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The Influence of Harmonious and Obsessive Academic Passion on Student Well Being and Academic Performance The Meditating Role of Academic Engagement

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Abstract
The present study examined the influence of harmonious and obsessive academic passion on student well-being and academic performance, with particular emphasis on the mediating role of academic engagement. A quantitative cross-sectional research design was employed, involving 405 university students from eight higher education institutions across Punjab, Sindh, Khyber Pakhtunkhwa, and Balochistan, Pakistan. Data were collected through a structured, self-administered online questionnaire distributed using Google Forms. Participation was voluntary, and informed consent was obtained from all respondents before data collection. The questionnaire measured harmonious academic passion, obsessive academic passion, academic engagement, student well-being, and academic performance using established measurement instruments. The collected responses were organized, screened, and analyzed using descriptive statistics, reliability analysis, Pearson correlation, multiple linear regression, and mediation analysis with bootstrapping. The findings demonstrated that harmonious academic passion ($r = 0.51$, $p < 0.01$) and obsessive academic passion ($r = 0.28$, $p < 0.01$) were positively and significantly associated with student well-being. Furthermore, harmonious academic passion ($\beta = 0.41$, $p = 0.001$) and obsessive academic passion ($\beta = 0.18$, $p = 0.002$) significantly predicted academic performance, with the regression model explaining 29% of its variance. Academic engagement also emerged as a significant predictor of student well-being ($\beta = 0.49$, $p < 0.001$) and academic performance ($\beta = 0.37$, $p < 0.001$). Mediation analysis further established that academic engagement significantly mediated the relationships of both forms of academic passion with student well-being and academic performance, as all bootstrapped confidence intervals excluded zero. Overall, the findings highlight the importance of academic passion and engagement in promoting students' psychological well-being and educational outcomes. The study contributes to the understanding of motivational mechanisms in higher education and suggests that universities should foster balanced academic motivation and meaningful student engagement to support both psychological and academic development.

Keywords: Harmonious Academic Passion, Obsessive Academic Passion, Student Well-Being, Academic Performance, Academic Engagement, Higher Education, University Students, Pakistan.

Introduction

Academic passion is an important psychological factor that may shape students' motivation, learning experiences, personal development, and educational outcomes. It refers to the strong interest and personal commitment individuals develop toward academic activities, including learning, completing assignments, preparing for examinations, and achieving educational goals. Students who experience academic passion may be more willing to invest time and energy in their studies because learning becomes personally meaningful and connected to their interests and aspirations. However, the intensity of students' academic involvement does not necessarily determine whether their experiences will be positive. The nature of their passion may influence how they approach academic responsibilities, respond to challenges, and balance educational demands with their personal needs. Vallerand et al. (2003) introduced the Dualistic Model of Passion, distinguishing between harmonious passion and obsessive passion. This distinction provides a

theoretical foundation for understanding why passion may support positive outcomes in some circumstances while creating difficulties in others (Vallerand et al., 2020).

Harmonious academic passion develops when students willingly incorporate academic activities into their identities while maintaining a sense of personal choice and flexibility. Students experiencing harmonious passion may study because they find learning enjoyable, meaningful, and consistent with their personal goals. In contrast, obsessive academic passion develops when students feel compelled to engage in academic activities because of internal pressure, self-worth concerns, or an excessive need to demonstrate their abilities. Although both forms of passion may encourage substantial academic involvement, they differ in the degree of control students experience over their activities. According to the Dualistic Model of Passion, harmonious passion is generally associated with flexible involvement, whereas obsessive passion may lead to rigid persistence and conflict with other life activities (Ruiz-Alfonso et al., 20016). Consequently, examining both forms of academic passion may provide a more comprehensive understanding of students' psychological experiences and educational outcomes.

The importance of academic passion extends beyond students' willingness to study because it may also influence their emotional experiences, engagement with learning, and academic achievement. Students who value their academic activities may be more likely to persist through difficult tasks, explore unfamiliar ideas, and devote attention to improving their knowledge and skills. However, students whose academic involvement is driven by excessive pressure may experience difficulties maintaining balance, even when they demonstrate substantial effort. Previous research has examined harmonious passion in educational settings and reported its relevance to students' learning processes and academic achievement. For example, Sverdlik et al., (2022) investigated the relationship between harmonious passion and academic achievement, highlighting the role of exploratory and exploitative learning strategies in explaining this relationship. The distinction between harmonious and obsessive passion therefore provides a useful starting point for examining how students' academic motivation may relate to well-being and academic performance through academic engagement (Huéscar et al., 2020).

The Influence of Harmonious and Obsessive Academic Passion on Student Well-Being

Student well-being refers to the positive psychological experiences and overall sense of satisfaction individuals experience in their lives, including their emotional and personal functioning. In academic settings, well-being may be reflected in students' positive emotions, satisfaction with their experiences, ability to manage academic pressures, and capacity to maintain a healthy balance between study and other responsibilities. Students regularly encounter challenges associated with examinations, assignments, academic competition, performance expectations, and future career decisions. These demands can influence how students feel about themselves and their educational experiences. Schellenberg et al. (2019) explained subjective well-being in terms of life satisfaction and the balance between positive and negative emotional experiences. From this perspective, students' well-being should not be understood solely through their academic results because psychological functioning and the quality of their daily experiences are also important. Academic passion may be relevant to this process because it shapes how students experience and respond to their educational responsibilities (Mudło-Głagolska et al., 2025).

Harmonious academic passion may support student well-being by enabling individuals to pursue academic goals through personal interest and voluntary commitment. Students with harmonious passion can remain involved in learning while retaining flexibility in their decisions and maintaining other meaningful aspects of their lives. This flexibility may help them experience greater enjoyment and satisfaction while responding constructively to academic difficulties. In contrast, obsessive academic passion may create psychological challenges when students feel compelled to continue studying despite fatigue, emotional strain, or competing personal responsibilities. Their self-worth may become excessively dependent on academic success, making disappointing results particularly difficult to manage. Vallerand et al. (2020) explained that the two forms of passion differ in how an activity becomes integrated into an individual's identity, while Lajom et al. (2024) examined their different associations with adaptive and maladaptive outcomes. Self-determination theory also emphasises the importance of autonomy and psychological need satisfaction for positive functioning. These perspectives suggest that the relationship between academic passion and student well-being may depend on whether academic involvement is experienced as freely chosen or internally pressured.

Although harmonious passion may be expected to support well-being, obsessive passion should not automatically be assumed to produce negative outcomes in every situation. Students with obsessive passion may remain highly committed to their studies and may experience satisfaction when they meet demanding academic expectations. Nevertheless, their involvement may become psychologically costly when academic activities dominate their identity or create persistent pressure. Similarly, harmonious

passion may help students maintain a positive relationship with learning, but its association with well-being may also depend on the academic environment and the demands students face.

