Cadernos de Pós-Graduação em Direito Político e Econômico
Published by: Centro de Estudos Acadêmicos Press
ISSN: 1678-2127
Volume 26 *Issue 1,* 2026
Website: https://ceapress.org

Locus of Control and its Relationship to Psychological Hardiness among University Students

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Received : 15/11/2025 Accepted :17/02/2026 Published : 10/06/2026

Abstract
This study aimed to explore the association between locus of control and psychological hardiness among university students. The research was conducted on a sample of 90 students selected from the Department of Psychology at the University of Algiers 2, including 66 female and 24 male participants. Adopting the descriptive-analytical approach, the study utilized Rotter's Locus of Control Scale and Imad Mohammed Mukhaymer's Psychological Hardiness Scale as the primary instruments for data collection.

The study findings revealed the following:

- There were no statistically significant differences in psychological hardiness among students attributable to gender.
- There were no statistically significant differences in psychological hardiness among students attributable to academic specialization.
- There were no statistically significant differences in psychological hardiness among students attributable to academic level.
- There were no statistically significant differences in locus of control among students attributable to gender.
- There were no statistically significant differences in locus of control among students attributable to academic specialization.
- There were no statistically significant differences in locus of control among students attributable to academic level.
- There was a significant relationship between locus of control and psychological hardiness among university students.

Keywords: Locus of Control; Psychological Hardiness; University Student.

Introduction

In today's rapidly changing world, university students face a wide range of academic and psychological challenges that can significantly influence their educational experiences and overall well-being. Successfully navigating these challenges often requires the development of positive personal characteristics, particularly psychological hardiness and psychological

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resilience, which enable students to cope effectively with stressful situations. In addition, students' confidence in their abilities to solve problems, fulfill responsibilities, and manage academic demands plays an important role in their adaptation and success. These competencies are frequently nurtured within supportive social and family environments that promote healthy socialization and personal development.

Given the assumption of individual differences in managing stressful situations among university students, some students demonstrate the ability to resist crises and transform them into opportunities for challenge and success, thereby reducing the negative effects of stress. Conversely, others struggle even with basic problem-solving skills and consequently become vulnerable to the adverse effects of stressful situations.

Maintaining good mental health among university students requires sustained efforts to help them make appropriate choices regarding their beliefs about academic competence, enhance self-confidence, and develop skills necessary for fulfilling academic responsibilities. Furthermore, university students should be trained in coping, challenge, control of stressful situations, crisis management, and the development of recovery skills through psychological resilience.

Accordingly, the present study addresses the interaction between two key variables that play a significant role in the aforementioned aspects: locus of control and psychological hardiness among university students. This focus stems from the urgent need to support university students in achieving academic success and personal fulfillment.

1. Research Problem

Higher education represents a crucial stage in students' academic journey, during which they specialize in a particular field of study to acquire the knowledge, competencies, and credentials required for entry into a chosen profession.

In the pursuit of academic qualifications, university students may face numerous academic and psychological challenges and pressures in the context of rapid societal changes. Coping effectively with these challenges requires adaptive capacities that depend on psychological variables such as self-efficacy, psychological resilience, psychological hardiness, and locus of control, among others. These capacities are influenced by individual personality traits, life experiences, and socialization practices.

The university period is also a critical transitional stage in which demands extend beyond academic achievement to include self-management and continuous stress management. In this context, Locus of Control emerges as a fundamental cognitive variable that determines how students perceive the sources of success or failure in their academic lives (Rotter, 1966).

Contemporary higher education has undergone profound transformations driven by digital competitive pressures and post-pandemic challenges, making psychological hardiness a fundamental pillar of academic adaptation (Savitsky et al., 2020). Psychological hardiness is no longer viewed merely as a stable trait but rather as a dynamic system interacting with

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students' cognitive beliefs, particularly locus of control, which directs efforts either inward or outward (Koutsimani et al., 2019).

High levels of academic stress may negatively affect university students' mental health and psychological and physical well-being, leading to reduced academic achievement and potentially even withdrawal from studies. Therefore, university students must develop effective coping strategies and possess high levels of psychological hardiness, while relying on a locus of control that should ideally be internal.

