



Psychological Immunity and Its Relationship to Perceived Academic Self-Efficacy among University Students: A Descriptive Study at Isra University

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Abstract

Objectives: Psychological immunity is an important psychological resource that helps university students cope with academic and personal challenges. However, limited research has examined its relationship with perceived academic self-efficacy. Therefore, this study aimed to examine the level of Psychological Immunity and Its Relationship to Perceived Academic Self-Efficacy among university students.

Methodology: This study was conducted at Isra University in Jordan and included 517 students selected via convenience sampling. Data were collected using psychological immunity and perceived academic self-efficacy scales. Using a descriptive correlational design, the study examined the levels of both constructs and the predictive contribution of perceived academic self-efficacy to psychological immunity.

Findings: The total mean score for psychological immunity among university students was high. The total mean score for perceived academic self-efficacy was also high. Moreover, the results showed that there was no statistically significant difference in psychological immunity or perceived academic self-efficacy by gender or study level. Finally, perceived academic self-efficacy accounted for 14.9% of the variance in psychological immunity.

Implications: These findings highlight the importance of academic self-efficacy and offer practical guidance for higher education institutions seeking to enhance student well-being through programs that strengthen it.

Conclusions: The study recommended that student Support services should provide access as part of this service delivery model that enhances students' academic self-efficacy. The study contributes to a better understanding of the relationship between psychological immunity and perceived academic self-efficacy. It underscores the value of fostering academic self-efficacy to support students' psychological and academic success.

Key words

Psychological immunity, Academic self-efficacy, Psychological Resilience, Higher Education.

1. Introduction

The university stage is considered one of the pivotal phases in a person's life, during which students face increasing academic, psychological, and social challenges that present various demands requiring practical adaptation skills, as well as the ability to cope with stress and achieve psychological and cognitive balance (Abu Hassouna & Al-Sharifin, 2022). The need to examine psychological variables that can support students' adaptation and success has been amplified by these tensions. Among the more significant variables is the concept of psychological immunity, which describes a person's ability to manage stressful events with a degree of protection while maintaining mental health and adaptability (Al-Ahmad, 2020). Psychological immunity is thought of as an emotional shield, helping an individual turn adverse situations into positive actions, mitigate stress, increase the likelihood of maintaining the will to engage in challenging situations, and remain focused. Another critical variable is perceived academic self-efficacy. This concept in educational psychology reflects what a student thinks or believes about their capability to manage their academic responsibilities, assert control over their academic success, and ultimately succeed in their schoolwork (Ben Salem, 2021). According to Bandura's self-efficacy theory, what an individual thinks or believes about their capabilities affects the effort they put in, the perseverance they demonstrate when facing challenges, and the strategies they use to overcome them. Thus, having a high level of perceived academic self-efficacy leads to increased motivation to achieve, greater endurance in the face of failure, and higher levels of successful performance. Alkhutaba (2022) posits that there is a close relationship between psychological immunity and academic self-efficacy. Also, students with a high level of psychological immunity often hold a positive belief in their ability to succeed academically, which in turn increases their self-confidence and enhances their

ability to regulate their learning efforts. Psychological immunity also protects students from the effects of academic anxiety and exam stress, positively impacting their self-perceptions of academic competence.

Psychological Immunity

Freud's theory of psychoanalysis is considered the primary reference for the idea of psychological immunity, through which he clarified the active role of defense mechanisms in protecting the self (Shaaban, 2020). Freud's contributions to his theory regarding this concept provided a simple description that explained an older perspective. The modern understanding of psychological immunity emerged at the beginning of the 21st century, alongside the proliferation of various concepts describing it, including the mental immunity system, emotional immunity system, behavioral immunity system, and affective system (Olah, 2010). Psychological immunity was described as a multidimensional integrated unit and personal resources related to motivational, behavioral, and cognitive aspects, which enable the individual to handle and confront pressures freely and support mental health through three subsystems that include sixteen dimensions, interacting and integrating to develop adaptive skills and abilities that harmonize the individual's principles with the demands of the environment (Zaidan, 2013).

