

The Impact of Social Belonging Perception on Academic Motivation through Peer Support and Identity Security in the Higher Education Sector

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ABSTRACT

The proposed research will discuss how Social Belonging Perception (SBP) can influence Academic Motivation (AM) with the mediating roles of Peer Support (PS) and Identity Security (IS) in the context of higher education students in Jordan, a developing country context. A survey of 302 university students attending institutions of higher learning in Jordan and were actively involved in academic programs was carried out. Amos v.26 was used as the structural equation modeling (SEM) to test the relationships between the variables of SBP, PS, IS and AM. The findings depict that SBP does not have a considerable direct impact on AM. Nonetheless, SBP has an important impact on PS and IS, which also play an important role as mediating variables in the relation between SBP and AM. The findings emphasize the fact that AM is mostly influenced by the use of social and psychological relational channels instead of immediate belonging perceptions. Although this study contributes to the better understanding of the social-psychological processes in a developing country context of higher education, the scope of cross-sectional survey data may provide a limited scope of causes and more profound qualitative information about the student experiences. In practice, the results indicate the need to reinforce the peer-based environment and an identity-supportive academic culture in promoting student motivation in universities. This paper presents a new integrated model by locating PS and IS as two mediators between SBP and AM. It builds on the current body of research on student engagement by clarifying the indirect processes that encompass the role of belonging in the context of motivational outcomes in higher education settings. The findings have practical implications on educators and policymakers who seek to create conducive and identity-affirming learning environments in the changing environment of developing nations.

Keywords: Academic Motivation, Peer Support, Identity Security, Higher Education, Developing Country

JEL Classifications: I23

1. INTRODUCTION

In developing countries, institutions of higher learning are increasingly working at the conditions of rapid growth, structural strain, and the psychosocial complex which have an extensive impact on student learning achievements and academic sustainability. In Jordan, the higher education sector has turned into one of the pillars of national development with more than 300,000 registered students in the government-owned public and privately owned universities and steady annual growth of over

4% (Ahn and Davis, 2020; Matheka et al., 2025). Although such expansion has occurred, national education monitoring reports show that persistent challenges include the reduction of student engagement, low academic persistence and lower motivational intensity among undergraduates (Zahid, 2023; Froehlich et al., 2023). These problems reveal the necessity to discuss psychosocial determinants that influence AM in the context of higher education. In this context, SBP has become a key psychological construct to reflect the perceived inclusion, acceptance, and emotional belonging of students in academic settings (Aithal et al., 2024;

Reddy et al., 2025). SBP is specifically applicable in collectivist and culturally diverse university environments like Jordan where peer relationships and social cohesion have a strong influence on learning behavior (Dost, 2026; Pisica et al., 2023). Nevertheless, SBP might not directly translate into AM without support by intermediary relational and identity-based processes. Thus, this paper incorporates PS and IS as the mediating variables to determine how SBP is turned into sustained AM. PS follows the definition of the academic, emotional, and informational support that students exchange, which increases engagement, resilience, and cooperative learning behaviors (Tian et al., 2021; Elumalai et al., 2021). IS, in turn, is the measure of how psychologically stable, valued, and confident in their academic self-concept students are (Rubin and Novis-Deutsch, 2026).

The rationale behind the inclusion of PS and IS is theoretically based on Self-Determination Theory (SDT) and Social Identity Theory (SIT) which both focus on relatedness, belonging, and identity affirmation as key motivational factors (Ryan and Deci, 2000; Tajfel and Turner, 1986). The choice of the higher education sector in Jordan has its strategic justification, based on its socio-economic significance, and the structural challenges that are evolving. Universities not only serve as learning institutions but also as important workforce pipelines to the national growth and regional competitiveness. Nonetheless, the growing student-to-faculty ratios (average 1:28), lack of infrastructural support in counseling, and increasing academic pressure have contributed to the escalation of the problem of student disengagement and psychological stress (Chakravarty and Satpathy, 2026; O'Connor, 2024). These factors render Jordan as a perfect empirical location to study the dynamics of SBP, PS, IS, and AM. Regarding industry and market, higher education is becoming more and more a competitive service sector where student satisfaction, retention and engagement direct institutional reputation and sustainability (Tian et al., 2021; Elumalai et al., 2021).

The world is experiencing a downward motivation trend among students, with research indicating that almost forty percent of students in developing countries are facing academic burnout caused by poor peer integration and identity insecurity (Radzlan et al., 2026; Lee et al., 2025). This supports the importance of examining psychosocial processes that can lead to motivation results. Although the current literature has gained significant momentum in terms of addressing student motivation and psychosocial issues in higher education, there are still a number of critical gaps that are present in the existing literature. Despite the extensive research that has been conducted on AM and related constructs, most of the studies have merely examined the constructs separately and not as an integrated explanatory system. An example of this is that studies by Rehman et al. (2023), Kumar et al. (2025), and Allen et al. (2026) primarily focus on the outcome of belongingness or motivation without the inclusion of dual mediating mechanisms that explain the effect of SBP on AM. The generalizability of the results to the context of developing countries, such as Jordan, where cultural, institutional, and educational frameworks vary greatly, is highly limited by existing research that is highly concentrated on Western and East Asian contexts Rubin and Novis-Deutsch (2026); El Zaatari

and Maalouf (2022), limits the generalizability of research to the context of developing countries, such as Jordan, where the cultural, institutional, and educational frameworks differ greatly. This would form a contextual disconnect in the comprehension of how SBP could work within a collectivist and resource constrained higher education context. Despite PS being considered as an essential factor in student engagement Zahid (2023); Gilani and Thomas (2025), its role as a mediating mechanism between SBP and AM is under-researched.