Individual differences in adaptation styles are not solely attributable to cognitive abilities but are also closely associated with psychological hardiness, which represents a stress-resistant personality characteristic that enables students to transform crises into opportunities for growth (Kobasa, 1979). Psychological hardiness functions as a protective mechanism that mitigates the negative consequences of psychological stress. Contemporary psychological literature indicates that students with an internal locus of control demonstrate a greater capacity to exercise control over their lives, which positively influences the dimensions of psychological hardiness (Maddi, 2002).

One indicator of good mental health among university students is their ability to adopt an appropriate pattern of locus of control—namely, an internal locus of control—which enables them to make decisions independently and exercise control over situations and emotions, thereby contributing to higher levels of psychological hardiness. In contrast, a tendency toward external control is likely to negatively affect levels of psychological hardiness.

The relationship between Locus of Control and Psychological Hardiness constitutes a central topic in educational and health psychology, as these variables play a crucial role in determining how university students cope with academic and life stressors.

Recent studies suggest that students who adopt an internal locus of control exhibit greater capacity for emotional regulation and effective confrontation of challenges. This cognitive orientation contributes to strengthening the three dimensions of psychological hardiness: commitment, control, and challenge (Tavakolizadeh et al., 2021). In learning environments characterized by uncertainty, an internal locus of control acts as a self-motivating factor that reduces the likelihood of academic burnout. Conversely, an external locus of control may deplete students' psychological resources, rendering them more vulnerable to academic demands (Satici et al., 2020).

Furthermore, Antonovsky (1987) argues that an individual's ability to perceive life as comprehensible, manageable, and meaningful enhances psychological resilience (Antonovsky, 1987). This perspective aligns with Kobasa's concept of psychological hardiness (Kobasa, 1979) and Richardson's resilience framework (Richardson, 2002), in which control becomes a central dimension in the development of resilience and hardiness among university students within the Arab university environment (Kobasa, 1979; Richardson, 2002). Studies further indicate that it is insufficient merely to measure locus of control and psychological hardiness; rather, these constructs should be integrated into developmental and clinical intervention models.

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The research problem of the present study lies in understanding the dynamic interaction between students' cognitive beliefs regarding sources of control over events and their ability to withstand academic pressures. Despite the importance of these variables, debate continues regarding the predictive nature of the relationship between them within the university environment, particularly in light of varying social and environmental influences that may push students toward an external locus of control, thereby weakening psychological hardiness and increasing vulnerability to academic burnout and academic failure.

Based on the foregoing discussion, the present study seeks to answer the following questions:

- Are there differences in psychological hardiness among students attributable to gender?
- Are there differences in psychological hardiness among students attributable to academic specialization?
- Are there differences in psychological hardiness among students attributable to academic level?
- Are there differences in locus of control among students attributable to gender?
- Are there differences in locus of control among students attributable to academic specialization?
- Are there differences in locus of control among students attributable to academic level?
- Is there a relationship between locus of control and psychological hardiness among university students?

2. Research Hypotheses

1. There are significant differences in psychological hardiness among students attributable to gender.
2. There are significant differences in psychological hardiness among students attributable to academic specialization.
3. There are significant differences in psychological hardiness among students attributable to academic level.
4. There are significant differences in locus of control among students attributable to gender.
5. There are significant differences in locus of control among students attributable to academic specialization.
6. There are significant differences in locus of control among students attributable to academic level.
7. There is a significant relationship between locus of control and psychological hardiness among university students.

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3. Significance of the Study

3.1 Theoretical Significance

The theoretical significance of this study lies in its contribution to the psychological literature and the broader body of knowledge in the field:

- **Enriching psychological literature:** The study provides a contemporary theoretical framework for understanding the intersection between a cognitive variable (locus of control) and a personal/existential variable (psychological hardiness) within a specific Arab university context.
- **Clarifying the structural organization of personality:** The study contributes to understanding the interactive model between individuals' perceptions of the source of control over life events and their capacity for resilience and endurance, thereby supporting the development of theories related to resilience and hardiness.
- **Bridging the research gap:** Previous studies have often examined each variable independently. The significance of the present study lies in exploring the correlational and predictive relationship between locus of control and psychological hardiness, thus opening new avenues for future researchers to investigate additional mediating and moderating variables.
- **Development and adaptation of measurement instruments:** The study employs established psychological measures, such as Rotter's Locus of Control Scale and Kobasa's Psychological Hardiness Scale, and applies them to a university student population, thereby contributing to the enhancement of the psychometric properties of these instruments within the university environment.