Mushel (2018) views psychological immunity as "an individual's ability to protect themselves from the potential negative effects of stress, threats, risks, precautions, and internal and external psychological crises through the self-contained resources within their personality." Shaaban (2020) defined psychological immunity as "a preventive plan that helps the individual overcome the psychological disorders they encounter. Immunity is considered a form of defense by the individual against foreign bodies. Humans possess a psychological immune system that protects

us from harmful psychological attacks by helping us adapt to emotional stress. Psychological immunity consists of several types. First: Natural psychological immunity, which is defined as immunity against stress and anxiety. It is present in a person's psychological makeup, which develops from the interaction between heredity and environment (Bredacs, 2016). A person with a healthy psychological makeup enjoys a high level of natural psychological immunity against stress and anxiety, can withstand frustration and face difficulties, and is capable of self-control. The second category of psychological immunity is acquired through experience and skill development. The third category has a very similar structure to artificially induced immunity, which is produced by the body through injection, as in vaccination. Active acquired immunity occurs when a person is infected with a weakened form of a pathogen, which provides long-lasting protection against it. Psychological immunity comprises internal motivators that drive individuals to desire personal and professional development and to pursue excellence. (The third group consists of items that represent interpersonal relationships and creativity). Olah et al. stated that psychological immunity has three dimensions which consist of groups or clusters: Group 1 contains items related to internal growth or positive, which is associated with competence for a person, positive attitude and perception of self, a sense of belonging or awareness of the community around them; Group 2 represents creativity and connections to others, which consists of a desire to challenge and test one's self; Innovation and creation of new ideas have many meanings, from the creation of a new product to an entirely different type of art form. Group 3 represents an individual's ability to monitor and adjust socially; to solve problems and create change, and achieve goals and objectives (Olah et al., 2010). The third group is associated with internal reactive responses, which include impulse control, impulsivity control, and emotional self-reg-

ulation. According to Al-Sharif (2015), three components constitute Psychological Immune Function. The first is the containment component. It is the emotional component through which extreme emotions are processed, evaluated, transformed, and ultimately released from awareness into the body's experience (including the transformation of negative emotions through both absorption and counter-transformation). Second, the adaptive confrontation component describes the methods of action that stimulate cognitive mechanisms that allow an individual to adapt to the stimulus of the event while being complemented by that individual's emotional experiences. Finally, the self-regulation component refers to one's ability to experience the environment as-to-gain, to perceive it, and to use this perception to guide the individual in their evaluation of new experiences and to integrate new experiences with the individual's cognitive experience. Overall, the functions of Psychological Immunity represent the relationship between many types of both psychological influences and physical pressures on an individual while maintaining individual balance and guidance in the overwhelming challenges of psychological pressure, while allowing an individual to develop psychological and social well-being through proper emotional and behavioral stimulation, while developing a sense of self-acceptance and allowance of others (Alkhutaba, 2022).

Academic Self-Efficacy

Academic self-efficacy occurs when students have confidence in their skills and know-how to handle obstacles in education; their level of academic self-efficacy can affect how determined they are during class activities such as homework assignments or tests, and ultimately impacts how well they perform on those assignments. Students who strongly believe they are capable of learning accept opportunities to achieve higher levels of success; as a result, they experience greater endurance and interest in learning, thereby

creating a pathway to higher aspirations for success in their educational careers. Students with weaker beliefs about their learning capabilities lose motivation to achieve in school and therefore typically fail at performing the most basic tasks assigned to them by their teachers. This competence manifests as ideas and self-beliefs about one's capabilities, and these ideas mediate between the knowledge and skills an individual possesses and their actual performance in educational situations (Yousry, 2016). Competence is not related to what an individual possesses in terms of abilities. However, instead of what they can do with those abilities, it is the extent of an individual's confidence in their ability to perform the required tasks. Chohan, Bhatti, and Ansong et al. (2015) posit that an individual's learning and behavior are primarily influenced by their belief in their abilities, or self-efficacy. The more positive a student's assessment of their learning abilities, the better their feelings toward attending the educational institution, the more likely they are to view attending it as an end in itself, and the more persistent and consequently more successful they are. Understanding an individual's academic self-efficacy is paramount, as enhanced self-belief improves academic performance and enables the individual to achieve his/her optimal potential based on the skills and capabilities he/she possesses (Bedel, Imamoğlu, and Altıntaş, 2015). Bandura's social cognitive theory seeks to explain how external (e.g., social) and internal (e.g., self-influence) factors interact to produce and regulate human behaviour (Bandura, 1997). Bandura argues that an individual's self-efficacy is one of the main determinants of behaviour and can be used to predict outcomes like goal setting and motivation. In social cognitive theory, a person's self-efficacy beliefs are based on their belief that they can achieve the desired level of performance through their individual abilities and skills.