The majority of research considers PS as an outcome, but not a psychological link affecting motivation channels. IS has been largely ignored in the context of educational motivation research, although it has theoretical relevance with regard to how students remain confident and psychologically stable when they are in academic settings (Almulla and Al-Rahmi, 2023; Mtshweni, 2024). There is little empirical research that has investigated the role of IS as a mediator in the context of higher education. Lastly, relational (PS) and identity-based (IS) mechanisms are rarely combined into one model in previous researchers to explain AM, such that a fragmented understanding of how social belonging translates into motivational outcomes is created.

This study fills these gaps by incorporating SBP, PS and IS into a single framework to better explain AM in a developing country setting. The aims of the present study are based on the following gaps: (1) to determine the effects of SBP on AM among university students in Jordan, (2) to investigate the mediating role of PS in strengthening this relationship, and (3) to examine the mediating effect of IS in explaining motivational outcomes. This framework is a part of a deeper comprehension of the joint effects of social and psychological processes on academic behavior. The importance of the study is both theoretical and practical. Theoretically, it expands SDT and SIT by incorporating the dual mediators (PS and IS) into one model of motivational pathways. In practice, it offers practical recommendations to policymakers and university administrators to improve peer-based learning systems and identity-supportive academic climates.

The originality of the study is that it incorporates a mediation framework, its use in the study is that it is in under-researched developing contexts such as Jordan. Comprehensively, this study is inspired by the pressing urgency to respond to the falling AM in the system of higher education that is rapidly changing. It provides a new, context-sensitive, empirically-based contribution to the understanding of how SBP is translated into AM by PS and IS, in turn, advancing both the academic theory and the practice of developing-country higher education systems.

2. THEORETICAL BACKGROUND

This paper is based on SDT and SIT that can be combined to provide a complete explanation of the effect of SBP on AM through PS and IS. These two theories need to be integrated as SDT elucidates the motivational process of internalization, whereas SIT elucidates how the social group membership and identity influence psychological well-being and engagement. According to SDT, human motivation is fueled by the satisfaction of three fundamental

psychological needs: autonomy, competence and relatedness (Ryan and Deci, 2000; Ahn and Davis, 2020). Among higher education, SBP directly is an indication of the necessity of relatedness, which enhances affective connection and involvement in educational settings. With high SBP, students are more inclined to engage in collaborative learning and pursue PS, which further promotes the intrinsic motivation of students (Radzlan et al., 2026). Empirical studies by Douglas et al. (2025), Phuong and Dung (2024) and Hussain et al. (2023) establish that relatedness is a strong predictor of academic engagement and persistence. Also, Zahid (2023) and Elumalai et al. (2021) point out that peer-based setting enhances motivation due to the presence of emotional support and confidence in schooling. Nevertheless, SDT in itself cannot be the complete explanation of identity-based psychological stability, at which point SIT becomes necessary. According to SIT, people base a portion of their self-concept on being a part of a group, as well as being perceived as a part of social systems (Tajfel and Turner, 1986; Hogg, 2016). SBP supplements IS in the context of higher education by strengthening the sense of belonging of students to academic and peer groups, which decrease identity threat and increase psychological security. The research by Ahn and Davis (2020) and Rubin and Novis-Deutsch (2026) show that resilience, engagement and motivation is improved by a strong social identity. In the same manner, Froehlich et al. (2023) and Reddy et al. (2025) stress the fact that identity security is a very important determinant of sustained academic performance, especially in diverse and competitive learning settings. The model of SDT and SIT also gives the model of this study a solid theoretical background. SBP is a basic construct that triggers both PS (relational mechanism) and IS (identity mechanism), which in combination can boost AM. Allen et al. (2021) support this dual-pathway approach by stating that motivation in educational settings arises due to both social relationships and identity processes. This integrated framework is also supported by previous empirical research. As shown by Pisica et al. (2023) and Zahid (2023) peer-related support is of great importance in enhancing academic engagement. Meanwhile, the results of Chakravarty and Satpathy (2026) and Radzlan et al. (2026) indicate that belonging interventions enhance motivation and academic persistence via identity-based processes. Moreover, Dost (2026) and Rehman et al. (2023) give evidence based on the Middle Eastern higher education situations, and confirm that belongingness and peer dynamics are significant determinants of student motivation in Jordan. Additional, supporting evidence is found in the work by Ahn and Davis (2020), and Nguyen et al. (2026), which highlights the fact that the notions of belongingness and peer integration are omnipresent predictors of motivation in educational settings. Together, the studies confirm the theoretical supposition that SBP affects AM by way of PS and IS. Hence, integrating SDT and SIT enable this study to elucidate the translation of SBP into AM in Jordanian higher education by considering both motivational regulation and identity-based psychological processes.