3.2 Practical Significance

The practical significance of this study relates to the potential application of its findings in educational, counseling, and clinical settings:

- **Designing counseling programs:** The findings may provide university counselors with scientific foundations for developing training programs aimed at shifting students' locus of control from an external (dependent) orientation to an internal (self-directed) orientation, thereby enhancing psychological hardiness.
- **Prevention of psychological disorders:** The study may assist in identifying students who are at greater risk (i.e., those characterized by low psychological hardiness and an external locus of control) and provide them with preventive psychological support before the emergence or escalation of anxiety, depression, or academic failure.
- **Enhancing academic performance:** The findings may help university administrators recognize that academic success is not determined solely by intellectual ability (IQ), but also by psychological hardiness, which enables students to persevere despite obstacles and setbacks.
- **Career guidance and preparation:** The study may contribute to preparing students psychologically for the post-graduation phase, as contemporary work environments

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require individuals who possess a strong internal locus of control and the ability to perceive pressures as challenges rather than threats.

4. Objectives of the Study

The present study aims to:

- Examine whether there are differences in psychological hardiness among students attributable to gender.
- Examine whether there are differences in psychological hardiness among students attributable to academic specialization.
- Examine whether there are differences in psychological hardiness among students attributable to academic level.
- Examine whether there are differences in locus of control among students attributable to gender.
- Examine whether there are differences in locus of control among students attributable to academic specialization.
- Examine whether there are differences in locus of control among students attributable to academic level.
- Investigate the existence of a relationship between locus of control and psychological hardiness among university students.

5. Study Terminology

5.1 Conceptual Definitions

Locus of Control: Refers to an individual's belief regarding the source that controls events in his or her life.

Internal Locus of Control: The student believes that success or failure depends primarily on personal effort and abilities; outcomes are attributed to internal factors.

External Locus of Control: The student believes that events are controlled by luck, chance, fate, or the influence of powerful others; outcomes are attributed to external factors.

Psychological Hardiness: A personality trait that functions as a psychological buffer against stress and consists of three major dimensions according to Kobasa's model:

- **Commitment:** A sense of meaning and involvement in daily activities.
- **Control:** The belief in one's ability to influence events and outcomes.
- **Challenge:** Viewing change as an opportunity for growth rather than a threat.

5.2 Operational Definitions

Locus of Control: The score obtained by the participant on Rotter's Locus of Control Scale.

Psychological Hardiness: The score obtained by the participant on Imad Mohammed Mukhaymer's Psychological Hardiness Scale.

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6. Characteristics of Individuals with an Internal Locus of Control

Personal Responsibility: Individuals with an internal locus of control believe that they are the masters of their own destiny. When they achieve success, they attribute it to their efforts, and when they encounter failure, they examine deficiencies in their own performance rather than blaming external circumstances (Rotter, 1966).

High Self-Efficacy: They generally possess high levels of confidence in their ability to accomplish tasks. This belief encourages them to confront challenges rather than avoid them because they trust that their skills can make a difference (Spector, 1982).

Orientation Toward Learning and Growth: Since they believe that outcomes depend on effort, they continuously seek information and knowledge to improve their performance. They are more likely to benefit from feedback to enhance future outcomes (Qatadah, 2015).

Independence in Decision-Making: Individuals with an internal locus of control are less influenced by social pressures and the opinions of others than those with an external locus of control. They rely on their internal standards and personal convictions when making important decisions (Rotter, 1966).

Ability to Cope with Stress (Psychological Resilience): Research has demonstrated that these individuals are less vulnerable to depression and anxiety associated with learned helplessness because they focus on aspects of situations that they can actually control, thereby reducing confusion and distress during crises (Carlson, 2010).

Achievement Orientation: They frequently occupy leadership positions or succeed in entrepreneurial ventures due to their persistence and belief that rewards are the direct result of hard work rather than chance (Spector, 1982).