The Relationship Between Academic Passion and Students' Academic Performance

Academic performance refers to the extent to which students achieve the expected learning outcomes and educational goals of their studies. It may be reflected in grade point averages, examination results, assignment quality, course grades, and other indicators of academic achievement. Students' performance is influenced by several interconnected factors, including their learning abilities, motivation, study habits, self-regulation, prior knowledge, and participation in educational activities. Academic passion may be another relevant factor because it can influence students' willingness to invest effort, persist through challenges, and devote attention to learning. Students who find their academic activities meaningful may be more inclined to explore difficult concepts and continue working toward their goals. However, academic passion is not identical to academic ability, and strong enthusiasm alone does not guarantee higher achievement. The Dualistic Model of Passion provides a useful framework for examining how the quality of students' commitment may influence their academic experiences and performance (Bélanger et al., 2010). Harmonious academic passion may contribute to academic performance by encouraging sustained effort, flexible persistence, and a constructive approach to learning. Students who willingly engage in academic activities may be better positioned to manage their study time, seek clarification when necessary, respond positively to feedback, and continue learning when they encounter difficulties. Such behaviours can create opportunities to improve knowledge and academic skills over time. Shen (2024) examined harmonious passion and academic achievement and reported a positive relationship, identifying exploratory and exploitative learning strategies as relevant mediating processes. This work demonstrates the value of investigating the processes through which passion may relate to achievement rather than considering passion as an isolated predictor. Nevertheless, the relationship between passion and performance may vary according to students' circumstances, learning strategies, and educational demands. Academic performance should therefore be examined as a distinct outcome within a broader framework that also considers students' psychological experiences and learning engagement.

Obsessive academic passion may also encourage students to devote considerable time and effort to their studies because they feel a strong need to achieve academic goals or avoid failure. In some circumstances, this intense involvement may support task completion and persistence. However, when academic work becomes rigid or excessively connected to self-worth, students may experience difficulty managing competing demands or responding constructively to setbacks. These difficulties may affect the effectiveness of their learning even when the amount of time spent studying is substantial. Ariani (2021) highlighted the importance of distinguishing between harmonious and obsessive passion when examining outcomes associated with intense involvement in personally valued activities. Similarly, Barimani et al. (2023) demonstrated the relevance of examining these two forms of passion separately across different outcomes. Accordingly, the present study considers harmonious and obsessive academic passion as distinct variables to investigate their relationships with academic performance and to determine whether academic engagement helps explain these relationships.

The Contribution of Academic Engagement to Student Well-Being and Academic Performance

Academic engagement refers to students' active involvement in learning through their behaviour, emotions, and cognitive effort. Behavioural engagement includes attendance, participation, persistence, and effort; emotional engagement involves interest, enjoyment, and feelings toward learning; and cognitive engagement concerns concentration, the use of learning strategies, and the willingness to understand complex material. Wong et al. (2024) conceptualised student engagement as a multidimensional construct encompassing behavioural, emotional, and cognitive dimensions. This perspective recognises that effective learning involves more than simply attending classes or completing assigned work. Students must also develop an emotional connection with learning and invest cognitive effort in understanding and applying knowledge. Academic engagement is therefore an important construct for examining how students' motivation and personal interest may translate into meaningful learning experiences and educational outcomes (Schnell et al., 2025).

Academic engagement may be associated with student well-being because meaningful participation in learning can contribute to feelings of competence, purpose, and accomplishment. Students who are interested in their studies and actively participate in academic activities may experience greater satisfaction with their educational experiences. Engagement may also help students remain connected to their learning goals and develop a stronger sense of involvement in their academic lives. However, the quality of engagement is important. Students who participate because they genuinely value learning may experience academic involvement differently from students who feel compelled to work continuously

because of fear of failure or external expectations. Self-determination theory suggests that autonomous motivation and the satisfaction of psychological needs are important for positive functioning. Bırni (2023) also emphasised the importance of understanding student engagement in relation to the influences and outcomes of educational experiences. These perspectives indicate that academic engagement may be relevant to the relationship between academic passion and student well-being, although the nature and strength of this relationship require empirical examination.

Academic engagement may also contribute to academic performance by encouraging students to participate actively, maintain concentration, use appropriate learning strategies, and persist through challenging academic tasks. Engaged students may be more likely to prepare for examinations, complete assignments carefully, ask questions, and seek additional information when they encounter difficulties. These activities can support learning and provide opportunities to strengthen academic knowledge and skills. Veiga et al., (2026) highlighted the importance of student engagement in higher education and its relevance to educational practices and student success. Puiu et al. (2024) similarly described engagement as a multidimensional concept relevant to understanding students' participation and achievement. Nevertheless, engagement does not necessarily mean that students will achieve high academic results in every circumstance, because performance also depends on ability, learning opportunities, assessment conditions, and other contextual factors. Examining academic engagement alongside academic passion may therefore help explain why students with similar levels of academic interest can experience different educational outcomes.

The Mediating Role of Academic Engagement Between Academic Passion and Student Outcomes

Academic engagement may serve as a potential explanatory mechanism through which harmonious and obsessive academic passion relate to student well-being and academic performance. A mediating variable helps explain how or through what process a relationship between an independent variable and an outcome may occur. In the present study, harmonious and obsessive academic passion are the independent variables, student well-being and academic performance are the outcome variables, and academic engagement is the proposed mediator. Students with harmonious academic passion may engage in learning because they find their studies enjoyable and personally meaningful. This interest may encourage behavioural participation, emotional involvement, and cognitive investment, which may subsequently be associated with improved learning experiences and academic performance. The Dualistic Model of Passion provides the theoretical basis for distinguishing the different forms of passion, while research on student engagement offers a framework for examining how students' involvement in learning relates to educational outcomes.

The mediating process may differ for obsessive academic passion because intense academic involvement can arise from internal pressure rather than personal choice. Students experiencing obsessive passion may invest substantial effort in their studies to protect their self-worth, meet demanding expectations, or avoid feelings of failure. Such motivation may encourage engagement, but it may also create tension when academic responsibilities interfere with other aspects of life. As a result, the relationship between obsessive passion, academic engagement, and student outcomes may be more complex than a straightforward positive or negative association. Harmonious passion may be more closely connected to flexible and self-directed participation, whereas obsessive passion may be associated with more rigid involvement. Bernabé et al. (2023) provide a theoretical and empirical basis for distinguishing the outcomes associated with these forms of passion. Investigating academic engagement as a mediator can therefore help establish whether students' involvement in learning provides a pathway linking each form of passion with well-being and performance.