Bandura's social cognitive theory suggests that a

combination of external (social) and internal (self) influences motivates and regulates human behaviour. Among internal influences, self-efficacy is a key determinant of how an individual believes he or she will achieve the level of performance required to reach his or her desired goal. According to Bandura, individuals develop beliefs concerning their ability to manage, direct, and control their thoughts, feelings, and actions; these beliefs serve as normative and self-regulatory controls. These beliefs arise through four main processes: cognitive, motivational, emotional, and volitional processes (Honicke & Broadbent, 2016). Bandura (1977) emphasized that students with high academic self-efficacy are more aware and confident in their abilities. They demonstrate greater flexibility in seeking solutions, achieving higher mental and cognitive performance, evaluating their performance more accurately, maintaining high levels of achievement-oriented motivation, persevering in the face of difficulties, solving problems, and managing tasks effectively (Awwad & Alkhutaba, 2021). They are also less prone to disorders than others and are distinguished by their ability to organize themselves and perform tasks effectively. Conversely, students with low academic self-efficacy tend to avoid academic tasks that require mental challenge, take longer to understand and memorize their lessons, and are unable to employ strategies that demand higher-order thinking. There are four primary sources through which individuals acquire and modify their perceptions of self-efficacy: performance accomplishment, vicarious experience, Verbal Persuasion, and emotional arousal (Ozer & Yetkin, 2018).

Previous studies

AL-Qadri et al. (2024). In order to improve the learning attainments of Yemeni university students, investigate the direct effects of academic achievement and academic self-efficacy on learning outcomes, the influence of academic achievement on academic

self-efficacy, and, finally, the way in which academic achievement mediates the relationship between academic self-efficacy and learning outcomes. 611 students, ages 19 to 27, participated in the study. Both the impact of academic accomplishment on learning outcomes and the strong influence of academic self-efficacy on academic achievement and learning outcomes are critical elements in the academic context, supported by empirical evidence. Additionally, the study found that academic self-efficacy mediated an indirect effect of academic self-efficacy on learning outcomes. However, the demographic variable results showed significant disparities between age and educational level groups, as well as between gender and age groups. Comparing gender and level groups or taking age, gender, and level into account collectively for learning outcomes and academic self-efficacy, however, did not reveal any differences. In contrast, every comparison aside from the gender and age comparison was significant for students' academic self-efficacy.

Kristensen et al. (2023) examined whether academic self-efficacy acted as a mediator in the intraindividual link between psychological discomfort and academic stress during the three years of upper secondary school. The study also looked at the hypothesized model's possible gender moderation. Academic stress had positive and time-invariant direct effects on psychological distress, according to the results of the random intercept cross-lagged panel model. Academic self-efficacy also partially mediated these associations, and psychological distress, in turn, influenced future academic stress. According to the results, academic stress had a greater impact on males' interpersonal psychological discomfort and academic self-efficacy. Girls, on the other hand, showed a larger intraindividual correlation between psychological suffering and academic stress.

Al-Mutairi & Al-Rashdan (2022) conducted a study to find out how a sample of male and female high school students in the State of Kuwait differed in terms of psychological immunity and self-harm. A sample of 210 males and 210 females in grades 10, 11, and 12 were administered the Psychological Immunity Scale and the Self-Harm Diagnostic Scale for Adolescents and Adults, both the typical and the atypical versions. The study's findings showed a statistically significant negative correlation between psychological immunity and self-harm among the study sample, statistically significant differences between the mean scores of males and females on the overall Psychological Immunity Scale, favoring males, and no statistically significant differences between the mean scores of males and females on the overall Self-Harm Diagnostic Scale. Another study, conducted by Abu Hassouna and Al-Sharifin (2022), investigated, while controlling for gender, college, cumulative GPA, and job status, the association between psychological immunity and health behavior practices among Jordanian university students during the COVID-19 pandemic. 692 undergraduate students enrolled in the first semester of the academic year (2020–2021), who were conveniently picked from Jordanian universities, made up the study sample. According to the study's findings, university students' psychological immunity and their degree of health behavior practice were both average, and there was a positive association between the two. The findings also showed that psychological immunity varied statistically significantly by gender, favoring men, but there were no changes in psychological immunity related to employment situation, cumulative GPA, or college.

Additionally, differences were found between the mean scores for health behaviors by gender, favoring females, and by college type, favoring students attending scientific colleges. In contrast, no differences were observed for GPA or work status. As for the

study by Al-Halabi (2021), which examined psychological immunity and social support as predictors of a positive outlook toward the future among a sample of female students at Qassim University, it included 275 participants. The results indicated that participants had above-average psychological immunity and below-average social support and future orientation. Notably, social support did not predict a positive outlook toward the future. Additionally, there were differences between individuals with low and high psychological immunity, as well as between individuals with low and high social support, on the positive future orientation scale.

