The Linkage Between University Students' Academic Engagement and Academic Support: The Mediating Role of Psychological Capital

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A r t i c l e   I n f o

Article type:
Original Research

How to cite this article:

A B S T R A C T

Purpose: Despite the importance of university students' academic engagement and the role of academic support in facilitating their success, there appears to be a dearth of research investigating the mediating effect of psychological capital in this relationship, highlighting a significant gap in the existing literature.

Methodology: This research was quantitative on the basis of the natural and general features and employed a descriptive-correlational approach based on the structural equation model (SEM). The statistical population of the research included all undergraduate students of Farhangian University of Kerman, approximately 2100 students. Out of this statistical population, 677 participants responded to the online survey. The sampling method was convenience sampling and the data was collected in the first semester of the academic year 1401-1402 (From Aban to Azar). Sands and Plunkett's (2005) academic support scale, Reeve and Tseng's (2011) academic engagement scale, and Luthans and Avolio's (2007) psychological capital scale were used to gather data. The statistical analyses were conducted with SPSS 23.0 and AMOS 23.0. Confirmatory factor analysis (CFA) supported the validity of the scales used in the Iranian tertiary context. Correlational results indicated that the relationships among main research variables were significant.

Findings: Structural equation modelling (SEM) indicated that psychological capital mediated the linkage between academic support and academic engagement ($\beta = 0.58$, $p < 0.01$). The results also revealed that academic support ($\beta = 0.69$, $p < 0.01$) and psychological capital ($\beta = 0.39$, $p < 0.01$) were predictive of university students' academic engagement.

Conclusion: The findings of this study indicated that providing academic support has the potential to influence students' psychological capital, resulting in their active engagement and participation in educational and learning endeavors. The limitations of this study and the future directions will be discussed.

Keywords: Academic Support, Academic Engagement, Psychological Capital, University Students

1. Introduction

The ultimate objective of any educational system is the comprehensive growth and development of learners in cognitive, affective, and social domains (Giannakos & Cukurova, 2023). Multiple factors can be influential in this process. One of the most important of these factors is academic engagement (AE) in educational activities (Werang & Leba, 2022). Academic engagement is a core construct used to understand the learner's behavior towards the teaching and learning process. Tatiana et al. (2022) define academic engagement as the extent to which a student actively participates and interacts with various components of the learning environment, including the university, professors, peers, education, and curriculum. This meaningful interaction reflects the student's relationship with these elements and is a critical determinant of academic success (Tatiana et al., 2022).

Scholars and researchers consider academic engagement to be a multidimensional construct that includes behavioral, cognitive, motivational, and factorial facets (Fredricks et al., 2016). Behavioral dimension refers to observable academic behaviors such as effort and persistence when facing problems while doing homework and asking for help from professors or peers in order to learn and understand course materials (Lee et al., 2019). The emotional dimension of engagement refers to the emotional and emotional reactions of the learner in the classroom and university (Phung, 2017). Emotional engagement includes interest in the content and homework, valuing the content, the presence of positive emotions and the absence of negative emotions such as frustration, anxiety and anger when doing homework and learning (Fredricks et al., 2016). Cognitive dimension of engagement includes all kinds of processes that students use for learning and consists of cognitive and metacognitive strategies (Vosniadou et al., 2021). Factorial dimension refers to the degree of constructive role of learners, including asking questions and expressing their preferences during learning process (Reeve & Shin, 2020).

Given the significance of academic engagement for the overall quality of students' academic life and drawing on valid psychological theories, it is crucial to understand the factors that influence this construct. Some of the contributing psychological theories to academic engagement include: self-determination theory (SDT), social cognitive theory (SCT), achievement goal theory (AGT), and academic resilience (AR). According to SDT, individuals have innate psychological needs for autonomy, competence,