2.1. Social Belonging Perception and Academic Motivation

The role of SBP in the formation of AM in students is central, especially in higher education settings where psychological inclusion and relational integration play a key role in the

development of AM in students. As students develop a strong sense of belonging to their academic community, the likelihood of students demonstrating greater levels of engagement, persistence, and intrinsic motivation increases (Froehlich et al., 2023). SDT states that when relatedness needs are fulfilled, it increases internal motivation and continued academic effort (Rubin and Novis-Deutsch, 2026; Almulla and Al-Rahmi, 2023). On the same note, Phuong and Dung (2024) highlight that belongingness is a key human need that has a direct influence on behavioral devotion and mental well-being. This relationship is also further supported by empirical evidence. Allen et al. (2021) discovered that belonging interventions can greatly enhance academic success by enhancing motivational orientation of students. O'Connor (2024) also confirm that perception of social connection in learning environments boosts emotional involvement and endurance in learning activities. Moreover, Haque et al. (2025) emphasize that students who hold stronger perceptions of belonging have a higher academic resilience and commitment to goals. According to Reddy et al. (2025), belongingness is a factor that decreases the disengagement of students in academic settings by enhancing the feeling of acceptance by the students in peer and institutional contexts. Allen et al. (2021) and Pisica et al. (2023) in the context of higher education confirm that social integration has a beneficial impact on motivational processes due to the increased engagement and reduced levels of academic anxiety. In addition, Zahid (2023) and Elumalai et al. (2021) present evidence of Middle Eastern universities, which reveals that students with better social inclusion have much higher levels of academic motivation. Taken together, these studies indicate that SBP is a psychological background driver that enhances AM by creating a sense of emotional security, engagement, and academic persistence in a higher education setting.

- H_1 : SBP has a positive impact on AM.

2.2. Social Belonging Perception and Peer Support

SBP is hoped to play a massive role in the improvements of PS in the context of a higher education by providing more interpersonal connections, cooperative learning behaviors, and mutual academic support between the students. When students feel that they are accepted and included in their academic community, students are more likely to be engaged in collaborative interactions, share knowledge, and actively participate in peer-based learning activities (Allen et al., 2026; Mtshweni, 2024). This relational dynamic is strongly supported by SDT, which emphasizes relatedness as a key psychological need that drives social interaction and supportive behavior (Zahid, 2023). This association is further supported by empirical studies. Froehlich et al. (2023) shows that students who have perceived belonging stronger are more likely to develop stronger peer networks, which can enhance academic cooperation as well as emotional support. Equally, Rehman et al. (2023) note that social connectedness in classroom environments enhances cooperative interaction and peer-based support. Zahid (2023) also discover that supportive peer conditions are more emanated as students encounter elevated levels of inclusion and acceptance. Moreover, Gilani and Thomas (2025) assert that, positive school belonging in addition to fostering relational trust among the students, also directly enhances the students peer

interactions and shared learning behaviours. Phuong and Dung (2024) also show that belongingness enhances the occurrence of prosocial academic behaviours such as helping peers and engaging in group learning tasks. Chanda et al. (2025) also demonstrate that belonging interventions enhance willingness of students to seek and provide peer support especially in diverse educational settings. Contextually speaking, Pisica et al. (2023) and El Zaatari and Maalouf (2022) present evidence of Jordanian universities, which indicates that students with higher SBP are more inclined to engage in peer collaboration and informal academic support. Taken together, these results imply that SBP is a fundamental social mechanism that reinforces PS by boosting trust, the frequency of interaction and cooperative academic interaction within the higher education environment.

- H_2 : SBP has a positive impact on PS.

2.3. Peer Support and Academic Motivation

PS is important to empower AM by offering students academic support, emotional support, and collaborative learning experiences, which increase their engagement in the learning process. Within the context of higher education, the more active the students are in accepting and giving support to peers, the more they are likely to develop stronger learning persistence, confidence, and goal-oriented behavior (Aithal et al., 2024; Nguyen et al., 2026). This connection is deeply rooted in SDT that underlines the idea that social relatedness contributes to internalized motivation and long-term academic effort (Tian et al., 2021). This pathway is always endorsed by empirical research. Froehlich et al. (2023) emphasize that academic interactions between peers have a great impact on the motivational levels of a student and his/her classroom interactions. Likewise, Pisica et al. (2023) show that positive peer relations boost the emotional investment and the decrease of academic disengagement. Douglas et al. (2025) add further that structured peer collaboration increases the persistence of learning and commitment to tasks in students through shared responsibility and encouragement. Besides, Rehman et al. (2023) state that peer learning environment helps to achieve high motivation, by encouraging active engagement and eliminating academic isolation. Allen et al. (2026) also attest that peer support systems also enhance the resilience and academic confidence of students, which results in better performance outcomes. Phuong and Dung (2024) present evidence that students who are embedded in a supportive peer network exhibit greater levels of academic persistence and motivation, especially in diverse institutional settings. Regionally, Zahid (2023), and Elumalai et al. (2021) indicate that students of universities in the Middle East, such as Jordan, have a higher level of academic motivation when the system of peer-based academic support is effective. On the same note, Rehman et al. (2023) underscore the fact that collaborative student environments can greatly decrease academic stress and increase engagement. Taken together, these results affirm that PS is a direct motivational driver that can boost AM via emotional reinforcement, academic cooperation, and continued involvement in higher education settings.

- H_3 : PS has a positive impact on AM.