7. Characteristics of Individuals with an External Locus of Control

Attribution of Outcomes to External Factors: These individuals tend to interpret success as a matter of luck or favorable timing, while attributing failure to bad luck, task difficulty, or bias from others. Consequently, they assume less personal responsibility for outcomes (Rotter, 1966).

Low Achievement Motivation: Because they believe that their efforts are unlikely to influence future outcomes, they often exhibit less initiative and reduced willingness to exert additional effort. They tend to assume that "what will happen, will happen" regardless of their attempts (Spector, 1982).

Feelings of Helplessness and Powerlessness: External locus of control is closely associated with the concept of learned helplessness, whereby individuals perceive themselves as lacking the means necessary to influence their environment. This perception may result in passive responses or premature surrender when confronted with obstacles (Seligman, 1975).

Anxiety and Psychological Stress: Individuals with an external locus of control often experience higher levels of psychological stress because they perceive their lives as governed by unpredictable and uncontrollable forces. This perception undermines their sense of predictability, which is essential for psychological security (Carlson, 2010; Abu Ghazal, 2012).

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Dependency and Social Conformity: Such individuals tend to rely on others when making decisions and frequently seek guidance and reassurance. They are also more susceptible to conformity and external pressures due to limited confidence in their ability to direct the course of their own lives (Rotter, 1966).
Blame and Victim Mentality: In stressful situations, individuals with this orientation may adopt a victim mentality, focusing on how circumstances have conspired against them rather than searching for adaptive coping strategies or solutions. This tendency may hinder both personal and professional growth (Spector, 1982).

8. Components and Core Characteristics of Psychological Hardiness

Commitment: Individuals with high psychological hardiness believe strongly in the value and significance of the activities they engage in. Rather than withdrawing from life events, they become deeply involved in them.
Behavioral characteristic: They possess a strong sense of purpose and meaning in life, which makes them more resistant to feelings of alienation and despair (Kobasa, 1979).
Control: These individuals believe that they can influence the course of events through their own efforts, a characteristic closely related to the concept of an internal locus of control.
Behavioral characteristic: They tend to take initiative and reject the notion that they are victims of circumstances. Instead, they actively seek practical solutions to problems (Maddi, 2002).
Challenge: Individuals with high psychological hardiness view change as an opportunity for growth and learning rather than as a threat to security and stability.
Behavioral characteristic: They adapt flexibly to new situations and remain open to diverse experiences, thereby reducing anxiety associated with uncertainty (Kobasa, 1979).
Optimism and Future Orientation: They maintain a positive outlook regarding both their abilities and their future, which enables them to regain psychological equilibrium quickly following crises and adversity.
Behavioral characteristic: They focus on the potential gains arising from difficult situations rather than concentrating on losses and setbacks (Funk, 1992; Mukhaymer, 2002; Al-Taybi, 2018).

9. Study Methodology

The descriptive-analytical method was employed because it is the most appropriate approach for this type of study.

10. Study Boundaries

10.1 Temporal Boundaries

The study instruments were administered to a sample of university students by sending them electronically in October 2025.

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10.2 Spatial Boundaries

The study instruments were administered to a sample of students from the Department of Psychology at the University of Algiers 2.

11. Study Sample

The study sample consisted of 90 students, including 66 females and 24 males, selected from the Department of Psychology at the University of Algiers 2.

12. Study Instruments

12.1 Locus of Control Scale: Developed by Rotter (1966) for Internal–External Control

Rotter's Internal–External Locus of Control Scale (Rotter, 1966) was used to determine the student's locus of control orientation. The scale consists of 29 forced-choice items, where a high score indicates an external orientation and a low score indicates an internal orientation.

Scoring Method and Interpretation of Results

- The respondent answers each item by selecting one statement from each pair that best reflects his or her orientation. The participant receives one point when choosing the statement representing an external locus of control and zero points when choosing the statement representing an internal locus of control.
- The individual's score on the scale is the sum of scores reflecting an external orientation. Scores range from 0 (indicating the absence of an external orientation) to 23 (indicating a completely external orientation).
- Respondents are classified into two categories:

Category 1: Scores ranging from 0 to 8 indicate individuals with an internal locus of control.
Category 2: Scores ranging from 9 to 23 indicate individuals with an external locus of control.