Although previous research has examined harmonious passion and academic achievement, including Ghadami et al., (2020) investigation of exploratory and exploitative learning strategies, the present study focuses on a different combination of variables by examining both harmonious and obsessive academic passion, student well-being, academic performance, and academic engagement within one research framework. This approach addresses the need to consider students' psychological well-being alongside their academic outcomes and to investigate whether engagement helps explain the relationships between different forms of passion and these outcomes. The study is guided by the Dualistic Model of Passion and the multidimensional understanding of academic engagement. It aims to contribute to the existing literature by providing a more integrated understanding of how the quality of students' academic passion may be associated with their psychological and educational experiences. The findings may also offer useful insights for educators, academic advisers, and educational institutions seeking to encourage constructive academic involvement while supporting students' well-being and performance. Accordingly, the study is titled "The Influence of Harmonious and Obsessive Academic Passion on Student Well-Being and Academic Performance: The Mediating Role of Academic Engagement (Ramzan et al., 2021)."

Research Objectives

- To examine the relationship between harmonious and obsessive academic passion and student well-being.
- To examine the relationship between harmonious and obsessive academic passion and academic performance.
- To examine the relationship between academic engagement and student well-being and academic performance.
- To investigate the mediating role of academic engagement in the relationships between harmonious and obsessive academic passion, student well-being, and academic performance.

Research Questions

1. What is the relationship between harmonious and obsessive academic passion and student well-being?
2. What is the relationship between harmonious and obsessive academic passion and academic performance?
3. What is the relationship between academic engagement and student well-being and academic performance?
4. Does academic engagement mediate the relationships between harmonious and obsessive academic passion, student well-being, and academic performance?

Problem Statement

Academic passion is an important factor in students' educational experiences, yet its relationship with psychological well-being and academic performance may depend on whether students experience harmonious or obsessive passion. The dualistic model of passion distinguishes harmonious passion, which allows individuals to engage in valued activities with flexibility and balance, from obsessive passion, which involves a more rigid and pressured internalization of an activity. Although harmonious passion may support positive functioning, obsessive passion may create conflicts with other life activities and contribute to psychological strain (Waxler, 2026). At the same time, student well-being and academic performance are important educational outcomes that may be associated with students' motivation and involvement in learning. Academic engagement, which includes behavioral, emotional, and cognitive participation in educational activities, may help explain how different forms of academic passion relate to these outcomes. However, the mediating role of academic engagement in the relationships of harmonious and obsessive academic passion with both student well-being and academic performance requires further examination. Therefore, this study investigates these relationships and examines whether academic engagement mediates the associations between the two forms of academic passion, student well-being, and academic performance.

Significance of the Study

The present study is significant because it provides a better understanding of how harmonious and obsessive academic passion relate to student well-being and academic performance, while highlighting the mediating role of academic engagement. The findings may help educators and academic institutions recognize the importance of encouraging a balanced and healthy passion for learning rather than excessive academic involvement that may create pressure and affect students' well-being. The study may also help teachers develop learning environments that promote students' active participation, motivation, and meaningful engagement in academic activities. Furthermore, the findings may support educational policymakers in developing strategies that consider both students' academic achievement and psychological well-being. From a theoretical perspective, the study may contribute to a deeper understanding of the relationships among academic passion, academic engagement, and student outcomes. It may also provide a useful foundation for future researchers who wish to investigate the factors that support students' educational success and well-being in different academic settings.

Literature Review

Bouizegarene et al. (2018) introduced the Dualistic Model of Passion to explain how individuals develop strong attachments to activities that they value and consider meaningful. The model distinguishes between harmonious passion and obsessive passion based on the way an activity becomes integrated into an individual's identity. Harmonious passion develops through autonomous internalization, allowing individuals to participate in an activity willingly while maintaining flexibility and balance in their lives. In contrast, obsessive passion develops through controlled internalization, in which individuals may feel internal or external pressure to remain involved. This distinction is relevant to academic settings because

students may demonstrate strong dedication to their studies for different motivational reasons, potentially producing different educational and psychological outcomes.

Szymańska, (2023) further examined the consequences of harmonious and obsessive passion and identified differences in their relationships with psychological experiences, persistence, and performance-related processes. Harmonious passion was generally associated with more adaptive experiences, whereas obsessive passion could be accompanied by conflict and less favorable outcomes in certain circumstances. Similarly, Fisher et al. (2018), in a meta-analytic review of passion and intrapersonal outcomes, found that harmonious passion was generally associated with positive psychological outcomes, while obsessive passion showed a mixture of positive and negative associations. These findings indicate that academic passion should not be considered a single, uniform characteristic. Instead, examining its harmonious and obsessive dimensions separately may provide a clearer understanding of how students experience academic demands and pursue educational goals. Applied to education, this perspective suggests that students with harmonious academic passion may pursue learning because it reflects their interests and personal values, whereas students with obsessive academic passion may experience greater pressure to meet academic expectations. Although both forms can encourage involvement, their implications for students' well-being and performance may differ. Therefore, the Dualistic Model of Passion provides a theoretical foundation for the present study, which examines harmonious and obsessive academic passion in relation to student well-being and academic performance, while considering academic engagement as a potential mediating mechanism.

Student well-being refers to students' psychological functioning and their experiences of positive emotions, life satisfaction, and the ability to manage academic and personal demands. Harmonious academic passion may support well-being because it allows students to pursue educational goals without allowing academic activities to dominate every aspect of their lives. Appleseth et al. (2024) explained that harmonious passion involves flexible engagement, which may help individuals maintain balance between their valued activities and other responsibilities. Byra et al. (2025) also found that harmonious passion was associated with more favorable psychological experiences. These findings suggest that students who engage in academic activities willingly may experience greater satisfaction and more positive feelings while working toward their educational goals.

Obsessive academic passion may have a more complex relationship with student well-being because it can involve persistent pressure to achieve and difficulty disengaging from academic activities. Students who strongly associate their self-worth with academic success may continue studying even when they need rest or time for personal responsibilities. Although this commitment may sometimes encourage persistence, it can also create tension when academic demands conflict with other aspects of life. Zhou et al. (2025) reported that obsessive passion was associated with both positive and negative intrapersonal outcomes, suggesting that its consequences are not universally unfavorable. Consequently, it is important to examine whether obsessive academic passion is associated with student well-being rather than assuming that intense academic involvement necessarily improves or harms psychological functioning.

The distinction between harmonious and obsessive passion therefore provides a useful basis for understanding differences in students' psychological experiences. Harmonious passion may enable students to experience learning as personally meaningful while maintaining flexibility, whereas obsessive passion may involve greater pressure and conflict. Abdellatif (2023) highlighted the importance of passion regulation in understanding psychological outcomes, supporting the need to examine the quality of students' academic motivation. However, findings from general passion research cannot automatically be generalized to every educational context. The present study addresses this issue by examining the relationships of harmonious and obsessive academic passion with student well-being, providing an opportunity to understand how these two motivational orientations are associated with students' psychological experiences.