and relatedness (González-Cutre et al., 2016). Academic engagement can help fulfill these needs by providing opportunities for self-directed learning, mastery of challenging tasks, and social interaction with peers and instructors (Parsons & Taylor, 2011). When students are engaged in their academic work, they are more likely to experience a sense of autonomy, competence, and relatedness, which can contribute to their overall well-being and satisfaction with their academic life. SCT emphasizes the role of self-efficacy in motivation and behavior (Bandura, 2002). Students who are academically engaged tend to have higher levels of self-efficacy, or confidence in their ability to succeed academically (Schunk & DiBenedetto, 2020). This, in turn, can lead to increased motivation, effort, and persistence in the face of challenges. According to Vattøy (2020), students who lack academic engagement may struggle with low self-efficacy and may be more likely to give up or avoid academic tasks (Vattøy, 2020). AGT suggests that students may have different goals for their academic work, such as mastery goals (focused on learning and improvement) or performance goals (focused on grades and evaluations) (Senko et al., 2011). Academic engagement is more likely to be associated with mastery goals, which have been linked to more positive outcomes such as higher academic achievement, greater self-esteem, and lower anxiety (Miller et al., 2021). Students who are not academically engaged may be more likely to adopt performance goals, which can lead to a focus on grades at the expense of deeper learning and personal growth. Finally, academic resilience has been shown to contribute significantly to academic engagement. This theory posits that individuals who are resilient in the face of academic challenges are more likely to be successful in their academic pursuits (Martin & Marsh, 2006). One important component of academic resilience is self-efficacy, which refers to an individual's belief in their ability to succeed in a given task or situation. Individuals with high levels of self-efficacy are more likely to view academic challenges as opportunities for growth and development, rather than as threats to their self-worth (Travis et al., 2020). Another key factor in academic resilience is the ability to regulate one's emotions. This involves recognizing and managing negative emotions such as frustration, anxiety, and disappointment, and maintaining a positive and optimistic outlook even in the face of setbacks (Meneghel et al., 2019). Research has shown that academic resilience is positively associated with academic engagement (Romano et al., 2021). Students who are more resilient are more likely to persist in their academic pursuits,

to be motivated to learn, and to achieve higher grades and test scores.

Drawing upon these theoretical foundations, it is evident that a multitude of contextual, cognitive, motivational, and personality factors contribute to an individual's propensity for engaging in the learning process. One of the pivotal contextual factors that can affect academic engagement is academic support (AS) (Robayo-Tamayo et al., 2020). Academic support actually covers a significant portion of contextual factors. This means that academic support involves not only the family and university, but also social connections like friends and peers. In their study, Robayo-Tamayo et al. (2020) consider academic support as the provision of resources that can, either directly or indirectly, enhance learners' academic engagement and performance (Robayo-Tamayo et al., 2020). In addition, academic support includes various aspects including emotional support through the provision of incentives, instrumental support through cooperation and companionship in completing homework, and cognitive support through emphasizing the significance of academic achievement (Malecki & Demaray, 2003). Bunijevac (2017) believes that students in school or university can be motivated to engage in learning, activities, and interactions with the curriculum, provided that they are supported by appropriate sources of support (Bunijevac, 2017). Also, the results of Klem and Connell's (2004) research indicated that teacher, school, and family support is significantly effective in predicting learners' academic engagement (Klem & Connell, 2004). Thus, based on the theoretical foundations and previous research, academic support plays an important role in fostering academic engagement among university students, which can lead to improved academic engagement and performance and overall success.

Despite the importance of academic support and engagement in students' achievement (Jelas et al., 2016; Tao et al., 2022; Wang, 2022), there is limited research that has investigated the role of psychological capital in mediating the relationship between these factors. The current study aims to address this gap in the literature by examining the extent to which psychological capital mediates the relationship between academic engagement and academic support among university students. Psychological capital is related to both academic engagement (Datu & Valdez, 2016; Martínez et al., 2019; Saleem et al., 2022) and academic support (Slåtten et al., 2023). Psychological capital (PsyCap) is a relatively new construct (Gorgens-Ekermans & Herbert, 2013) that has garnered significant attention in the field of

organizational and educational psychology. PsyCap is defined as an individual's positive psychological state of development characterized by four core components: self-efficacy, which means believing in oneself and having enough self-confidence to accept and make the necessary effort to succeed in doing challenging tasks; optimism, which pertains to an individual's general disposition towards current and future success; hope, which is defined as the belief that one can find ways to reach their desired objectives and become inspired to pursue those paths, and it plays a crucial role in driving people's emotions and overall state of being; and resilience, which is characterized as one's potential to adapt and succeed in the face of adverse conditions and risks (Chaffin et al., 2023). Because PsyCap is considered comprehensive due to the inclusion of its four important and effective components in achieving academic success, this variable is "one potential way to focus on and understand more fully the state-like positive attributes of an individual" (Preston et al., 2023).