2.4. Social Belonging Perception and Identity Security

High SBP is anticipated to boost IS by increasing student attitude of acceptance, stability, and confidence in their academic self-concept in the context of higher education. When students feel socially included and valued within their institutional setting, they are less likely to experience identity threat and more likely to develop a stable and coherent sense of self in relation to their academic roles (Almulla and Al-Rahmi, 2023; Nguyen et al., 2026). This process is closely connected with SIT, which assumes that that meaning of group membership brings individuals psychological stability and self-definition (Tian et al., 2021). This relationship is supported by the empirical evidence. Froehlich et al. (2023) show that belonging interventions are effective in reducing identity threat and enhancing psychological security in university students. Rubin and Novis-Deutsch (2026) further clarifies that when people feel that they are included in the academic setting, they become less susceptible to stress associated with their identity, and they become more psychologically stable. Lee et al. (2025) reiterate that social context is a critical inducement in the formation of self-concepts especially in collectivist learning institutions. Moreover, Aithal et al. (2024) established that students who had better perceptions of belonging had stronger identity resilience which positively affects academic confidence and persistence. Pisica et al. (2023) further indicate that identity-based motivation is enhanced whereby individuals feel that social acceptance occurs within the relevant groups. Chakravarty and Satpathy (2026) further argue that belonging to a group serves to promote self-continuity and uncertainty is minimized in identity construction. Educationally, O'Connor (2024) observe that supportive school environments help students develop stronger identities, whereas Rehman et al. (2023) confirm the same. According to Allen et al. (2026) and Mtshweni (2024), students in the Middle East universities have stronger psychological security when they feel that they are socially integrated. Taken together, these studies suggest that SBP is a major antecedent of IS since it stabilizes the academic identity of students and enhances psychological confidence with regard to higher education environments.

- H_4 : SBP has a positive impact on IS.

2.5. Identity Security and Academic Motivation

The enhancement of AM through the use of IS is predicted to be highly effective in enhancing AM by improving the psychological well-being, self confidence, and clarity of academic self-concept of the AM. Once students feel safe in their identity, they more willing to participate in learning activities in a safe and secure environment (Almulla and Al-Rahmi, 2023). This is in line with SIT, which explains that positive behavioral and motivational outcomes are promoted by the stable identity formation within meaningful groups (Hussain et al., 2023). There is considerable empirical evidence that supports this relationship. According to Reddy et al. (2025), low identity threat means that students perform better academically and they are more motivated to learn because they feel less psychologically strained in learning environments. El Zaatari and Maalouf (2022) also highlight that a stable self-concept increases goal directed behavior and cognitive involvement in education contexts. Rehman et al. (2023) points out that identity-based motivation is heightened

when persons recognize their academic identity as unassailable and socially valid. Allen et al. (2026) are experimental evidence indicating that students who have a stronger identity security report higher academic persistence and resilience, especially in difficult academic tasks. Correspondingly, Matheka et al. (2025) discover that a sense of belonging and identity stability, through reinforcement, puts long-term changes in academic motivation and achievement. Chanda et al. (2025) also posit that secure social identity gives psychological resilience and commitment to group-related objectives, such as educational attainment. In terms of education, according to Tian et al. (2021) identity development is one of the main factors determining student engagement and motivational power. Douglas et al. (2025) contributes to the fact that identity security lowers the levels of academic anxiety and increases the engagement of the learner in the education process. According to Zahid (2023) and Elumalai et al. (2021) in developing country contexts, students who are psychologically more stable in terms of identity demonstrate greater motivation and persistence in studying. Together, these results support the view that IS is an important factor in the development of AM by generating psychological confidence, alleviating stress caused by identity, and strengthening academic engagement in higher education contexts.

- H_5 : IS has a positive impact on AM.

2.6. Mediating Role of Peer Support

PS play a central role as a mediating factor whereby SBP is converted into increased AM. The more students feel that they have a strong sense of belonging in their academic context, the more they are likely to engage in supportive peer interactions, which subsequently help to enhance their academic engagement and motivation (Allen et al., 2021). This procedure echoes the relational route that is emphasized in SDT, with relatedness promoting internalized motivation through meaningful social relationships (O'Connor, 2024). This mediating logic is empirically supported by empirical evidence. Tian et al. (2021) underscores the importance of interactions with peers in explaining the relationship between social integration and better academic performance. Likewise, Aithal et al. (2024) show that social connectedness improves engagement mainly by providing peer-related affective and academic support systems. Mtshweni (2024) further affirm that co-worker settings serve as a mediator between social belonging and enduring motivation. According to Chanda et al. (2025), the belonging has a positive indirect impact on motivational outcomes by creating supportive peer climates that promote participation and persistence. Another aspect that Radzlan et al. (2026) also focus on is that peer networks enhance the relationship between social inclusion and academic engagement by providing continuous reinforcement and shared learning experiences. According to Pisica et al. (2023) experimental evidence indicates that belonging interventions enhance academic motivation in terms of enhanced peer integration. According to Gilani and Thomas (2025) and Radzlan et al. (2026), peer interactions are key phenomena in the context of higher education, where social belonging is transformed into behavioral engagement and motivation. Further, in Jordanian universities, peer-based academic assistance has a significant positive impact on the motivation of students to belong. Taken together, these findings suggest that PS is a significant mediating

factor in converting SBP into AM through enhancing relational engagement and academic persistence.

- H_6 : PS mediates the relationship between SBP and AM.