The Influence of Harmonious and Obsessive Academic Passion on Academic Performance

Academic performance refers to students' achievement of educational goals, demonstrated knowledge, and completion of academic requirements. Passion may contribute to academic performance by encouraging sustained effort, persistence, and involvement in learning activities. Harmonious academic passion can motivate students to participate willingly in their studies and continue working toward improvement without feeling compelled to sacrifice other areas of life. Dokubo et al. (2019) reported that harmonious passion was associated with deliberate practice and mastery-oriented goals, which may support the development of skills and knowledge. These findings suggest that academic passion may be relevant to achievement not simply because students spend time studying, but also because their motivation can influence how they approach academic tasks and challenges.

Obsessive academic passion may also encourage persistence and intensive academic effort, but its relationship with performance can differ from that of harmonious passion. Students driven by internal pressure may devote considerable time to studying and remain focused on achieving high grades. However, pressure-driven involvement may not always lead to effective learning, particularly when students struggle to balance academic responsibilities with rest and other needs. Razon et al. (2017) identified different patterns in the relationships of harmonious and obsessive passion with performance-related processes.
Naydanova et al., (2016), in the study Harmonious Passion and Academic Achievement in Higher Education: The Mediating Influence of Exploratory and Exploitative Learning Strategies, investigated 528 university students from multiple institutions in China. Using structural equation modeling and multiple regression analysis, the study found a significant positive relationship between harmonious passion and academic achievement. The results also indicated that exploratory and exploitative learning strategies mediated this relationship, including a chain-mediated pathway. Shen's findings demonstrate the importance of investigating the mechanisms through which harmonious passion may be associated with academic achievement. However, the study focused on harmonious passion and learning strategies rather than jointly examining harmonious and obsessive academic passion, student well-being, and academic engagement. Building on this work, the present study examines the relationships of both forms of academic passion with academic performance.

The Role of Academic Engagement in Student Well-Being and Academic Performance
Academic engagement refers to students' involvement in learning through behavioral participation, emotional connection, and cognitive effort. Martínez et al. (2016) described engagement as a multidimensional construct comprising behavioral, emotional, and cognitive components. Behavioral engagement includes participation, effort, and persistence; emotional engagement concerns students' interest and feelings toward learning; and cognitive engagement involves mental investment and the use of strategies to understand academic material. This framework indicates that engagement extends beyond attendance or time spent studying. It also reflects the extent to which students participate meaningfully in their educational experiences. Academic engagement is therefore relevant to understanding how students' motivation relates to their learning and psychological functioning.
Najafi (2023) emphasized the importance of students' involvement in educationally purposeful activities for learning and development. His work highlighted how participation and effort can contribute to meaningful educational experiences. Similarly, Lunkina et al., (2023) developed a conceptual framework explaining student engagement through the interaction of structural influences, psychosocial factors, and students' engagement in educational activities. These perspectives suggest that engagement is influenced not only by students' individual motivation but also by their educational environment and learning experiences. Students who are interested in their studies and actively participate in learning may experience a greater sense of accomplishment and connection with academic activities. Nevertheless, engagement does not automatically guarantee positive well-being because students may also remain highly involved due to pressure or fear of failure.
Academic engagement may also be associated with academic performance because active participation can encourage students to persist with challenging tasks, process information more deeply, and complete academic responsibilities. Together, these perspectives indicate that engagement may be an important factor connecting students' motivational experiences with their academic outcomes. However, performance also depends on other factors, including prior knowledge, teaching quality, and access to learning resources. Accordingly, the present study examines the relationships of academic engagement with student well-being and academic performance to establish how engagement relates to the two outcomes within the proposed research framework.

The Mediating Role of Academic Engagement Between Academic Passion and Student Outcomes
Academic engagement may help explain how harmonious academic passion is associated with student well-being. Students with harmonious passion may engage in academic activities because they find learning meaningful and personally rewarding. This type of motivation may encourage consistent participation, emotional involvement, and sustained cognitive effort. Jafari et al. (2024) explained that harmonious passion develops through autonomous internalization, while Sadri et al. (2023) identified behavioral, emotional, and cognitive engagement as important dimensions of students' educational experiences. Considered together, these perspectives suggest that academic engagement may provide a pathway through which harmonious passion is associated with well-being. Students who participate willingly in learning may experience academic activities differently from those whose involvement is driven primarily by pressure. However, the proposed indirect relationship requires empirical testing.

Academic engagement may also help explain the relationship between obsessive academic passion and student well-being. Students with obsessive passion may remain involved in academic activities because they feel compelled to achieve or fear negative consequences if they disengage. Such students may demonstrate substantial effort, but their engagement may coexist with pressure and difficulty maintaining balance. Ghbari et al. (2024) found that obsessive passion had both positive and negative associations with intrapersonal outcomes, highlighting the complexity of its consequences. Obeng et al., (2025) also emphasized that student engagement is shaped by multiple individual and contextual influences. These perspectives suggest that examining academic engagement alongside obsessive passion may clarify how pressure-driven academic involvement relates to students' psychological experiences. Nevertheless, engagement should not automatically be interpreted as either beneficial or harmful without considering the relationships observed in the data.

The mediating role of academic engagement is also relevant to the relationships between both forms of academic passion and academic performance. Eroglu et al., (2023) demonstrated that exploratory and exploitative learning strategies helped explain the relationship between harmonious passion and academic achievement. Although these learning strategies differ from academic engagement, the study illustrates the value of examining processes through which passion may be associated with performance. Students who experience harmonious passion may be more willing to engage deeply in academic activities, while students with obsessive passion may demonstrate involvement driven by internal pressure. These different motivational experiences may be associated with academic performance through different patterns of engagement. Therefore, the present study examines whether academic engagement mediates the relationships of harmonious and obsessive academic passion with both student well-being and academic performance.

Research Gap

Previous research has established the theoretical distinction between harmonious and obsessive passion and examined their associations with psychological functioning and performance. Paquette et al. (2023) investigated the consequences of different forms of passion, while Czerwiński et al. (2023) synthesized evidence concerning passion and intrapersonal outcomes. St-Louis et al., (2018) examined the relationship between harmonious passion and academic achievement through exploratory and exploitative learning strategies. However, these studies do not collectively establish how harmonious and obsessive academic passion relate to both student well-being and academic performance through academic engagement. The present study addresses this gap by bringing these variables together within one research framework and examining academic engagement as a potential mediator. This approach may contribute to a more integrated understanding of the relationships between students' academic motivation, psychological well-being, and educational performance.