The psychological capital of students is influenced by the support provided by their teachers, parents, and peers because, according to the self-determination theory, social support can facilitate the flourishing of one's inner capacities (Champ et al., 2023). Therefore, it is expected that academic support is a significant predictor of psychological capital. But as mentioned earlier, psychological capital is one of the factors that affects academic engagement. Luthans and Youssef-Morgan (2017) state that when viewed as personal resource, psychological capital has the potential to strengthen an individual in a demanding and unpredictable work setting, thereby enabling them to prevail and surmount the obstacles within it (Luthans & Youssef-Morgan, 2017). Due to the positive cognitive evaluation of events, psychological capital helps individuals to pay attention, interpret, and maintain positive and constructive emotions in their interactions and engagement with educational environments. This can lead to greater engagement with course materials, ultimately resulting in improved performance and quality of work (Wang et al., 2021; Wang et al., 2020).

The present study aims to investigate the relationship between university students' academic support and academic engagement with the mediating role of psychological capital. The problem addressed by this research is the potential mediating role of psychological capital in the relationship between university students' academic support and academic engagement they receive. Specifically, the study aims to investigate whether

psychological capital, which encompasses individuals' positive psychological resources, namely, self-efficacy, optimism, hope, and resilience, mediates the relationship between academic engagement and academic support among university students. On the other hand, the lack of any prior research scrutinizing the three variables within a single model highlights the existing research gap and underscores the need for conducting this research. Thus, the study seeks to contribute to a better understanding of the underlying mechanisms linking academic engagement, academic support, and psychological capital, which can inform the development of effective interventions and policies to enhance students' academic success and well-being in higher education.

Based on the hypothesized research model proposed in Fig. 1, the following three hypotheses were formulated and tested:

H1: University students' academic support will positively affect their academic engagement.

H2: University students' academic support will positively affect their psychological capital.

H3: University students' psychological capital will positively affect their academic engagement.

H4: University students' psychological capital mediates the linkage between their academic support and academic engagement.

2. Methods and Materials

2.1. Study Design and Participants

This study was applied in its objective and employed a descriptive-correlational approach based on the structural equation model (SEM). The statistical population of the research included all undergraduate students of Farhangian University of Kerman, approximately 2100 students. Cochran's formula was used to determine the sample size. The calculation results with an error level of 5% showed that for a statistical population with a size of 2100 students, the minimum sample size is equal to 325 participants. Out of this statistical population, 677 participants responded to the online survey. The sampling method was convenience sampling. In convenience sampling, individuals accessible to the researchers within the population are chosen to constitute the sample (Asiamah et al., 2017). Data was collected in the first semester of the academic year 2022-2023. Sands and Plunkett's (2005) academic support scale, Reeve and Tseng's (2011) academic engagement scale, and Luthans and Avolio's (2007) psychological capital scale

were used to gather data. The statistical analyses were conducted with SPSS 23.0 and AMOS 23.0. Confirmatory factor analysis (CFA) supported the validity of the scales used in the Iranian tertiary context. Correlational results indicated that the relationships among main research variables were significant. Farhangian university is an umbrella organization with around 64 main campuses and 34 centers evenly distributed in 32 provinces of Iran. This state-run university is responsible for training would-be teachers as reflective practitioners or teachers as classroom researchers with an Iranian identity. Students entering Farhangian university are employed by the Ministry of Education upon arrival, reflecting the government's commitment to invest in this area and raise the chances of recruiting the best and the most talented candidates.

Participants were invited via social media such as WhatsApp, Soroosh, and Eita to take part in this study. The Google Form link of the relevant questionnaires was created and it was shared by the teachers in their class groups they had on social media. In the initial section of the questionnaire, the research objectives were thoroughly elucidated to the survey participants, accompanied by a statement informing them of the voluntary nature of their participation. The participants were also assured that their responses would remain confidential and anonymous, coupled with the explicit option to withdraw at any point, and with the completion of the survey they indicated their consent to partake in the study.

2.2. Measures

Before the main survey questionnaires, a short sociodemographic questionnaire was created. This was an ad-hoc questionnaire to collect data that involved gender, age, and year of study. Then, the three questionnaires, namely, academic engagement, academic support, and PsyCap scales were included. Confirmatory Factor Analyses (CFA) were run by means of AMOS 23.0 to provide the validity of the measurement instruments. The questionnaires assessed by a five-point scale ranging from 1 (=strongly disagree) to 5 (=strongly agree) were employed to elicit participants' responses. The following questionnaires were used to collect the data:

Academic Engagement: In this study, Reeve and Tseng's (2011) scale was utilized to assess students' academic engagement. This scale is a tool used in educational research to assess students' level of engagement in academic activities. It measures various aspects of engagement such as

agentic engagement which is defined as students' constructive contribution into the flow of the instruction they receive (Reeve & Tseng, 2011); behavioral engagement which refers to the observable action students take to be on-task and exert effort (Reeve et al., 2020); emotional engagement which assesses effective reactions of students in the class, including interest, boredom, joy, sadness and anxiety; and cognitive engagement refers to how students attempt to learn in terms of employing sophisticated rather than superficial learning strategies, such as using elaboration rather than memorization (Reeve, 2013). Reeve and Tseng (2011) measured the reliability of these four variables by applying 0.78% Cronbach's alpha coefficient. As mentioned above, this 21-item scale includes four subscales: the agentic engagement (AE) (5 items, Cronbach's alpha = 0.79), behavioral engagement (BE) (5 items, Cronbach's alpha = 0.83), emotional engagement (EE) (4 items, Cronbach's alpha = 0.88), and cognitive engagement (CE) (7 items, Cronbach's alpha = 0.85) subscales. CFA was conducted for the whole scale, and the results exhibited a satisfactory construct validity ($\chi2$/df = 3.27, GFI = 0.93, NFI = 0.95, AGFI = 0.95, CFI = 0.99, RMSEA = 0.05). This scale enjoyed a satisfactory goodness of fit and was valid for assessing students' academic engagement (Reeve & Tseng, 2011).

Academic Support: In order to assess students' academic support, Sands and Plunkett's (2005) scale was used. This scale is a measure used to assess various forms of support provided to students in an academic setting (Plunkett et al., 2008). This scale includes items related to the availability of resources, encouragement from faculty and staff, parents, and peers. Academic support is defined as caring, encouraging, guiding, assisting, or inspiring youth toward current and future educational endeavors (Sands & Plunkett, 2005). This scale has four 6-item subscales: Mothers' academic support (MAS) (Cronbach's alpha = 0.84), fathers' academic support (FAS) (Cronbach's alpha = 0.81), teachers' academic support (TAS) (Cronbach's alpha = 0.79), and peers' academic support (PAS) (Cronbach's alpha = 0.86). CFA provided acceptable results for this scale ($\chi2$/df = 1.86, GFI = 0.95, NFI = 0.92, AGFI = 0.96, CFI = 0.95, RMSEA = 0.04), indicating the satisfactory construct validity.

Psychological Capital: Luthans and Avolio's (2007) psychological capital scale was used in this study. This scale is a measurement tool used to assess an individual's psychological resources in the workplace (Luthans et al., 2007). Psychological capital is composed of four key

components: self-efficacy, hope, optimism, and resilience. The scale helps evaluate an individual's positive psychological state and their ability to effectively cope with challenges and setbacks in their work environment (Luthans & Youssef-Morgan, 2017). The four 6-item subscales include: resilience (Cronbach's alpha = 0.82), self-efficacy (Cronbach's alpha = 0.85), hope (Cronbach's alpha = 0.77), and optimism (Cronbach's alpha = 0.79). CFA was conducted for the whole scale, and the results exhibited a satisfactory construct validity ($\chi2$/df = 3.28, GFI = 0.97, NFI = 0.94, AGFI = 0.94, CFI = 0.98, RMSEA = 0.08). Therefore, the scale was valid for measuring students' psychological capital (Luthans & Youssef-Morgan, 2017).

2.3. Data Analysis

In the present study, structural equation modeling (SEM) techniques via SPSS 23.0 and AMOS 23.0 were run to analyze the data and test the hypotheses. The analyses were performed in three steps. First, in order to explore the relationship among academic engagement, academic support, and psychological capital, statistical analysis was conducted with SPSS 23.0 to measure means, standard deviations and Pearson correlation for the variables. Then, a two-step approach developed by Anderson and Gerbing (1988) was utilized. The first step in this approach involved assessing the validity and reliability of the measurement model while the second step involved analyzing the structural model to test the research hypotheses.

3. Findings and Results

This study used convenience sampling to collect the data. The study included 677 university students from Farhangian University in Kerman, Iran. 48.3 % were male (n = 327; female: n = 350). The majority age group of the participants were those from 18-20 (53%). This was followed by the age group from 21-23 (44.9%), 24-26 (1.6%), and 27 years old and more (0.4%). 259 (38.2%) of the participants were freshmen; 130 (19.3%) were sophomores; 147 (21.7%) were juniors; and 141 (20.8%) were seniors.