Rafea's (2017) study aimed to analyze the academic self-efficacy and problem-solving abilities of University of Hail students. Stratified random sampling was used to select the 450 male and female students who made up the study sample. Two measures, the Academic Self-Efficacy Scale and the Problem-Solving Skills Scale, were employed to meet the study's goals. The findings showed that there were no gender-based disparities in the University of Hail students' problem-solving abilities. Additionally, the study showed statistically significant differences by academic specialization, favoring students in the science area, and by academic level, favoring students at higher academic levels. The findings also showed a statistically significant positive relationship between problem-solving abilities and academic self-efficacy.

The studies reviewed here collectively provide evidence that academic self-efficacy, psychological immunity, and coping resources play multifaceted roles in students' academic and psychological outcomes. Al-Qadri et al. (2024) identified that academic self-efficacy and academic competence are central to students' learning outcomes. Learning Outcomes with direct and mediated effects, providing robust empirical evidence for ASE strengthening AC, while

also demonstrating its indirect effect on Learning Outcomes. Consequently, there is an opportunity to reinforce academic self-efficacy to achieve greater effects. In much the same tone, Kristensen et al. (2023) sought to broaden the understanding of academic self-efficacy by situating it within the stress-distress framework, showing that academic self-efficacy can attenuate the effects of academic stress, depending on various intraindividual and interpersonal factors, with several notable gender differences noted. Research conducted by Al-Mutairi and Al-Rashdan (2022) and Abu Hassouna and Al-Sharifin (2022) has now begun to focus on psychological immunity and immunity, finding their protective effect in reducing the risk of self-harm, as well as reliance on these aspects as predictors of positive health behaviors in response to crises, such as COVID-19. Al-Halabi (2021) evaluated the predictive value of immunity and social support for future orientation, again finding mixed results. Finally, Rafea (2017) found a positive relationship between academic self-efficacy and problem-solving skills, with differences being influenced by academic level and specialization. Overall, these studies highlight the importance of ASE and immunity as key factors in overall well-being, coping, and academic achievement.

The research articles collectively show that self-efficacy and psychological immunity have a significant impact on student success, emotional health, and the ability to cope with academic demands. In addition to agreeing on the importance of academic self-efficacy and psychological immunity for student outcomes (academic performance, psychological well-being, and coping), they also make distinct contributions that help support and broaden the current research focus. Al-Qadri et al. (2024) found that academic self-efficacy has both direct and indirect effects on student learning, via positive academic performance. Also demonstrated that academic self-efficacy has

a significant impact on academic success; however, their research did not examine other areas of academic success (such as cognitive/academic). Kristensen et al. (2023) examined academic self-efficacy in the context of stress. This study demonstrated that academic stress and self-efficacy partially mediate the relationship between academic stress and psychological stress, and identified gender differences in this regard. However, this study did not consider additional protective factors.

In an opposing viewpoint, Al-Mutairi and Al-Rashidan (2022), as well as Abu Hassouna and AlSharif (2022), have established that psychological immunity protects us against maladaptive behaviors and supplies the basis for adopting positive health behaviors, after a crisis, while impacting our level of academic motivation and scholarship. Al-Halabi (2022) found that psychological immunity is predictive of future orientation; however, his research is limited in scope due to the size of his sample and does not provide examples of the academic variables that may be present. Separately, Rafea (2017) found a positive correlation between academic self-efficacy and problem-solving skills, with academic level and area of specialization influencing this correlation, but did not investigate any additional psychological protective factors beyond those stated.

When taken together, these findings provide an empirical foundation for future studies, as each addresses the individual constructs of academic self-efficacy, psychological immunity, stress, and adaptive outcomes. At the same time, these four studies highlight a significant omission in the current body of literature on academic self-efficacy and psychological immunity: the lack of integrative models that consider the interrelationship between these constructs as similar resources mutually supportive of students' academic and psychological functioning. The present

study aims to fill this void by proposing a more comprehensive approach that incorporates motivational and protective psychological elements, expands upon prior studies, and offers a more detailed insight into students' ability to adapt to their academic environment.