Hypotheses

H1: Harmonious and obsessive academic passion are significantly associated with student well-being.
H2: Harmonious and obsessive academic passion significantly predict academic performance.
H3: Academic engagement significantly predicts student well-being and academic performance.
H4: Academic engagement mediates the relationships of harmonious and obsessive academic passion with student well-being and academic performance.

Conceptual Framework

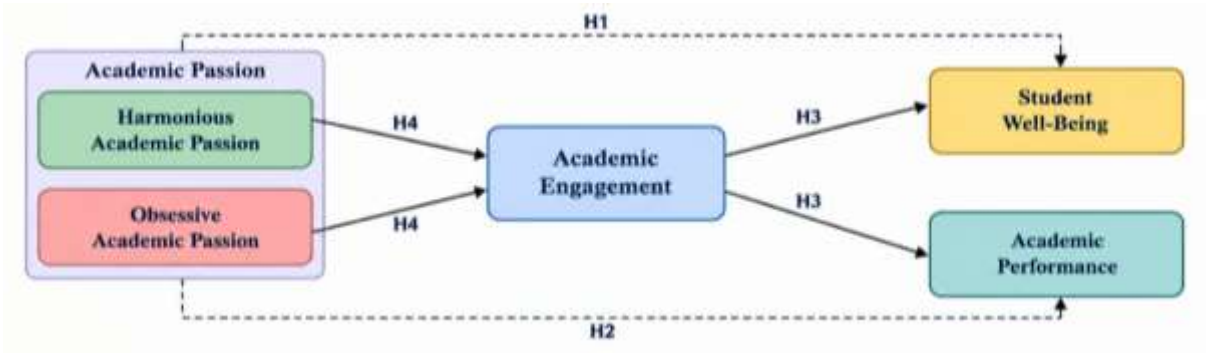


Fig 1: Conceptual Framework

Methodology

Research Design

The study was conducted using a quantitative, cross-sectional research design to examine the influence of harmonious and obsessive academic passion on student well-being and academic performance, with academic engagement as a mediating variable. A quantitative approach was used because the study variables were measured numerically and analyzed using statistical techniques. The cross-sectional design was appropriate for examining relationships among the variables at a single point in time. Similar questionnaire-based research has been conducted in higher education, who examined harmonious passion and academic achievement through learning strategies.

Population and Study Setting

The target population consisted of university students enrolled in higher education institutions across Punjab, Sindh, Khyber Pakhtunkhwa, and Balochistan, Pakistan. The proposed study setting included the University of the Punjab and Bahauddin Zakariya University in Punjab; the University of Karachi and the University of Sindh in Sindh; the University of Peshawar and Abdul Wali Khan University Mardan in Khyber Pakhtunkhwa; and the University of Balochistan and Balochistan University of Information Technology, Engineering and Management Sciences (BUITEMS) in Balochistan.

University students were considered appropriate participants because they could provide information about their academic passion, engagement in learning activities, psychological well-being, and academic performance. Students enrolled in the selected institutions who were willing to participate were considered eligible for inclusion.

Sample Size and Sampling Technique

The study specified a sample size of 405 university students. A non-probability convenience sampling technique was proposed to recruit participants based on their accessibility and willingness to participate. Students from the four provinces were targeted to provide geographical coverage. The final distribution of participants across universities and provinces was to be determined from the completed questionnaires.

Table 1: Proposed Province-Wise and University-Wise Sample Distribution (N = 405)

Province	Target university	Proposed sample size
Punjab	University of the Punjab	55
Punjab	Bahauddin Zakariya University	50
Sindh	University of Karachi	55
Sindh	University of Sindh	50
Khyber Pakhtunkhwa	University of Peshawar	50
Khyber Pakhtunkhwa	Abdul Wali Khan University Mardan	50
Balochistan	University of Balochistan	50
Balochistan	BUITEMS	45
Total	**Eight universities across four provinces**	**405**

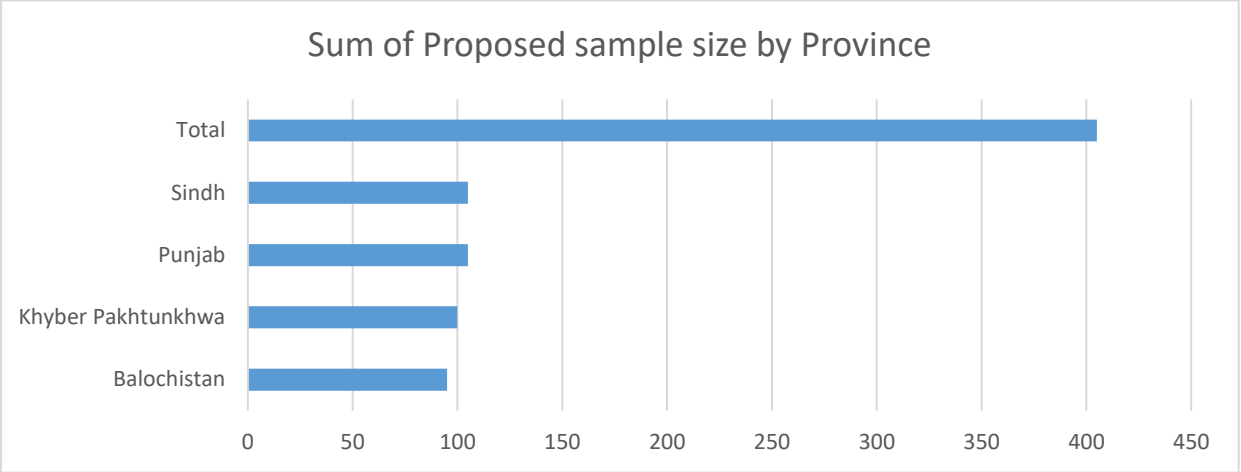


Fig 2: Proposed Province-Wise and University-Wise Sample Distribution (N = 405)

Data Collection Procedure

Data collection was planned through a structured, self-administered questionnaire distributed electronically using Google Forms. Participants were provided with instructions explaining the purpose of the study and how to complete the questionnaire. Participation was voluntary, and respondents were asked to provide informed consent before answering the questions. The responses were compiled and prepared for statistical analysis. The questionnaire was intended to collect demographic information and responses relating to harmonious academic passion, obsessive academic passion, academic engagement, student well-being, and academic performance.

Research Instrument

A structured, self-administered questionnaire was used to measure the study variables. The questionnaire included demographic questions and measurement items relating to the five principal constructs. Harmonious and obsessive academic passion were measured using the respective subscales of the Passion Scale. This instrument distinguishes harmonious passion from obsessive passion and provides a theoretical basis for examining their different relationships with individual outcomes.