Table 1 shows the descriptive statistics and correlation analysis between research variables. According to the results, the relationships of all exogenous, endogenous, and mediating variables are positive and significant. Also, the range of correlation coefficients between all variables is from 0.18 to 0.88. As expected, the relationships among main research variables are significant. Academic support is positively correlated with both academic engagement (r =

0.49, p < 0.01) and PsyCap (r = 0.58, p < 0.01). Likewise, PsyCap is positively associated with academic engagement (r = 0.47, p < 0.01).

Table 1

Correlation matrix, means, standard deviations of research variables

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	M	SD
PAS	-															14.15	4.35
FAS	.18*	-														23.11	3.08
MAS	.25*	.39*	-													22.32	2.81
TAS	.24**	.34**	.35*	-												21.90	3.31
AS	.70**	.66**	.68**	.70*	-											81.25	8.89
Self-efficacy	.31**	.25**	.33**	.21**	.40*	-										22.24	5.42
Hope	.27**	.33**	.29**	.25**	.42**	.70*	-									23.19	4.85
Optimism	.31**	.25**	.27**	.19**	.37**	.47**	.64*	-								24.16	3.79
Resilience	.33**	.19**	.18*	.23**	.36**	.51**	.49**	.48*	-							19.25	5.18
PsyCap	.39**	.31**	.33**	.27**	.58**	.85**	.88**	.77**	.79*	-						88.59	15.32
AE	.29**	.22**	.20**	.33**	.39**	.35**	.28**	.18*	.28**	.34*	-					23.98	5.99
BE	.25**	.33**	.32**	.28**	.42**	.33**	.42**	.31**	.18**	.38**	.44*	-				25.19	3.12
EE	.29**	.31**	.33**	.39**	.48**	.38**	.51**	.38**	.28**	.35**	.33**	.46*	-			23.65	4.86
CE	.20**	.21**	.35**	.37**	.39**	.48**	.41**	.33**	.32**	.48**	.40**	.47**	.48*	-		22.13	4.71
AE	.21**	.20**	.36**	.37**	.49**	.47**	.41**	.33**	.42**	.47**	.41**	.47**	.48**	.79*	-	94.64	15.17

Note. PAS = peers' academic support, FAS = fathers' academic support, MAS = mothers' academic support, TAS = teachers' academic support, AS = academic support, PsyCap = psychological capital, AE = agentic engagement, BE = behavioral engagement, EE = emotional engagement, CE = cognitive engagement, AE = academic engagement, * p <.05, ** p <.01

Next, the goodness-of-fit test was carried out on the structural model through different fitness indexes such as absolute, incremental, and parsimonious fit indices. Measures like CMIN/DF ($\chi2$/df), GFI, NFI, AGFI, CFI, and RMSEA were utilized. Our retrieved data were consistent with the established threshold. Table 2 displays the outcomes of the structural model, revealing that our findings indicate a satisfactory fit with the confirmatory factor analysis (CFA).

Table 2

Structural Model Validity

Fit indices	CMIN/DF	GFI	NFI	AGFI	CFI	RMSEA
Recommended value	<3.00	>0.90	>0.90	>0.80	>0.90	<0.08
Structural model	2.27	0.92	0.91	0.90	0.92	0.05

Note. CMIN/DF = chi-square/degree of freedom, GFI = Goodness-of-fit index, NFI = Normed fit index, AGFI = Adjusted goodness-of-fit, CFI = Comparative fit index, RMSEA = Root mean square error of approximation