2.7. Mediating Role of Identity Security

IS is supposed to be a key psychological process by which SBP improves AM. The perceived high belongingness within their academic context helps the students to experience less identity threat and more psychological stability, which strengthens their academic self-concept and ultimately boosts motivational drive (Ahn and Davis, 2020). SIT is a strong supporter of this pathway, which explains why secure group belonging is a strong stabilizer of self-definition and a strong contributor to positive behavioral outcomes (Nguyen et al., 2026). This mediating relationship is supported by empirical literature. Rubin and Novis-Deutsch (2026) points out that belonging alleviates the stress of identity, which subsequently leads to academic persistence, and motivation. Douglas et al. (2025) show that belonging interventions can improve long-term academic outcomes by improving the sense of identity security as a psychological buffer. On the same note, Nguyen et al. (2026) discover that students whose identity is reinforced experience increased levels of motivation and long-term academic interest. According to them, in the educational setting, identity development is profoundly affected by the sense of social inclusion, which in turn impacts motivation-related behavior. Chakravarty and Satpathy (2026) further clarifies that identity-based motivation occurs when people believe that their academic identity is safe and validated by society. Zahid (2023) also highlight that robust social identity adds to psychological continuity and goal commitment. In schools, Lee et al. (2025) propose that belonging enhances motivation indirectly as a result of identity development processes that lead to engagement and resilience. Allen et al. (2026) affirms that less identity uncertainty increases participation and academic confidence. In the context of the developing countries, O'Connor (2024) and Ahn and Davis (2020) report that students with greater perceived inclusion have a higher level of identity stability, which greatly enhances AM in students. Taken together, these results suggest IS is a crucial mediating pathway between SBP and AM due to enhancing psychological security and reaffirming motivational engagement in higher education settings.

- H_7 : IS mediates the relationship between SBP and AM.

3. METHODS

3.1. Sample and Data Collection

This study used a quantitative approach to analyze the hypothesized relationships shown in Figure 1. The primary data were gathered through convenience sampling method. The survey was also designed via Google Forms and distributed via other social media, such as WhatsApp, LinkedIn, Gmail, Facebook and Instagram. People were invited to take part in the survey. The questionnaire was designed into two parts: A and B. Part A included questions that covered data related to the universities and academic settings that students were most conversant about, and involved. Section B involved the items related to the four major constructs being

investigated in this research, SBP, PS, IS and AM, which were obtained out of various existing studies. The introduction letter contained guidelines on how to fill the survey and it was stressed that it was voluntary and anonymous. There were no correct or incorrect answers. A total of 341 completed questionnaires were received and through screening, 302 were found to be valid to be analyzed.

3.2. Measures

This study questionnaire was comprised of four instruments, SBP, PS, IS and AM. Five items adapted to (Kumar et al., 2025) were used to measure SBP. One such item is: I believe that I fit in my academic setting. The reliability coefficient Cronbach's alpha was determined to be $\alpha = 0.92$. Four items were used to measure PS, borrowed (El Zaatari and Maalouf, 2022). An example question is: I get academic and emotional support provided by my classmates. Cronbachs alpha was calculated as the reliability coefficient with the value of $\alpha = 0.90$. IS was measured using five items that were borrowed (Matheka et al., 2025). An example question: I am not afraid of my identity as a university student. Cronbachs alpha is 0.91, which is the reliability coefficient of Cronbachs. The assessment of AM was done through five items that were borrowed (Zahid, 2023). One of the sample items is as follows: I am motivated to meet my academic objectives at all times. Cronbachs alpha was calculated and it is $\alpha: 0.93$. Each of the constructs was rated on a five-point Likert scale. As far as the higher education situation is concerned, the respondents were presented with 11 different universities: University of Jordan, Yarmouk University, Jordan University of Science and Technology, Hashemite University, Mutah University, Al-Balqa Applied University, Princess Sumaya University of Technology, Petra University, Applied Science Private University, Middle East University and German Jordanian University, as the most recognized institutions in this industry. The students were questioned concerning their degree of engagement, their academic experience, peer interaction, perception of belonging and motivation in these universities. Demographic data concerning the respondents such as age, gender, education level, faculty, academic year and monthly family income were gathered in the last section of the questionnaire.

3.3. Model Estimation

A two-stage approach was used to analyze the data. To test the reliability and validity of the scales, first, confirmatory factor analysis (CFA) was conducted. Second, structural equation modeling (SEM) was performed, to test the hypothesized

model. The results of CFA are displayed in Table 1. All the standardized loadings exceed 0.70 and the t-values of the loadings are significant at the level of 0.01. All constructs have a composite reliability (CR) value of above 0.70, which is a high value indicating high reliability. In addition, all values of the average variance extracted (AVE) are above 0.50, which underlines the convergent validity of the constructs. Furthermore, the fit indices of $\chi^2 = 2.68$, CFI = 0.96, NFI = 0.93, TLI = 0.95, SRMR = 0.05 and RMSEA = 0.06 indicate a strong overall fit between the data and the hypothesized model, suggesting a robust fit.

4. RESULTS

Table 2 shows the demographic information of participants. There were fewer male respondents (39.6%) compared to female respondents (60.4%). Most of the respondents were aged 31-40 (41.5%), 21-30 (33.4%), and a smaller percentage (6.5%) were above 50. Almost 44.0% of the respondents said that the monthly family earnings were 650 JD or below. Table 3 indicates that University of Jordan has the highest number of people attending it. Jordan University of Science and Technology scored the highest score on perceived academic quality, and was also linked with an increased academic work load. German Jordanian University was the most innovative one, and the frequency of participation at the Mutah University was the lowest. Princess Sumaya University of technology was associated with the lowest perceived social integration and peer interaction, and Al-Balqa Applied University was perceived as least supportive in identity related academic experiences.