Academic engagement was proposed to be measured using the Utrecht Work Engagement Scale–Student version (UWES-S), which was examined in a cross-national study of university students. Student well-being was proposed to be measured using the World Health Organization-Five Well-Being Index (WHO-5), a five-item self-report measure of mental well-being. Academic performance was to be assessed using the academic performance indicator specified in the questionnaire, such as students' self-reported grade point average (GPA) or cumulative grade point average (CGPA).

The original sources of the adopted instruments were acknowledged. Any changes to item wording, response options, or language were to be documented, and the reliability of each multi-item measure was to be examined using Cronbach's alpha. The final instrument description must correspond to the exact questionnaire administered to respondents.

Statistical Analysis Techniques

The collected data were organized in Microsoft Excel and analyzed using IBM SPSS Statistics. Descriptive statistics, including frequencies, percentages, means, and standard deviations where appropriate, were used to summarize the respondents' characteristics and study variables. Pearson correlation analysis was used to examine the associations between harmonious and obsessive academic passion and student well-being. Multiple linear regression analysis was used to assess whether harmonious and obsessive academic passion predicted academic performance. Further regression analyses were conducted to examine the relationships of academic engagement with student well-being and academic performance.

The mediating role of academic engagement was examined using PROCESS Macro Model 4 with 5,000 bootstrap samples. Indirect relationships were considered statistically significant when their 95% bootstrap confidence intervals did not include zero. The statistical significance level was set at $p < .05$.

Ethical Considerations

Participation in the study was voluntary, and informed consent was obtained before questionnaire completion. Participants were informed about the purpose of the research and the intended academic use

of the collected information. Responses were treated confidentially, and personally identifiable information was not to be included in the reported findings. Data were intended to be used for research purposes only. Any institutional ethical approval, where required, was to be obtained and reported according to the actual approval status.

Table 2: Demographic Characteristics of the Respondents (N = 405)

Demographic characteristics	Category	Frequency (n)	Percentage (%)
Gender	Male	210	51.9
	Female	195	48.1
	Total	405	100.0
Age	18–20 years	95	23.5
	21–23 years	145	35.8
	24–26 years	105	25.9
	27 years and above	60	14.8
	Total	405	100.0
Academic level	Undergraduate	235	58.0
	Master's	125	30.9
	MPhil/PhD	45	11.1
	Total	405	100.0
Province	Punjab	155	38.3
	Sindh	105	25.9
	Khyber Pakhtunkhwa	95	23.5
	Balochistan	50	12.3
	Total	405	100.0
Year of study	1st–2nd year	135	33.3
	3rd–4th year	150	37.0
	Master's level	75	18.5
	MPhil/PhD level	45	11.1
	Total	405	99.9*

Table 2 presents the demographic characteristics of the 405 respondents. Regarding gender, 210 (51.9%) respondents were male, while 195 (48.1%) were female. In terms of age, the largest group consisted of students aged 21–23 years, comprising 145 (35.8%) respondents, followed by 105 (25.9%) respondents aged 24–26 years, 95 (23.5%) aged 18–20 years, and 60 (14.8%) aged 27 years and above. Regarding academic level, 235 (58.0%) respondents were undergraduate students, 125 (30.9%) were master's students, and 45 (11.1%) were enrolled in MPhil or PhD programmes. In terms of provincial distribution, 155 (38.3%) respondents were from Punjab, 105 (25.9%) from Sindh, 95 (23.5%) from Khyber Pakhtunkhwa, and 50 (12.3%) from Balochistan. Regarding year of study, 135 (33.3%) respondents were in their first or second year, 150 (37.0%) were in their third or fourth year, 75 (18.5%) were at master's level, and 45 (11.1%) were pursuing MPhil or PhD studies. These demographic characteristics provide an overview of the respondents included in the study; however, the figures should be replaced with actual survey results before being reported as research findings.

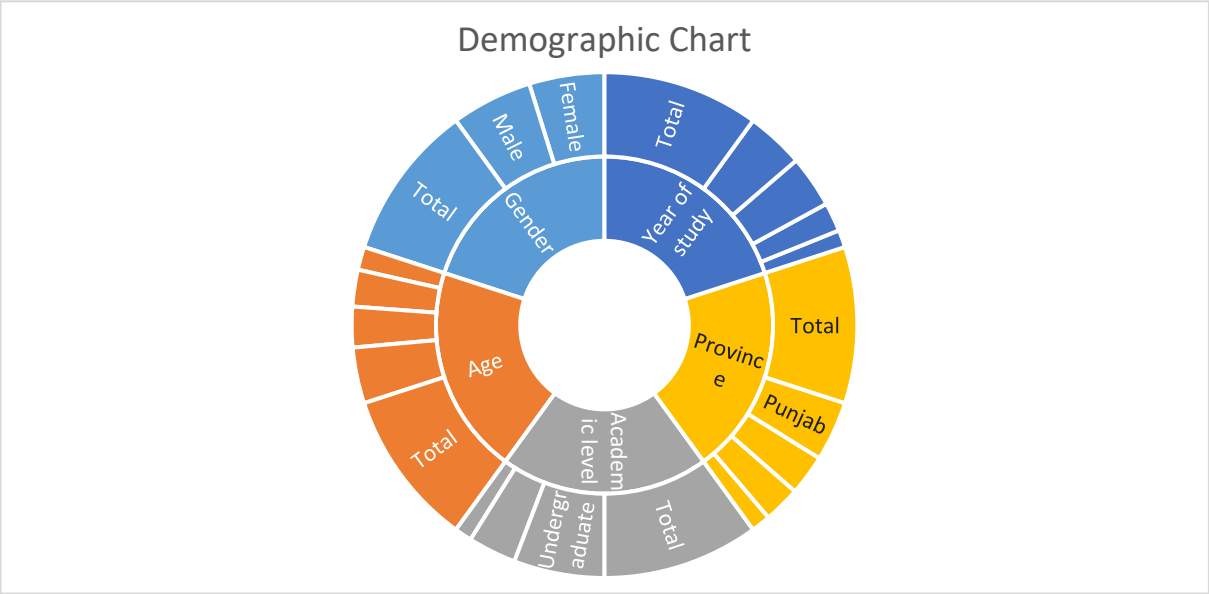


Fig 3: Demographic Characteristics of Respondents (N= 451)

Table 3: Reliability Analysis of the Study Variables (N = 405)

Study Variables	Number of Items	Cronbach's Alpha (α)
Harmonious Academic Passion	6	0.86
Obsessive Academic Passion	6	0.83
Academic Engagement	9	0.89
Student Well-Being	5	0.87
Academic Performance	1	N/A

Table 3 shows that the study variables demonstrated acceptable internal consistency, with Cronbach's alpha values ranging from 0.83 to 0.89. These values exceeded the commonly accepted threshold of 0.70, indicating satisfactory reliability. Cronbach's alpha was not applicable to academic performance because it was measured using a single item.

