of more than 0.5 proves validity in the construct. High reliability is demonstrated by Cronbach's alpha of 0.942 for the PSY construct, which goes above the advised threshold of 0.9 for exceptional internal consistency. With a CR of 0.952 and an AVE of 0.713, the factor loadings from 0.807 to 0.890 highlight that the PSY construct exhibits strong reliability and convergent validity. The high level of the AVE (over 0.7) means that many aspects of the variance are due to the construct and confirm the reliability of measuring psychological capital.

Discriminant Validity
Table 2
HTMT RATIO

Variables	1	2	3
Psychological Capital (PSY)			
Perceived Social support (PSS)	0.572		
Mental Health (MH)	0.480	0.707	

The Heterotrait-Monotrait (HTMT) ratio of correlations is often regarded as a more challenging and trustworthy measure for assessing discriminant validity. The HTMT technique evaluates the typical correlations of constructs assumed to be distinct (heterotrait-monotrait) against the mean correlations of indicators that measure the same construct (heterotrait-monotrait). When the HTMT ratio remains under a set threshold often cited as

0.85 (sure, researchers propose 0.90 based on circumstances), discriminant validity is confirmed. The correlation between PSY and PSS equals 0.572 and shows that PSY and PSS possess sufficient discriminant validity if the HTMT value remains below 0.85. The 0.572 figure is well under the 0.85 limit and establishes discrimination validity among these two constructs. The relationship of PSY to MH is 0.480. Support for discriminant validity is apparent when the HTMT analysis produces a number lower than 0.85.

Given that 0.480 is a very low correlation that overlaps with the threshold level, the discriminant validity of PSY and MH is established. The association between PSS and MH is 0.707. To demonstrate discriminant validity with HTMT, this value has to be under 0.85. Due to the threshold being surpassed, 0.707 represents acceptable discriminant validity for PSS about MH according to HTMT guidelines.

Hypothesis Testing
Figure 2
Structural Equation Modelling
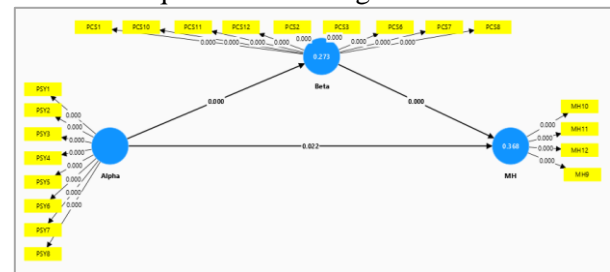
Table 3
Hypotheses Results

Relationships	Original sample	Sample mean	Standard deviation	T statistics	P values
PSS -> MH	0.523	0.524	0.057	9.212	0.000
PSY -> PSS	0.153	0.150	0.067	2.297	0.022
PSY -> MH	0.513	0.519	0.061	8.379	0.000
Indirect effect					
PSY -> PSS -> MH	0.268	0.273	0.048	5.528	0.000

The links between the constructs illustrate substantial favorable outcomes. Perceived social support (PSS) directly influences mental health (MH) with a strong positive association (0.523), a high t-statistic (9.212), and a low p-value (0.000). This demonstrates the essential impact of social

support on mental health. This evidence shows that more excellent perceived social support correlates with a positive in mental health. The impact of Psychological Capital (PSY) on Mental Health (MH) is positive, with a path coefficient of 0.513 and a p-value of 0.000. The relationship between Psychological Capital (PSY) and Perceived Social Support (PSS) yields a positive and significant contribution at a coefficient of 0.153 and a t-statistic of 2.297 despite being weaker in strength than others.

The investigation of indirect relationships demonstrates that Psychological Capital (PSY) indirectly shapes Mental Health (MH) by way of Perceived Social Support (PSS). With a coefficient of 0.268 and associated t-statistic of 5.528, the evidence suggests that perceived social support impacts the connection between psychological capital and mental health. The indirect effect underscores the value of psychological capital and social support in promoting mental health results. The direct and indirect effects merge to illustrate the detailed interactions among these elements that affect mental well-being.