Table 1: Psychometric properties of the constructs

Constructs	Standard loadings	t-value	CR	AVE
Social belonging perception				
SBP	0.94	0.73		
SBP1	0.82	16.21**		
SBP2	0.87	17.89**		
SBP3	0.88	18.05**		
SBP4	0.89	18.41**		
SBP5	0.80	Fixed	0.94	0.73
Peer Support				
PS	0.90	0.66		
PS1	0.82	15.02**		
PS2	0.83	15.18**		
PS3	0.84	15.35**		
PS4	0.79	14.22**		
PS5	0.77	Fixed		
Identity Security				
IS	0.92	0.70		
IS1	0.86	19.10**		
IS2	0.85	18.45**		
IS3	0.84	18.02**		
IS4	0.88	Fixed	0.92	0.70
Academic Motivation				
AM	0.93	0.72		
AM1	0.87	14.88**		
AM2	0.88	14.95**		
AM3	0.86	14.72**		
AM4	0.76	19.05**		
AM5	0.72	Fixed		

P<0.01. Source: Authors' own work

Figure 1: Conceptual model

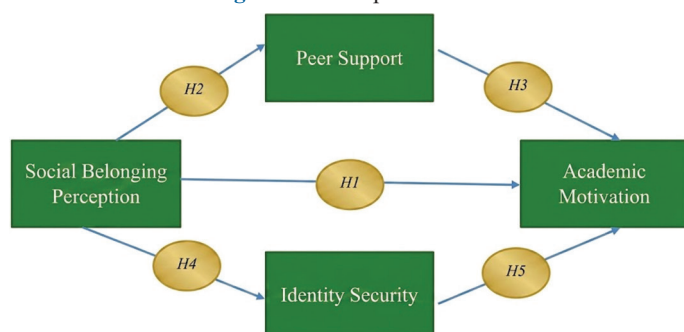


Table 4 shows the correlations and descriptive statistics of all the variables. The findings revealed that there was a strong positive association between SBP and PS, IS and AM. Table 5 shows the results of the hypothesis tests, with the analysis based on 10,000 bootstrap samples. The findings of the calculations based on SEM indicate that SBP does not have a significant influence on AM ($\beta = 0.06$, $P > 0.05$), which in turn causes the rejection of H_1 . Nevertheless, SBP demonstrates a considerable effect on PS ($\beta = 0.62$, $P < 0.01$), which proves H_2 . Moreover, PS has a significant impact on AM ($\beta = 0.57$, $P < 0.01$) that confirms H_3 . SBP has a significant impact on IS ($\beta = 0.41$, $P = 0.01$), which proves H_4 . Also, AM ($\beta = 0.40$, $P < 0.01$) has a strong impact on IS, which supports H_5 . Moreover, PS is a major mediator in the positive correlation between SBP and AM ($\beta = 0.27$, $P = 0.01$), which is the confirmation of H_6 . In the same manner, IS is a strong mediator between the positive correlation existing between SBP and AM ($\beta = 0.22$, $P = 0.01$), and which confirms H_7 . The SEM model has been represented in Figure 2 in a visual format.

5. DISCUSSION

The current analysis is a detailed review of the impact that SBP has on AM, with the mediating effects of PS and IS in higher education institutions in Jordan. Not only do the findings provide both direct and indirect information into student motivational dynamics in the context of developing countries, but it also contributes to the existing theoretical and empirical discussions. The first important conclusion is that SBP does not directly impact AM significantly. This finding is in line with previous research that stated that belonging was not necessarily the same as motivational results unless other psychological and social processes were involved (Allen et al., 2026; Kumar et al., 2025). Rehman et al. (2023) and Elumalai et al. (2021) report similar evidence, and argue that belonging is an enabling condition, and not a direct motivational driver. Yet, this result is opposite to that of Aithal et al. (2024) and Phuong and Dung (2024) who found a direct positive correlation between the interventions of belonging and academic performance. The difference can be attributed to the contextual differences, as in the case of the Jordanian higher education system, peer-based and identity-based adaptation is often more prevalent than a direct impact of institutional belonging. The second result proves the existence of a good positive correlation between SBP and PS. This finding aligns with Zahid (2023), who pointed out that perceived belonging increases peer interaction and cooperation learning behaviours. The findings of Froehlich et al. (2023) also revealed that students who have a higher perception of belonging are more active in academic exchanges related to their peers. On the same note, Mtshweni (2024) and Radzlan et al. (2026) concur that relatedness needs promote collaboration among peers. Nevertheless, according to some studies like Douglas et al. (2025), peer engagement might not be as contingent on perceived belonging but rather on institutional structure, indicating some contextual variation. The third result proves that PS considerably improves AM, which is highly consistent with SDT. According to Reddy et al. (2025) and Lee et al. (2025) peer-based environments promote intrinsic motivation by supporting autonomy and relatedness.

Lee et al. (2025), and Ahn and Davis (2020) also provide empirical support that peer interaction boosts persistence and engagement.