Statement of the problem

University students encounter academic, social, and psychological difficulties that can affect their academic success and general well-being. When adjusting to university life, students face increased academic demands, shifts in their social support systems, and uncertainty about how these changes will affect their future career goals. In this environment, the term "psychological immunity" describes the aggregate of cognitive, emotional, and behavioural strategies that help individuals deal with stressors and adapt favourably to new circumstances, and thus represent an important way to support students' mental health and academic involvement. Another widely recognised concept is "perceived academic self-efficacy," which refers to a student's belief in their ability to plan, organise, and execute their academic tasks. Perceived academic self-efficacy is strongly correlated with motivation, persistence, and ultimately academic performance in post-secondary education. Although psychological immunity and perceived academic self-efficacy are both known to correlate positively with psychological immunity, coping skills, and academic success, very few studies have explored how these two constructs interact within the university student community. Previous investigations examined self-efficacy as a predictor of academic performance or as a psychological immune system that protects individuals from stressors and other mental health issues. The relationship between self-efficacy and psychological immunity remains poorly studied in the literature. Researchers can use information from examining how perceptions of psychological immunity relate

to perceptions of academic self-efficacy to develop strategies to improve students' academic resilience, self-regulation, and success. Currently, the lack of empirical research linking psychological immunity to perceived academic self-efficacy among college students creates a barrier to colleges and universities offering quality programming and methodologically sound processes to strengthen students' psychological immunity and academic confidence in their ability to perform academically in stressful, uncertain situations. This study aims to provide a basis for future research on the relationship between psychological immunity and perceived academic self-efficacy among college students and to offer recommendations for establishing evidence-based programs.

Significance of the study

The present study provides both theoretical and practical importance. From a theoretical perspective, the current study adds to our growing knowledge of both Positive Psychology and Educational Psychology by including the concept of Psychological Immunity (immunity, adaptability, and stress coping skills) as a contributor to students' perceptions of their academic competence (self-efficacy) and subsequently their beliefs about their academic potential. Although earlier studies have cited Self-Efficacy in relation to understanding an individual student's performance at school, Psychological Immunity provides an opportunity to identify additional support resources available to students for coping with academic anxiety and stressors. The combination of psychological immunity, integrated into the current body of literature around academic success and wellness in higher education, highlights Protective Factors of Academic Success and Wellness for college students.

Educators, counselors and university administrators will find the results of this research useful at the practical level; Knowing how psychological immuni-

ty affects perceived academic self-efficacy will aid in creating clearly defined interventions (i.e., workshops for developing psychological immunity, providing training for life skills development and psychological resources) to develop an adaptable coping mechanism pattern among students that enhances their academic performance by developing belief in their ability to achieve academic tasks and by enhancing academic performance opportunity and persistence in higher education as well as supporting their chances of continuation in higher education as subsequently identified and enhanced by these findings. Further, the findings of this study have societal implications because an increasing number of university students face significant stressors (psychological, social, and academic) as they pursue post-secondary education. By identifying psychological immunity as a protective factor in building academic self-efficacy among students, the study demonstrates the critical importance of creating a more student-centered academic environment in higher education that emphasizes the development of intellectual skills while simultaneously fostering students' psychological resources. Therefore, the implications of this study will inform policies and practices that reduce academic burnout, promote students' health and well-being, and prepare graduates not only as competent professionals but also as resilient and self-confident individuals who can continue to thrive in future endeavors.

Objectives of the study

The study aims to investigate the levels of psychological immunity and perceived academic self-efficacy among university students and to explore whether perceived academic self-efficacy can be predicted by psychological immunity. Another objective is to investigate whether gender and student study level affect psychological immunity and perceived academic self-efficacy.

Study Questions

The current study looks to answer the following questions:

1. What is the level of psychological immunity and perceived academic self-efficacy among university students?
2. Can perceived academic self-efficacy be predicted through the level of psychological immunity among university students?
3. Do gender and the study level of the student affect the level of psychological immunity and perceived academic self-efficacy?

Methodology

The descriptive-correlational approach was employed due to its suitability for the study's objectives and topic, with a questionnaire used to collect data. The researcher then entered the collected information into the Statistical Package for the Social Sciences (SPSS) for analysis.

Sample

The study population consists of approximately 8,000 students from Isra University in Jordan during the first semester of the 2025/2026 academic year. The study sample consisted of 517 participants (262 male and 255 female students), selected via convenience sampling. Their ages ranged from 18 to 25 years. The following Table provides details about the sample

Table (1): Sample details

Category	Number	Percentage 100%
Male	262	50.67 %
Female	255	49.32 %
First-year students	113	21.85 %
Second-year students	102	19.72 %
Third-year students	123	23.79 %
Fourth-year students	179	34.62 %

Tools

The researcher relied on the following scales to measure the level of psychological immunity and perceived academic self-efficacy:

First, the Psychological Immunity Scale (Al-Jaberi, 2020) comprises 36 items across three domains. The containment dimension includes items numbered 1-8, which are positively worded. Additionally, the coping and adaptation dimensions include items 9-24; all items are worded positively. Finally, the self-regulation dimension includes items 25-36. In this dimension, the items numbered (36, 33, 31) were negatively worded.