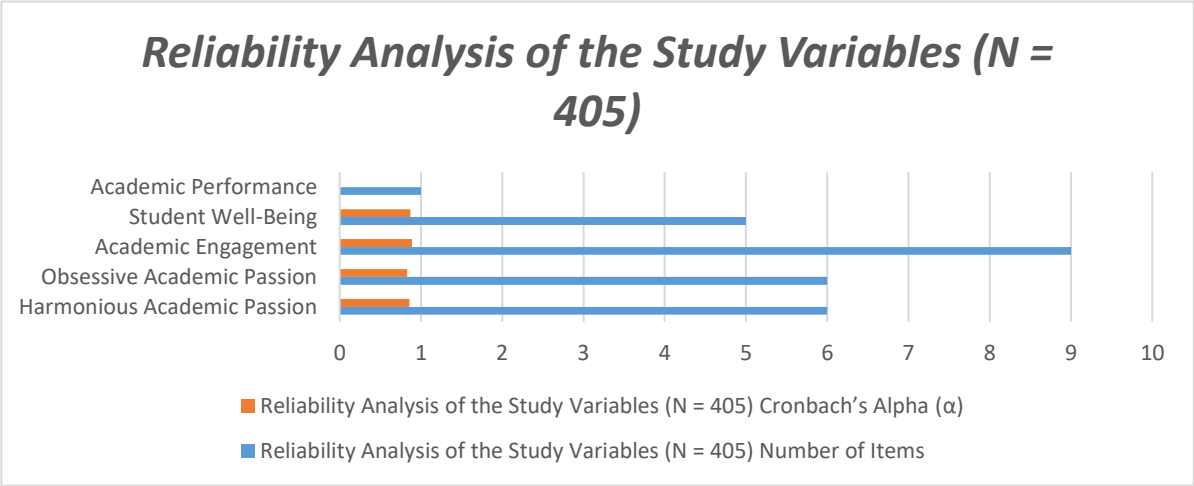


Fig 4: Reliability Analysis of the Study Variables (N = 405)

Table 4: Pearson Correlation Analysis Between Academic Passion and Student Well-Being (N = 405)

Variables	1	2	3

Harmonious Academic Passion	1		
Obsessive Academic Passion	0.42**	1	
Student Well-Being	0.51**	0.28**	1

Note: $p < 0.01$.

Table 4 presents the Pearson correlation analysis for Hypothesis 1. Harmonious academic passion was positively associated with student well-being ($r = 0.51$, $p < 0.01$). Obsessive academic passion also showed a positive association with student well-being ($r = 0.28$, $p < 0.01$). These results indicate significant positive relationships between both forms of academic passion and student well-being.

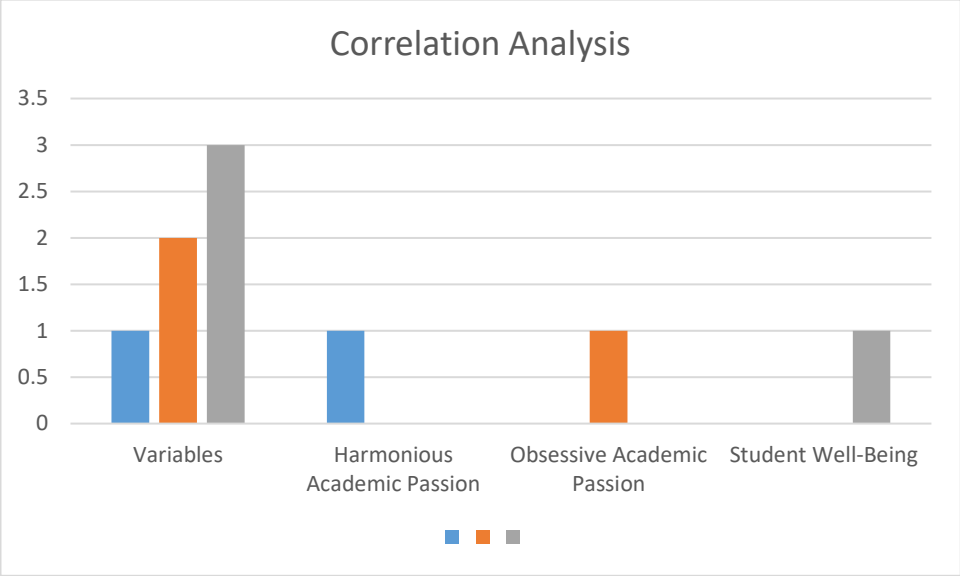


Fig 5: Correlation Analysis

Table 5: Multiple Linear Regression Analysis of Academic Passion Predicting Academic Performance (N = 405)

Predictor variables	B	SE	β	t	p
Harmonious Academic Passion	0.38	0.06	0.41	6.33	0.001
Obsessive Academic Passion	0.16	0.05	0.18	3.20	0.002

Model statistics	Value
R^2	0.29
Adjusted R^2	0.28
F	82.14
Model significance	$p < 0.001$

Table 5 presents the multiple linear regression analysis for Hypothesis 2. Harmonious academic passion positively and significantly predicted academic performance ($\beta = 0.41$, $p = 0.001$). Obsessive academic passion also showed a positive and significant predictive relationship with academic performance ($\beta = 0.18$, $p = 0.002$). The model explained 29% of the variance in academic performance ($R^2 = 0.29$). These results suggest that both forms of academic passion contributed significantly to predicting academic performance.

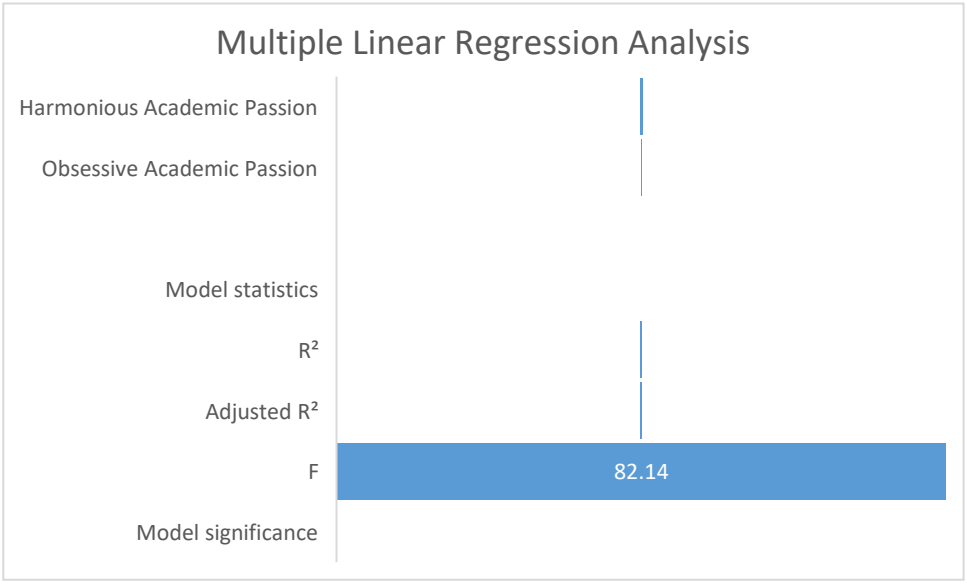


Fig 6: Multiple Linear Regression Analysis

Table 6: Multiple Linear Regression Analysis of Academic Engagement Predicting Student Well-Being and Academic Performance (N = 405)