Table 2: Demographic data of the sample (n=302)

Variables	Categories	Frequency	%
Gender	Male	120	39.6
	Female	182	60.4
Age	Under 20	12	4.0
	21-30	101	33.4
	31-40	126	41.5
	41-50	47	15.6
	50+	16	5.5
Education	Diploma or less	41	13.6
	Bachelor	47	15.6
	Master or higher	214	70.8
Employment	Employed full-time	224	74.2
	Part time	21	7.0
	Self-employed	31	10.3
	Students	21	6.9
Monthly income	Unemployed	5	1.6
	<400 JD	28	9.2
	400-650 JD	134	44.0
	651-900 JD	101	33.4
	901-1200 JD	21	7.0
	>1200 JD	18	6.4

Source: Authors' own work

Table 3: Academic engagement and institutional perception across universities

Universities	Participation frequency	Academic quality mean	Peer support mean	Social belonging mean	Identity security mean	Academic motivation mean
University of Jordan	2.92	3.20	3.45	3.50	3.48	3.62
Yarmouk University	2.30	2.58	2.85	2.88	2.90	2.75
Jordan University of Science and Technology	2.88	3.95	3.70	3.68	3.72	3.78
Hashemite University	2.25	2.45	2.60	2.62	2.65	2.55
Mutah University	1.75	2.20	2.40	2.38	2.42	2.30
Al-Balqa Applied University	2.20	2.35	2.30	2.28	2.25	2.22
Princess Sumaya University for Technology	2.70	3.10	3.05	3.00	3.08	3.15
Petra University	2.22	2.50	2.65	2.60	2.58	2.48
Applied Science Private University	2.18	2.40	2.55	2.52	2.50	2.45
Middle East University	2.15	2.33	2.48	2.50	2.47	2.40
German Jordanian University	2.85	3.85	3.80	3.78	3.82	3.80

Source: Authors' own work

Conversely, Tian et al. (2021) observed less significant effects of peer support in highly competitive academic systems which suggests that cultural and institutional competitiveness may moderate this relationship. The current finding supports Dost (2026) and Phuong and Dung (2024) and the importance of peer-based motivational structures in collectivist settings, including Jordan. The fourth finding shows that SBP is a significant improve of IS. SIT is a strong supporter of this outcome and proposes that group belonging enhances self-definition and psychological stability. The same argument is made by Chakravarty and Satpathy (2026) and Rubin and Novis-Deutsch (2026) who claim that identity threat is reduced by belonging and that belonging increases psychological security. The same is also affirmed by Froehlich et al. (2023) and Allen et al. (2021) who state that inclusive environments enhance identity-based resilience. Nguyen et al. (2026) however, observe that the effect of identity security can be varied depending on institutional inclusiveness and that may explain the variation in the magnitude across contexts. The fifth finding shows that IS has a big impact on AM. This coincides with

Zahid (2023), who proved that identity security lowers academic anxiety and enhances persistence. Further support of the claim that secure identity structures drive motivation and goal-directed behavior is provided by Elumalai et al. (2021) and O'Connor (2024) respectively. Dost (2026) also point out the development of identity as a key motivator of academic engagement. Contrastingly, other studies including O'Connor (2024) propose the possibility that identity effects are less strong in highly standardized education systems but this was not the case in the current study.

The most important insight of the study is the results of the mediation. PS play an important role in mediating the relationship between SBP and AM, which confirms that belonging translates into motivation using peer-based mechanisms. This is in line with Gilani and Thomas (2025), Reddy et al. (2025) as well as Douglas et al. (2025) who highlight relational pathways in academic motivation. On the same note, IS also mediates this relationship, confirming the arguments of Zahid (2023), and Kumar et al. (2025) who highlight the identity-based motivational processes. All of these findings collectively support Ahn and Davis (2020) who suggest that the development of identity and social relationships together shape motivation. In general, the findings validate the hypothesis that SBP does not act directly but indirectly in affecting AM, via both PS and IS mechanisms. This dual mediation model can be aligned with previous fragmented results, and can be used to provide

Table 4: Correlations among constructs

Constructs	Mean	SD	SBP	PS	IS	AM
SBP	3.52	1.08	1			
PS	3.78	0.88	0.55**	1		
IS	3.69	0.92	0.61**	0.74**	1	
AM	3.58	0.95	0.63**	0.77**	0.75**	1