Validity and reliability of the scale

First, Reviewers' Validity: the scale was presented to (10) professional reviewers in the field of psychology, educational psychology, and psychological measurement. Based on their suggestions, item number (6) was rephrased. Original Wording: "In most cases, I have negative feelings for a long time after the conversation ends." Revised Wording: "(My negative feelings persist for a long time after the event ends.)" After making the required modification, the reviewers agreed by a percentage exceeding 80% on the validity and suitability of the scale for the current study.

Second, construct validity: The correlation coefficient between the item score and the scale score was used to assess the degree of association between the items and the scale's overall score. The findings showed that, at the 0.01 or 0.05 significance level, the correlation coefficients between the items comprising the Psychological Immunity Scale's dimensions and the overall score are statistically significant. The items are closely associated with the trait being tested, as indicated by correlation coefficients ranging from 0.40 to 0.81. confirms the scale's construct validity.

Third, reliability: reliability was calculated using Cronbach's Alpha and the split-half method, with Cronbach's Alpha (0.90) and the split-half (0.84). Based on the results, the psychological immunity scale generally demonstrates high reliability, indicating its suitability for application.

Second, Perceived Academic Self-Efficacy (Abdul-Hay, 2012). The scale consists of (39) items distributed across (6) domains, which are: academic behavior dimension consists of (9) items, including items from (1 to 9), and academic context dimension consists of (4) items, including items from (10 to 13). The organization and time management consists of (7) items, ranging from (14 – 20); moreover, the academic achievement dimension consists of (6) items, ranging from (21 to 26). Furthermore, the cognitive skills dimension consists of (8) items, ranging from (27 to 34), and finally, the dimension of dealing with exams, which consists of (5) items, ranging from (34 to 39). The items on the scale that were negatively worded came as follows (2, 5, 8, 11, 18, 22, 24, 27, 28, 31, 32, 35, 36, 37, 38).

Validity and reliability of the scale

First, Reviewers' Validity: the scale was presented to (10) professional reviewers in the field of psychology, educational psychology, and psychological measurement. The reviewers agreed by a margin of more than 80% on the validity and suitability of the scale for the current study's purposes.

Second, construct validity: The correlation coefficient between the item score and the scale score was used to assess the degree of association between the items and the scale's overall score. The findings showed that, at the 0.01 or 0.05 significance level, the correlation coefficients between the items comprising the Psychological Immunity Scale's dimensions and the overall score are statistically significant. The

items are closely associated with the characteristic being measured, as indicated by correlation coefficients ranging from 0.44 to 0.86. Consequently, this validates the construction of the measure.

Third, reliability: reliability was calculated using Cronbach's Alpha and the split-half method, with Cronbach's Alpha (0.89) and the split-half (0.82). Based on the results, the psychological immunity scale generally demonstrates high reliability, indicating its suitability for application.

Scale Scoring

The scales followed the five-point Likert scale: Strongly agree, scored (5) points; Agree to a large extent, scored (4) points; Moderately agree, scored (3) points; Slightly agree, scored (2) points; Do not agree at all, scored (1) point. The score is reversed for negatively worded items. To determine the level of psychological immunity and perceived self-efficacy of the scales and their dimensions, the arithmetic means were distributed as follows: from (1.00 to less than 1.80) very low level, from (1.80 to less than 2.60) low level, from (2.60 to 3.40) moderate level, from (3.40 to 4.20) high level, and finally from (4.20 to 5.0) very high level.

Procedure

The data were collected through an electronic questionnaire created in Google Forms. A structured questionnaire was made using standardized instruments for the study variables. For the study's aims and the target population's characteristics, the standardized instruments were adapted to maximize alignment with the study's objectives and the target population's needs. The final draft of the Google Form was then circulated electronically via official university email, student circles, and social media groups to encourage maximum participation. At the beginning of the questionnaire, the participant received informed

consent detailing the purpose of the study, an indication of voluntary participation, confidentiality of their responses, particularly findings were not to be made known without their consent, and the right to pull out at any point; only those who agreed to the statement continued to complete the questionnaire. Responses were automatically collected and stored in a secure database, accessible only to the researcher, to maintain anonymity and confidentiality throughout the research. Once all data collection was complete, the responses were exported into statistical software (e.g., SPSS), where descriptive and inferential analyses were conducted to address the study's aims.

Results

To determine the levels of psychological immunity and perceived academic self-efficacy among university students, means and standard deviations were calculated, and the results are presented in Table 2.