In order to test the hypothesized research model, SEM approach was utilized. Hypotheses testing was carried out to see the significance of the variable relationship. The analysis regarding the first hypothesis revealed that (AS to AE) had significant and positive relation (β = 0.69, p < 0.01), hence H1 was supported. For the second hypothesis, (AS to PsyCap), also a significant and positive relationship was observed (β = 0.57, p < 0.01), hence H2 was accepted. The direct effect of (PsyCap to AE) was also assessed via H3, and it was found that PsyCap had a positive and significant effect on academic engagement (β = 0.39, p < 0.01), hence, H3 was accepted.
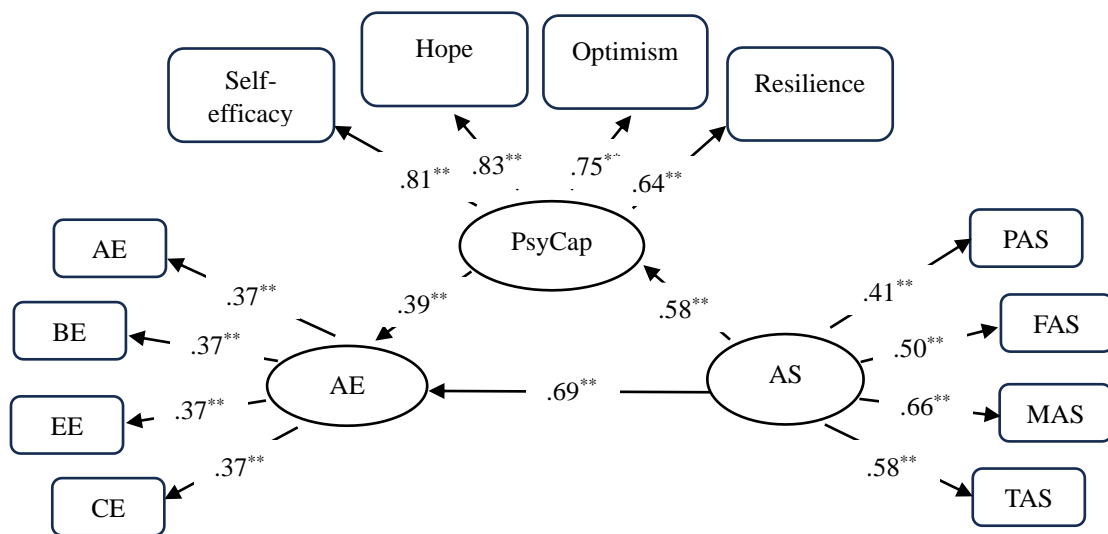
Table 3

The Results of Direct Effect and Bootstrap Test

Path	Beta Value	Bootstrap 95% CIs
Direct effect PsyCap to AE	.39	[0.09. 0.45]
Indirect effect AS to PsyCap to AE	.19	[0.05, 0.32]
Total effect	.58	[0.29, 0.62]

Figure 1

The outcome of the hypothesized research model

As shown in Figure 1 and Table 3, PsyCap plays a mediating role in the relationship between AS and AE. Specifically, the relationship was partially mediated by PsyCap as the effect of AS on AE was reduced by 0.19 from ($\beta = 0.58$, $p < 0.01$) to ($\beta = 0.39$, $p < 0.01$). In addition, to test the reliability of the mediating effect, non-parametric bootstrapping method with 5,000 times of resampling was used. As shown in Table 4, the value of the direct effect of PsyCap on AE is 0.39, accounting for 62% of the total effect, with a 95% confidence interval (CI) of [0.09, 0.45]. The indirect effect of PsyCap between AS and AE is 0.19, accounting for 38% of the total effect. The 95% CI is [0.05, 0.32], which indicates that there is a significant mediating effect of PsyCap on the relationship between AS and AE.

4. Discussion and Conclusion

The present study examined the mediating effect of a personal variable, ie., PsyCap on the relationship between two social and environmental variables, namely academic support and academic engagement. Results of testing the first hypothesis of this study indicated that university students' academic support was able to predict their academic engagement. This finding is consistent with the results of similar studies (Groves et al., 2015; Robayo-Tamayo et al., 2020) and it indicated that the positive relationship between university academic support and academic engagement is multifaceted. When students receive support from their mothers, fathers, teachers, and peers, they are more likely to feel motivated, confident, and connected to their academic pursuits. In explaining this finding, it should be said that based on the models proposed by Connell and Welborn (1991) and Reeve (2018), students who are supported by parents, friends and teachers feel safe and they value and understand the university as a safe and supportive environment (Connell & Wellborn, 1991). Therefore, they participate in class activities, have positive reactions towards their friends and professors, make necessary efforts to understand complex and difficult ideas,

and actively participate in the teaching and learning process. In other words, creating an environment that allows university students to have a say in their educational activities, such as selecting assignments and courses, and valuing their opinions and ideas, can promote academic engagement (Zhao & Kuh, 2004). Additionally, providing effective feedback, encouraging reflection on important life matters, priorities, and goals, and maximizing their participation in learning activities can further enhance their engagement.