Scoring of the Locus of Control Scale

- Items (1, 8, 14, 19, 24, and 27) are filler items and are not scored.
- Items (2, 6, 7, 9, 16, 17, 18, 20, 21, 23, 25, and 29) receive one point when answered with option (A) and zero points when answered with option (B).
- Items (3, 4, 5, 10, 11, 12, 13, 15, 22, 26, and 28) receive one point when answered with option (B) and zero points when answered with option (A).

12.2 Psychological Hardiness Scale: Developed by Imad Mohammed Mukhaymer (2002)

The Psychological Hardiness Scale developed by Mukhaymer (2002) was used. The scale was specifically designed for the Arab environment and for university student samples. It consists of 47 items distributed across three dimensions: Commitment, Control, and Challenge. Its psychometric properties, including validity and reliability, have been established and were deemed suitable for the current study sample.

Scoring Key

Commitment Dimension Items: (1, 4, 7, 10, 13, 16, 19, 22, 25, 28, 31, 34, 37, 40, 43, 46).

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Control Dimension Items: (2, 5, 8, 11, 14, 17, 20, 23, 26, 29, 32, 35, 38, 41, 44).
Challenge Dimension Items: (3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, 42, 45, 47).
Scoring Procedure
Responses are scored as follows:

- Always = 3
- Sometimes = 2
- Never = 1

Reverse-scored items marked with an asterisk (*) are scored as follows:

- Always = 1
- Sometimes = 2
- Never = 3

13. Psychometric Properties of the Study Instruments

13.1 Psychometric Properties of the Psychological Hardiness Scale

To calculate the psychometric properties, the study instruments were administered to a sample of students from the University of Algiers 2 across different specializations and academic levels, including second-year General Psychology students, third-year Clinical Psychology students, third-year Social Psychology students, first-year Master's students in Criminology, second-year Clinical Psychology students, third-year Translation students, and second-year Master's students in Translation. This sample consisted of 130 male and female students.

13.1.1 Reliability

To determine the reliability of the scale, Cronbach's Alpha coefficient was used. The results were as follows:

Table 01. Reliability of the Psychological Hardiness Scale

Scale	Sample Size	Cronbach's Alpha
Psychological Hardiness Scale	103	0.76

Table (01) shows that Cronbach's Alpha coefficient for the Psychological Hardiness Scale was 0.76. Based on this value, it can be concluded that the scale possesses a high degree of reliability.

A. Table (02): Split-Half Reliability

Scale	Sample Size	Alpha Coefficient (First Half)	Alpha Coefficient (Second Half)	Spearman-Brown Coefficient
Psychological Hardiness Scale	103	0.60	0.64	0.75

Table (02) indicates that the split-half reliability coefficient (Cronbach's Alpha) for the first half of the Psychological Hardiness Scale was 0.60, while the coefficient for the second half

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was 0.64. The Spearman-Brown correction coefficient reached 0.75. Based on this value, it can be concluded that the scale demonstrates a high level of split-half reliability.

13.1.2 Validity

The validity of the Psychological Hardiness Scale was verified through internal consistency validity by examining the correlation between individual items and the total scale score. The results were as follows:

Table (03): Internal Consistency Validity of the Psychological Hardiness Scale

Item	Correlation Value	Item	Correlation Value	Item	Correlation Value
Item 1	0.32**	Item 17	0.26**	Item 33	0.42**
Item 2	0.32**	Item 18	-0.10	Item 34	0.28**
Item 3	0.38**	Item 19	0.39**	Item 35	0.32**
Item 4	0.14	Item 20	0.22**	Item 36	0.07
Item 5	0.34**	Item 21	0.29**	Item 37	0.38**
Item 6	0.11	Item 22	0.34**	Item 38	0.34**
Item 7	0.38**	Item 23	0.31**	Item 39	0.17
Item 8	0.30**	Item 24	0.22*	Item 40	0.46**
Item 9	0.40**	Item 25	0.30**	Item 41	0.29**
Item 10	0.43**	Item 26	0.29**	Item 42	0.50**
Item 11	0.19	Item 27	0.43**	Item 43	0.13
Item 12	0.20**	Item 28	0.26**	Item 44	0.43**
Item 13	0.35**	Item 29	-0.08	Item 45	0.44**
Item 14	0.10	Item 30	0.34**	Item 46	0.29**
Item 15	0.40**	Item 31	0.37**	Item 47	0.50**
Item 16	0.41**	Item 32	0.29**		

Table (03) shows that 39 items were significantly correlated with the total scale score, whereas 8 items were not significantly correlated.