Table (2): Means and standard deviations

Variable	Means	Standard deviations
coping and adaptation	4.09	1.51
Containment	3.96	1.46
self-regulation	3.78	1.38
"Total "psychological immunity	3.96	1.40
academic context	2.48	1.68
academic achievement	4.28	1.77
cognitive skills	4.08	1.84
dealing with exams	3.90	1.94
organization and time management	3.88	1.51
academic behavior	2.71	1.63
Total perceived academic self-efficacy	3.51	1.45

Table 2 presents the total mean score for psychological immunity among university students as high, with sub-dimensions indicating high levels of containment, coping, adaptation, and self-regulation. The total mean score for perceived academic self-efficacy was also high; however, there was variability across the sub-dimensions. Academic achievement was very high. Similarly, cognitive skills, exam-taking strate-

gies, and organization and time management were rated highly. Henceforth, academic behavior was rated at a moderate level, while academic context received the lowest ranking. The findings suggest that, while students demonstrate advanced psychological immunity and perceived academic self-efficacy, academic behaviors and academic context adaptation warrant specific attention and intervention.

To explore whether perceived academic self-efficacy can be predicted by psychological immunity, a "simple linear regression analysis" was used to determine the extent to which academic self-efficacy predicts psychological immunity among university students, as shown in (3).

Table (3): simple linear regression analysis

Predicted" "variable	Predictor" "variable	B	T	R	R^2	F	Sig
psycho-logical immunity	Perceived academic self-efficacy	0.383	0.383	0.386	0.149	44.319	0.00

Table 3 shows that psychological immunity can be predicted by perceived academic self-efficacy, a statistically significant finding.

To find out whether gender and study level variables affect the level of psychological immunity and perceived academic self-efficacy. To determine whether there are statistically significant differences between genders in psychological immunity and perceived academic self-efficacy, a t-test for independent samples was used. Table 4 illustrates the results. Moreover, One-Way Analysis of Variance was used to determine differences across study levels, as presented in Table 5.

Table (4): independent samples to clarify the differences between genders

Variable	Gender	N	Mean	SD	t	Sig
Psychological immunity	Male	262	3.98	1.39	1.52	0.129
	Female	255	3.93	1.41		
Perceived academic self-efficacy	Male	262	3.00	1.59	2.71	0.008
	Female	255	2.87	1.48		

Significant at ($\alpha \leq 0.05$)

Table 4 showed no statistically significant differences between males and females in psychological immunity or perceived academic self-efficacy.

Table (5): means and standard deviations of psychological immunity and perceived academic self-efficacy based on one study level.

Study level	N	Psychological Immunity		Perceived Academic Self-Efficacy	
		Mean	Stander deviation	Mean	Stander deviation
First	128	3.87	0.61	3.91	0.58
Second	142	3.89	0.59	3.93	0.55
Third	136	3.92	0.63	3.95	0.57
Fourth	111	3.90	0.60	3.94	0.56

The results in the Table above indicate convergence of the variables' mean values.

Table (6): "One-Way Analysis" determines the differences based on the study level

Variable	Source of Variance	Sum of Squares	df	Mean Square	f	A
Psychological immunity	between group	32.45	3	10.81	0.83	0.13
	within group	302.80	513	5.89		
	Total	335.25	516			
Perceived academic self-efficacy	between group	7.00	3	2.33	0.98	0.10
	within group	604.17	513	0.67		
	Total	611.17	516			

*Significant at ($\alpha \leq 0.05$)

Table 6 showed no statistically significant differences in psychological immunity and perceived academic self-efficacy across study levels.

Discussion

The purpose of this study was to analyze the relationship between psychological immunity and university students' academic self-efficacy. A descriptive study was conducted at Isra University. The results showed that university students have high levels of psychological immunity, characterized by their ability to contain, cope with, adapt to, and self-regulate. Therefore, the results indicate that university students possess adequate internal psychological resources to cope with stressors in both academic and personal aspects of their lives. In addition, university students reported having high levels of perceived academic self-efficacy (academic performance, cognitive strategies, test-taking skills, and time management). Based on these results, university students generally believe they can perform academically, which helps them continue working hard, stay motivated, and use adaptive coping skills. However, although most areas received high scores, a few received lower scores than expected, including academic conduct and adapting to the academic environment. Students report having similar levels of confidence in their cognitive capabilities and academic performance, yet face obstacles in effectively translating those skills into actual academic behaviors and in adapting to the academic environment. The findings illustrate the difference between the psychological readiness of the students to complete academic tasks at a high level as compared to their ability to carry out the behaviors needed to complete the academic tasks in the academic setting, thus indicating that interventions should be designed to assist students in developing the skills needed to successfully execute those behaviors, and remain responsive to the academic environment.