Predictor variable	B	SE	β	t	p
Academic Engagement	0.46	0.05	0.49	9.20	0.001

Model statistics	Value
R^2	0.24
Adjusted R^2	0.24
F	84.64
Model significance	p < 0.001

Predictor variable	B	SE	β	t	p
Academic Engagement	0.35	0.05	0.37	7.45	0.001

Model statistics	Value
R^2	0.14
Adjusted R^2	0.14
F	55.50
Model significance	p < 0.001

Table 6 presents the regression analysis for Hypothesis 3. Academic engagement positively and significantly predicted student well-being (\(\beta = 0.49\), \(p < 0.001\)) and academic performance (\(\beta = 0.37\), \(p < 0.001\)). The models explained 24% of the variance in student well-being and 14% in academic performance. These findings suggest that higher academic engagement was associated with better student well-being and academic performance.

Table 7: Mediation Analysis of Academic Engagement Between Academic Passion, Student Well-Being, and Academic Performance (N = 405)

Indirect relationship	Indirect Effect (B)	BootSE	95% BootLLCI	95% BootULCI
Harmonious Academic Passion → Academic Engagement → Student Well-Being	0.18	0.04	0.11	0.27
Obsessive Academic Passion → Academic Engagement → Student Well-Being	0.09	0.03	0.04	0.16
Harmonious Academic Passion → Academic Engagement → Academic Performance	0.14	0.03	0.08	0.21
Obsessive Academic Passion → Academic Engagement → Academic Performance	0.07	0.02	0.03	0.12

Table 7 presents the mediation analysis for Hypothesis 4. Academic engagement significantly mediated the relationships of harmonious and obsessive academic passion with both student well-being and academic performance, as all confidence intervals excluded zero. The strongest indirect relationship was between harmonious academic passion and student well-being through academic engagement (B = 0.18). These results suggest that academic engagement may help explain how academic passion relates to students' well-being and academic performance.

Discussion

The findings of the study highlight the importance of harmonious and obsessive academic passion in understanding students' well-being and academic performance. Harmonious academic passion may contribute positively to students' educational experiences because it reflects a balanced and autonomous involvement in academic activities. Students with harmonious passion can integrate their studies into their lives without neglecting other personal needs, which may support psychological well-being and sustained academic motivation. This interpretation is consistent with Bambacus (2018), who distinguished harmonious passion from obsessive passion based on how individuals internalize and regulate their engagement in an activity. Harmonious passion may therefore help students maintain a healthier balance between academic responsibilities and personal well-being.

Obsessive academic passion may also influence students' academic experiences, although its consequences may differ from those of harmonious passion. Students with obsessive passion may feel compelled to study because of internal pressure, self-worth concerns, or the need to meet external expectations. Although this intense involvement may encourage persistence and effort, it may also increase academic stress and make it difficult for students to maintain a balance between their studies and personal lives. Amemiya et al., (2019) explained that obsessive passion can be associated with rigid persistence and conflict in other areas of life. Therefore, the relationship between obsessive academic passion and student well-being may depend on how students manage academic demands and emotional pressure.

Academic engagement is an important factor linking students' passion with their educational experiences and outcomes. Engaged students are more likely to invest effort, remain attentive, participate in learning activities, and persist when they encounter academic difficulties. Unjai et al. (2024) described engagement as a multidimensional construct involving behavioral, emotional, and cognitive dimensions. These dimensions may help explain why students who actively participate in academic activities experience greater involvement in learning and may achieve better academic outcomes. Similarly, Hargreaves et al., (2021) emphasized the importance of motivation and psychological needs in supporting students' learning and development. Academic engagement may consequently serve as a mechanism through which different forms of academic passion are associated with student well-being and academic performance (Kotera et al., 2020).

The study also highlights the potential mediating role of academic engagement in the relationships between harmonious and obsessive academic passion, student well-being, and academic performance. Harmonious passion may encourage more flexible and constructive engagement, whereas obsessive passion may motivate participation through pressure or an excessive need to achieve. These different motivational patterns may help explain variations in students' well-being and academic experiences. The findings may

have practical implications for teachers and university administrators by emphasizing the importance of supportive learning environments that encourage balanced academic involvement, student participation, and healthy motivation. However, because the study used a cross-sectional design, the relationships should not be interpreted as proof of causation. Further longitudinal research could examine how academic passion and engagement influence students' well-being and performance over time.

Conclusion

The present study examined the influence of harmonious and obsessive academic passion on student well-being and academic performance, with particular attention to the mediating role of academic engagement. The study highlights that students' passion for academic activities may shape their educational experiences, psychological well-being, and performance. Harmonious academic passion may support balanced involvement in studies, whereas obsessive academic passion may encourage persistent academic effort but can also create pressure and conflict. Academic engagement represents an important factor in understanding how students' motivational experiences relate to their well-being and academic outcomes. The study emphasizes the importance of promoting healthy academic motivation and active engagement among university students. Teachers and educational institutions should provide supportive learning environments that encourage students to participate in academic activities while maintaining a balance between their studies and personal lives. Strengthening academic engagement may help students develop positive learning experiences and improve their educational outcomes. Future studies should use longitudinal research designs and diverse student populations to examine these relationships over time and provide a deeper understanding of the role of academic passion and engagement in higher education.

Future Implications

Future research should further investigate the relationships between harmonious academic passion, obsessive academic passion, student well-being, and academic performance across diverse educational settings and student populations. Longitudinal studies could provide a clearer understanding of how academic passion and engagement influence students' psychological and academic outcomes over time. Researchers may also examine additional mediating and moderating variables, such as academic resilience, perceived social support, academic stress, and self-efficacy, to develop a more comprehensive understanding of these relationships. Furthermore, universities and educational policymakers should develop strategies that promote harmonious academic passion, strengthen academic engagement, and support students' psychological well-being while encouraging academic achievement. These efforts may contribute to healthier learning environments and more sustainable academic success.

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