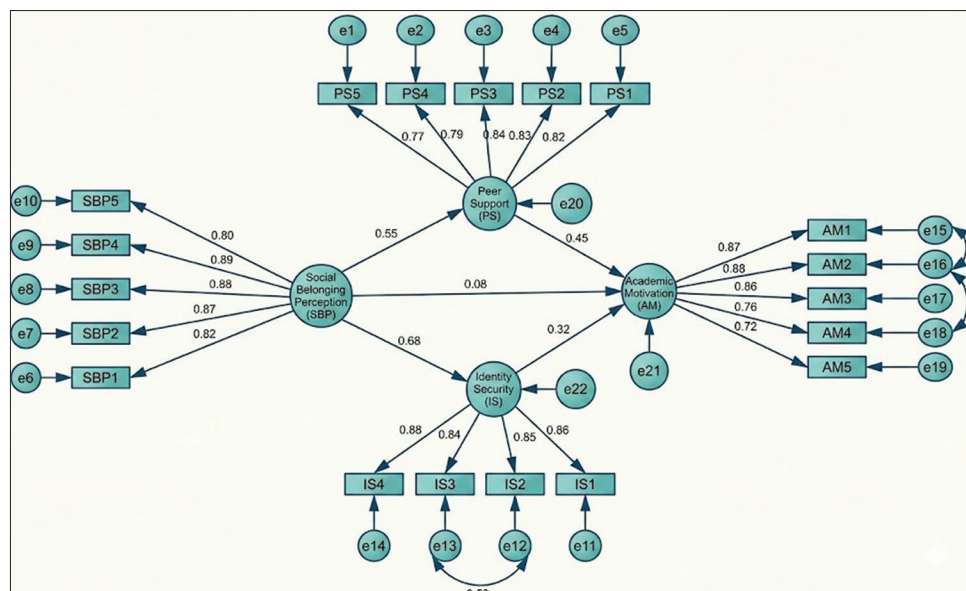
P<0.01. Source: Authors' own work

Table 5: Results of the SEM

Hypotheses test	Standard estimate	Lower bound	Upper bound	P-value	Result
SBP→AM	0.06	-0.09	0.17	0.58	Rejected
SBP→PS	0.62	0.54	0.71	<0.01	Confirmed
PS→AM	0.57	0.39	0.73	<0.01	Confirmed
SBP→IS	0.41	0.33	0.50	<0.01	Confirmed
IS→AM	0.40	0.21	0.59	<0.01	Confirmed
SBP→PS→AM	0.27	0.19	0.36	<0.01	Confirmed
SBP→IS→AM	0.22	0.11	0.34	<0.01	Confirmed

Source: Authors' own work

Figure 2: Direct relationships between the variables



a coherent explanatory mechanism of student motivation in Jordanian higher education settings.

5.1. Theoretical Contributions

This research has been done with great theoretical contributions, as SDT and SIT have been integrated into a single theoretical framework that explains how SBP affects AM via PS and IS. Regarding SDT, the results support the primary role of relatedness as a determinant of motivation outcomes, and that SBP can enhance AM indirectly by means of socially embedded processes like PS. The research is an expansion of SDT, in that relatedness does not work alone but rather occurs through the structured interactions of peers within higher education settings. In terms of SIT, the findings are a strong confirmation of the fact that SBP is able to enhance IS, which in turn promotes AM, as research findings indicate the relevance of group-based identity formation in a learning environment. The research builds on the SIT by empirically placing identity security as a dynamic mediating construct, as opposed to a fixed psychological outcome. Moreover, integrating SDT and SIT, the study proposes a dual-pathway model that explains both the relational (PS) and identity-based (IS) mechanisms, which offers a more comprehensive theoretical prism than the previous fragmented ones (El Zaatari and Maalouf, 2022; Tian et al., 2021). This mixed methodology leads to the insight into student motivation in the context of developing countries, especially in the context of Jordan higher education.

5.2. Practical Implications

This research has significant practical implications to policy makers in higher education, university administrators and academic support units. To begin with, the results show that it is vital to reinforce the learning environment based on peers because PS is of significant benefit to AM. Universities ought to thus encourage organized group learning, peer mentoring classes and joint academic projects to encourage student participation. Second, institutions are supposed to make improvements in SBP by creating inclusive classroom cultures and supportive faculty-student relationships and by providing participatory learning environments. Third, the powerful role of IS implies that universities should adopt psychological support systems, counseling services, and identity-affirming academic practices that can lead students to have confidence in the academic selves. These interventions are especially necessary within the context of higher education in Jordan where the diversity among students is growing, as well as the academic pressure to which students are exposed. Lastly, policymakers ought to develop learning systems that can combine both social and psychological support systems to decrease the disengagement process and enhance the long-term educational attainment. Overall, the research could offer practical recommendations on how to enhance student motivation using systematized social and identity-based interventions.

6. CONCLUSION

In this study, the conclusion is that SBP does not directly affect AM, but has a significant indirect impact via PS and IS in higher

education institutions in Jordan. The results prove that both relational and identity-based processes are needed in the translation of belonging into motivation and it provides a more in-depth insight into the dynamics of student engagement. The combination of SDT and SIT allows the study to make a good theoretical contribution, which explains the motivation in two channels of social interaction and identity formation. Empirical findings indicate the significance of PS and IS in mediating the positive effect of supportive peer environments and identity stability in increasing academic performance. In sum, the research contributes to the existing body of literature through the presentation of a context-sensitive and empirically validated model of AM in a developing country context. It highlights that to increase student motivation, there is a need to not only reform the academic system but also to make psychological and social interventions to enhance the feeling of belonging, peer relationships, and identity security in the context of higher education.

Although it has made contributions, this study has a number of limitations. To begin with, a cross-sectional research design restricts the possibility of establishing causal links between SBP, PS, IS, and AM. It is suggested that longitudinal research be conducted to study the change with time. Second, self-reported questionnaires were used to collect data, which could bring about response bias and social desirability effects. Mixed-method designs may be included in future studies to understand the topic better, with the help of qualitative interviews. Third, the research is confined to higher education institutions in Jordan which may limit the generalizability of the results to other cultural or educational settings. This should be done in future research where the model replicated in other countries in order to prove its strength. Fourth, the model takes into account only two mediators (PS and IS), and other psychological variables like academic self-efficacy, emotional intelligence, or resilience may be examined. Lastly, future studies might be interested in investigating the moderating variables (gender, academic discipline or institutional type) to further refine the model.

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