Consistent with previous research on the positive relationship between academic support and psychological capital (Albright & Hurd, 2018; Sadoughi & Hejazi, 2021; Wang, 2022), the results of the second hypothesis of this study showed that receiving academic support can function as a facilitator and it can make a student's inner capabilities flourish (Reeve, 2013; Reeve et al., 2020; Reeve & Shin, 2020; Reeve & Tseng, 2011). Indeed, a student's perception of the support and companionship provided by influential individuals in their life profoundly influences their self-beliefs, problem-solving strategies, optimistic outlook on the future, and pursuit of goals. When students receive adequate academic support, it can positively impact their psychological capital. For instance, accessing tutoring or mentoring programs can enhance students' self-efficacy by improving their understanding of course material and boosting their confidence in their academic abilities. This increased self-efficacy, in turn, strengthens their psychological capital by fostering a belief in their own competence to overcome challenges and succeed in their academic endeavors (Luthans et al., 2019). Moreover, academic support can contribute to students' optimism and hope (Sezgin & Erdogan, 2015). When students receive guidance and assistance in developing effective study strategies or navigating academic difficulties, they are more likely to maintain a positive outlook and believe in their capacity to achieve their academic goals. This positive reinforcement can lead to the cultivation of a sense of hope, which is a key component of psychological capital (Luthans & Youssef-Morgan, 2017). Students with high levels of hope are more resilient, motivated, and persistent in the face of setbacks, increasing their chances of academic success. Conversely, a lack of academic support can have detrimental effects on students' psychological capital (Poots & Cassidy, 2020). Without access to necessary resources or guidance, students may experience increased stress, self-doubt, and a diminished sense of control over their academic outcomes. This can erode their psychological capital, leading to decreased academic engagement, motivation, and overall well-being.

The findings regarding the third research hypothesis indicated a significant and positive relationship between university students' psychological capital and academic engagement, which aligns with the findings of the previous studies (Carmona-Halty et al., 2021; Farhadi et al., 2016; Oriol-Granado et al., 2017). According to Newman et al. (2014), as personal resources become challenging and uncertain in an environment, psychological capital can empower individuals, enabling them to succeed and overcome such circumstances by bolstering their resilience and capabilities (Newman et al., 2014). Psychological capital enables individuals to cognitively evaluate events in a positive manner, thereby facilitating the processes of attending to, interpreting, and maintaining positive and constructive emotions during their interactions and participation within educational environments (Luthans & Youssef-Morgan, 2017). This can, in turn, lead to more engagement with course materials, helping the individual act at an optimal level, and increasing performance (Fredrickson, 2013). Students with greater self-efficacy tend to employ study and learning strategies more effectively to attain their desired academic outcomes (Martínez et al., 2019). Specifically, they utilize cognitive and meta-cognitive strategies more frequently and engage in academic pursuits with deliberate and meticulous planning. As a result, they are better equipped to comprehensively address academic issues and challenges. Also, students who are at a higher level in terms of hope, are more focused on their goals and are more motivated than their classmates. These students, as Pekrun and Perry (2014) rightly state, exhibit significant perseverance and motivation to engage in academic activities and invest greater effort in managing their educational and learning pursuits. Moreover, genuine optimistic beliefs are stepping stones to active participation and meaningful engagement of learners in educational programs, as well as their ability to effectively navigate educational challenges and obstacles (Pekrun & Perry, 2014). Optimism fosters increased effort and participation among students in academic activities, and optimistic learners demonstrate greater control over their learning process, actively adhering to their educational programs (Tschannen-Moran et al., 2013). Lastly, students with high resilience possess the capacity to effectively manage setbacks, pressure, and stress within educational settings. As a result, they are able to mitigate the detrimental effects of academic challenges by responding positively to adverse

circumstances and maintaining active engagement in university programs, thereby exhibiting increased motivation in their academic pursuits (Ramadhani & Sagita, 2022).