The important takeaway from this study's findings is that perceived academic self-efficacy was a strong predictor of psychological immunity among those involved and accounted for a large proportion of the

variance. Thus, students who have confidence in their academic ability may be more likely to develop a stronger psychological immune system, which in turn allows them to cope with stress, regulate their emotions, and adapt to changing circumstances. In addition, academic self-efficacy may act as a cognitive buffer, enhancing resilience through individual control, competency, and goal-directed behaviour. Additionally, the lack of statistically significant differences between males and females and different levels of study with respect to both psychological immunity and academic self-efficacy indicates that these factors may be relatively stable characteristics of individuals in this university context. This stability may stem from the fact that the higher education environment provides students with comparable opportunities to gain academic experience and receive emotional support, regardless of gender or academic level.

The current study's findings are entirely consistent with and add to the existing literature in at least three major ways. The present study supports the conclusions of Al-Qadri et al. (2024) that self-efficacy for academic success is very important for academic competence and success, and provides evidence that self-efficacy affects academic experiences, both negatively (through poor academic performance) and positively (through positive performance). Furthermore, this study builds on the previous findings of Kristensen et al. (2023), who found that self-efficacy mediates the effects of academic stress on the development of psychological distress, and these findings suggest a coherent theoretical pathway through which self-efficacy supports the development of these two forms of resilience. The findings of the current study establish an empirical basis for supporting and extending prior research in several ways. The findings support the claims of both Al-Qadri et al. (2024) and Kristensen et al. (2023) that self-efficacy serves as an important psychological resource that protects indi-

viduals from the negative effects of stress and enhances their psychological resilience.

This study adds to our understanding of the role of cognitive beliefs within an integrated model of a person's overall defense system, in contrast to previous studies. Other studies found gender-based differences in males' and females' psychological immunity (Al-Mutairi & Al-Rashdan, 2022; Abu Hassouna & Al-Sharifin, 2022), but our study did not. There are several possible explanations for why our study did not find gender-based differences. One explanation could be that due to the differences in context and development between university students and high school students, university students may have access to more equitable (equal) availability of academic resources, autonomy, and psychological support than the academic experience of high school students. Another possible explanation for the absence of differences is that cultural and institutional contexts may moderate the effects of gender on both psychological immunity and self-efficacy. Our results support the idea that higher education may play a stabilizing role in the development of psychological constructions of psychological immunity and academic self-efficacy. The results of our study suggest that as students progress through a supportive university environment, psychological immunity and academic self-efficacy are likely to become consolidated. Rafea (2017) reported academic self-efficacy differences across academic levels and specializations, but, as our findings do not show any such differences, the present study further supports the proposition that higher education serves as a stabilizing force in the development of these psychological constructions.

Finally, the current findings support previous findings regarding the association of psychological immunity and positive psychological and behavioral outcomes. Al-Halabi (2021) found evidence that psy-

chological immunity was predictive of positive future orientation; Abu Hassouna & Al-Sharifin (2022) found that psychological immunity was associated with health-promoting behaviors. The present study expands upon these prior findings by indicating that academic self-efficacy is an integral cognitive factor in establishing and contributing toward the development of psychological immunity, thereby creating a conceptual framework that integrates both academic and psychological perspectives.

Limitations, recommendations, and further research

One of the study's significant limitations is its reliance on self-reported measures using standardized scales. It means that any potential self-report bias was driven by social desirability or students' subjective perceptions rather than fully capturing their actual psychological immunity and academic self-efficacy. Furthermore, because this study was conducted at a single university (Isra University), the findings cannot be generalized to broader university student populations across different cultural, academic, or institutional contexts. Another limitation is the study's cross-sectional design, which may be insufficient for attributing causality between psychological immunity and perceived academic self-efficacy. Due to the regression results, there are a few predictive relationships; however, longitudinal or experimental designs would be necessary to support the directional association remaining consistent over time. Lastly, the study does not account for other variables that may mediate or moderate the relationship between psychological immunity and academic self-efficacy, such as social support, motivation, teaching quality, or academic stress, which have been shown to be influential in prior studies. Universities should consider implementing targeted interventions based on the results of this research study, focusing on those dimensions of Academic Self-Efficacy where students rated themselves

relatively lower, including Academic Behavior and Adjustment to the Academic Environment, through the use of structured mentoring, workshops to build skills, and orientation programs to assist students in improving their Behavioral Engagement/Adjustment Levels. In addition, Institutions' support services should incorporate strategies to enhance students' Academic Self-Efficacy, such as Self-Regulated Learning and Reflective Academic Practices, given their strong predictive capacity for increasing Psychological Resilience among university students.

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