Validity of the Total Scale Score through Its Dimensions

Table (04): Validity of the Total Score of the Psychological Hardiness Scale

Internal consistency validity was further examined by assessing the correlations between the three dimensions and the total scale score. The results were as follows:

Scale Dimensions	Correlation with Total Scale Score
Commitment	0.82**
Control	0.73**
Challenge	0.79**

Table (04) indicates that all dimensions were significantly correlated with the total scale score. The correlation coefficient for the first dimension (Commitment) was 0.82**, the second

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dimension (Control) was 0.73**, and the third dimension (Challenge) was 0.79**. Therefore, the internal consistency validity of the scale was confirmed.

Extreme Groups Validity

The extreme groups validity of the scale was examined to determine its ability to discriminate between individuals with high and low scores on the scale. Using the independent samples t-test, the following results were obtained:

Table (05): Extreme Groups Validity of the Psychological Hardiness Scale Using an Independent Samples t-Test

Psychological Hardiness Scale	Sample Size	Mean	Standard Deviation	Calculated t-value	Statistical Significance
High Scores	30	121.20	3.98	20.57	p = 0.00, statistically significant
Low Scores	30	101.55	3.46	20.52	

The table above indicates that the mean score of the upper group on the Psychological Hardiness Scale was 121.20 with a standard deviation of 3.98, whereas the mean score of the lower group was 101.55 with a standard deviation of 3.46. The calculated t-values were 20.57 and 20.52, respectively. These values were statistically significant at an alpha level of less than 0.01, indicating significant differences between the mean scores of the upper and lower groups. This demonstrates the scale's ability to discriminate effectively between the two extremes of the score distribution.

13.2 Psychometric Properties of the Internal–External Locus of Control Scale

13.2.1 Reliability

The reliability of the scale was verified by calculating Cronbach's Alpha coefficient. The results were as follows:

Table (06): Cronbach's Alpha Reliability Coefficient

Scale	Sample Size	Cronbach's Alpha Coefficient
Internal–External Locus of Control	103	0.62

As shown in the table above, the Cronbach's Alpha reliability coefficient was estimated at 0.62.

Table (07): Split-Half Reliability

Scale	Sample Size	Alpha Coefficient (First Half)	Alpha Coefficient (Second Half)	Spearman-Brown Coefficient
Internal–External Locus of Control Scale	103	0.42	0.50	0.58

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Table (07) shows that the split-half reliability coefficient (Cronbach's Alpha) for the first half of the Internal–External Locus of Control Scale was 0.42, while the Alpha coefficient for the second half was 0.50. The Spearman-Brown correction coefficient was 0.58.

13.2.2 Validity

Internal Consistency Validity

The internal consistency validity of the Internal–External Locus of Control Scale was verified by examining the correlation between each item and the total scale score. The results were as follows:

Table (08): Correlation of the Internal–External Locus of Control Scale Items with the Total Scale Score

Items	Correlation Value	Items	Correlation Value
Item 1	0.36**	Item 13	0.32**
Item 2	0.21**	Item 14	0.52**
Item 3	0.31**	Item 15	0.38**
Item 4	0.45**	Item 16	0.31**
Item 5	0.35**	Item 17	0.28**
Item 6	0.26**	Item 18	0.19
Item 7	0.21**	Item 19	0.40**
Item 8	0.22**	Item 20	0.56**
Item 9	0.22**	Item 21	0.10
Item 10	0.40**	Item 22	0.46**
Item 11	0.40**	Item 23	0.29**
Item 12	0.21**		

Table (08) indicates that 21 items were significantly correlated with the total scale score, whereas 2 items were not significantly correlated.