DISCUSSION

The research uncovers how relationships among Psychological Capital (PsyCap), mental health (MH), and support from peers and loved ones at higher education institutions in Pakistan are linked. This leads us to hypothesize that PSS mediates the relationship between PsyCap and MH for higher education students. The first research questions of interest were (a) examining the direct and indirect effects of PsyCap on Mental Health and (b) examining the direct and indirect effects of PSS on Mental Health. The findings identified a significant positive relationship between PsyCap and mental health students from Pakistan in support of the studies conducted by Nafees and Jahan (2017). The results indicate that enhanced levels of PsyCap are associated with improved mental and physical well-beingwellbeing.

The study of Youssef-Morgan & Luthans (2015) supports research that states that increased PsyCap enhances the quality of students' psychological state and their level of satisfaction. Krasikova et al. (2015) studies support the relationship that PsyCap leads to student-improved mental health. According to Krasikova and Lester

(2015), higher PsyCap amounts strongly reduce emotional health problems such as addiction and depression. These results suggest that lower levels of PsyCap might improve the likelihood of suffering from a mental disorder. Prior studies also show that PsyCap bears an inverse relationship with anxiety, workplace deviance, and burnout outcomes. From the study, the author establishes that PsyCap enhances mental well-being while reducing psychological strain in fields such as academics. This research contributes to the extant literature by exploring PSS as a moderator of the PsyCap on mental health consequences.

In this analysis, there was a moderate and significant association between social support perception (PSS) and mental health (MH) (Bond, 2007; Magson et al., 2014). This correlation aligns with the Conservation of Resources (COR) model, which posts that individuals supported by values in one resource (PsyCap or community support) will realize higher degrees of the next resources, including MH. To this end, we also established the moderating role of PSS on PsyCap-MH trajectory, with PsyCap and PSS enhancing MH as postulated by this research study hypothesis (H1). Perceived stress ranged from low to high; the extremely low PSS enhanced the correlation between PsyCap and MH, while the low PSS slightly reduced this connection. Engaging evidence indicates the implications of social support as a situational resource based on COR theory, which underlines the potential importance of the resource in decreasing stress.

In line with the stress-reduction theory of social support by Luo &Jiang(2022), we found support for PSS as a protective factor for the PsyCap - wellbeing relationship. Our results align with other studies, Ciby and Sahai (2020), where social support enhances mental health in such psychological demands as loss of contrast or search for resources (Hobfoll&Shirom, 2000). From college and university, it is evident that students come across various stressors, such as an inferiority complex as well as other life learnings, which ignite negative shifts in their mental health.

CONCLUSION
This analysis points out the significant effect of perceived social support (PSS) on promoting and improving mental health (MH) within higher

educational settings. In examining the effects of social support on mental well-being in the past, our study focuses on the mediating effect of PSS on the relationship between PsyCap and MH. Having many social resources to handle stress can boost students' mental wellness.

Several disadvantages occur within this study. It examines only university students in Pakistan, reducing how applicable the results are. In future studies, we could investigate various groups to improve our knowledge of these links. This study depended entirely on data given by participants through self-report, which might skew analysis. Future research should adopt more methods to accurately represent the complex links between

MH and PsyCap. In addition to focusing on PSS as a mediator in this study, future analysis might also investigate the impact of other moderator factors like socioeconomic status and social class, cultural and regional differences, digital and online social support, gender and personality traits. These variables could supply an extra understanding of the relationship. Future investigations may benefit from using a longitudinal or time-lag approach to monitor changes with time and improve insight into the lasting impact of PsyCap and PSS on MH. This method will reveal a richer perspective on the changing dynamics of these interactions over time and facilitate more detailed investigations into causality.

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