The fourth research hypothesis, which posited that psychological capital mediates the linkage between academic support and academic engagement, was supported by the findings. In explaining this finding, it can be said that according to the social-cognitive theory as well as self-determination theory and also based on the conceptual models proposed by Connell and Welborn (2016) and Reeve (2018), academic support from parents, professors and peers creates a supportive and encouraging environment for students (Connell & Wellborn, 1991; Reeve & Shin, 2020). Such an environment enables students to feel secure and validated in their successes through positive social reinforcement, while being shielded from harsh and discouraging criticism from important others in the face of mistakes or failures (Wentzel et al., 2010). Establishing such an environment can steer students' self-assessment, emotional state, and ability towards a positive trajectory. According to Chaffin et al. (2023), this implies that students possess complete confidence in their personal capabilities and aptitudes (i.e., self-efficacy), embrace challenging tasks, and hold the belief that demanding conditions and tasks are well within their capacity (Chaffin et al., 2023). Additionally, it instills a sense of active control and a positive attributional style (i.e., optimism) within individuals, while also fostering their capacity for planning and effectively managing academic challenges and stressful educational situations. Furthermore, it generates a sense of satisfaction (i.e., hope) associated with setting and pursuing goals, as well as motivation and concentration towards activities, while also mitigating the psychological impact of unfavorable events and overcoming challenges and adapting effectively (i.e., resilience). These cognitive, emotional, and positive self-perception assessments, as suggested by Reeve (2013), contribute to students' academic engagement by motivating them to exert greater effort, exhibit increased cooperation, and demonstrate enhanced perseverance in academic activities (i.e., behavioral engagement) (Reeve, 2013). Moreover, students demonstrate positive responses towards their peers, instructors, and university authorities, and recognize the lessons, educational, cultural, and research activities of the university setting as valuable (i.e., emotional engagement). Also, students direct their attention towards their courses and their teachers, employ diverse learning strategies to enhance their comprehension of the topics, and utilize cognitive and metacognitive strategies more efficiently (i.e., cognitive engagement). Last but not least, students play an active and constructive role in the educational process by posing questions, engaging in practical and skill-based training programs, offering suggestions, and expressing their needs and interests (i.e., agentic engagement) (Reeve & Shin, 2020).

Understanding the positive relationships between university students' academic engagement, academic support, and the mediation of psychological capital entails some implications. The first implication is that educational institutions should prioritize the cultivation of psychological resources among students to enhance their academic success. By fostering psychological capital, consisting of self-efficacy, optimism, hope, and resilience, universities can empower students to overcome challenges, believe in their abilities, maintain a positive outlook, and persevere in their academic pursuits. Second, providing comprehensive academic support services, such as mentoring programs, counseling, and tailored interventions, can further bolster students' engagement and overall well-being, leading to improved academic performance and retention rates. By recognizing the crucial role of psychological capital and integrating it with academic support strategies, universities can create an environment that nurtures students' personal growth, fosters a sense of belonging, and maximizes their potential for success. Third, this understanding highlights the importance of psychological factors in shaping students' academic experiences (Skinner et al., 2022). The concept of psychological capital provides a theoretical framework for understanding how personal psychological resources influence students' engagement with their academic pursuits. By recognizing the mediating role of psychological capital, researchers and educators can delve deeper into understanding the underlying mechanisms through which these factors interact and impact students' academic outcomes. This knowledge can inform the development of evidence-based interventions and support programs that target the enhancement of psychological capital among students, ultimately leading to improved academic engagement, performance, and overall well-being. Moreover, this theoretical perspective underscores the need for a holistic approach to student success, emphasizing the integration of academic support services with the cultivation of psychological resources to create an optimal learning environment.

The findings of this study are based on a sample of Iranian university students from Farhangian University in Kerman.

Future studies can replicate these findings in other universities so as to enhance the validity of the results of the present study. Second, the study focused on the mediating role of PsyCap in the relationship between academic support and engagement. However, the directionality of these effects may be bidirectional and influenced by other unmeasured factors. Future studies could explore the reciprocal relationships among these constructs. Third, the present study used a cross-sectional design, which limits the ability to establish causal relationships among variables. Future research utilizing longitudinal or experimental designs could provide more robust evidence of the mediating effects observed in this study.

In conclusion, the results of this study found that academic support and psychological capital were predictors of university students' academic engagement. Hence, it can be concluded that a nurturing educational environment, supportive family and friends, and secure relationships with significant individuals in academic life contribute to the development of positive perceptions in students. Consequently, students perceive themselves as capable of attaining desired and favorable outcomes, as well as striving towards and accomplishing their goals. Moreover, they actively plan and persistently concentrate their efforts until they attain the desired results, possessing positive evidence of success and approaching obstacles with knowledge. This approach enables them to prioritize their needs and aspirations, actively participate with enthusiasm, express their preferences and suggestions, and engage in discussions about their interests with others.

Authors' Contributions

The first author was responsible for collecting data, and the other author was responsible for collecting and analyzing the data and writing the article.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

Acknowledgments

Declaration of Interest

The authors report no conflict of interest.

Funding

Ethics Considerations

The present study was conducted by adhering to ethical considerations such as honesty in reporting finding.

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