Extreme Groups Validity

Extreme groups validity was assessed by calculating the significance of the differences between the means of the upper and lower score groups on the scale. The results were as follows:

Table (09): Extreme Groups Validity Based on the Significance of Differences Between Upper and Lower Mean Scores on the Locus of Control Scale

Internal–External Locus of Control Scale	Sample Size	Mean	Standard Deviation	Calculated t-value	Statistical Significance
Upper Scores	30	15.30	1.60	18.88	p = 0.00, statistically significant
Lower Scores	30	7.47	1.61	18.88	

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The table above shows that the mean score of the upper group on the Internal–External Locus of Control Scale was 15.30, with a standard deviation of 1.60, whereas the mean score of the lower group was 7.47, with a standard deviation of 1.61. The calculated t-value was 18.88, which was statistically significant at an alpha level of less than 0.01. This indicates significant differences between the upper and lower score groups, demonstrating the scale's ability to discriminate between the two extremes of the score distribution.

14. Presentation of the Study Results

14.1 Results of the First Hypothesis

The first hypothesis stated that there are differences in psychological hardiness among students attributable to gender. To test this hypothesis, an independent-samples t-test was used to determine the significance of differences between male and female students in the study sample. The results were as follows:

Table (10): Significance of Differences Between Male and Female Students in Psychological Hardiness

Psychological Hardiness Scale	Sample Size	Mean	Standard Deviation	Calculated t-value	Statistical Significance
Male Sample	24	112.06	6.38	0.07	0.94, not significant
Female Sample	66	110.98	8.58		

The table indicates that the mean score for males was 112.06 with a standard deviation of 6.38, whereas the mean score for females was 110.98 with a standard deviation of 8.58. The calculated t-value was 0.07, which was not statistically significant. This indicates that there are no significant differences between male and female students in psychological hardiness. Therefore, the first hypothesis is rejected.

14.2 Results of the Second Hypothesis

The second hypothesis stated that there are differences in psychological hardiness attributable to students' specialization. To test this hypothesis, a one-way analysis of variance (ANOVA) was conducted to examine differences in psychological hardiness among students majoring in Psychology, Social Psychology, and Work and Organizational Psychology.

Table (11): Differences Among Students in Psychological Hardiness

Psychological Hardiness Scale	Sample Size	Mean	Calculated F-value	Statistical Significance
Psychology	42	111.52	0.79	0.49, not significant
Social Psychology	22	108.64	0.79	
Work and Organizational Psychology	25	109.16	0.79	

The table shows that the mean score for Psychology students was 111.52, while the mean score for Social Psychology students was 108.64, and the mean score for Work and Organizational

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ISSN: 1678-2127
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Psychology students was 109.16. The calculated F-value was 0.49, which was not statistically significant. Therefore, there are no differences attributable to specialization in psychological hardiness among students, and the second hypothesis is rejected.

14.3 Results of the Third Hypothesis

The third hypothesis stated that there are differences in psychological hardiness attributable to academic level. To test this hypothesis, an independent-samples t-test was used to examine differences between Master's and Bachelor's students.

Table (12): Differences Between Academic Levels in Psychological Hardiness

Psychological Hardiness Scale	Sample Size	Mean	Standard Deviation	Calculated t-value	Statistical Significance
Master's Students	18	111.22	6.98	-1.14	0.54, not significant
Bachelor's Students	72	110.14	9.30	-1.14	

The table shows that the mean score of Master's students was 111.22 with a standard deviation of 6.98, while the mean score of Bachelor's students was 110.14 with a standard deviation of 9.30. The calculated t-value (-1.14) was not statistically significant ($p = 0.54$), indicating no significant differences in psychological hardiness between Master's and Bachelor's students. Therefore, the third hypothesis is rejected.

14.4 Results of the Fourth Hypothesis

The fourth hypothesis stated that there are differences in locus of control attributable to gender. To test this hypothesis, the Chi-square test of independence was used.

Table (13): Differences Between Male and Female Students in Locus of Control

Internal–External Locus of Control Scale	Female Sample	Male Sample	Chi-square Value	Statistical Significance
Internal Locus of Control	6	4		
External Locus of Control	60	20	0.40	0.52, not significant
Total	66	24		

The table indicates that the frequency of internal locus of control among females was 6, whereas the frequency of external locus of control was 60. For males, the frequencies were 4 for internal locus of control and 20 for external locus of control. The Chi-square value was 0.40 with a significance level of 0.52, which was not statistically significant. Therefore, there are no gender differences in locus of control, and the fourth hypothesis is rejected.

14.5 Results of the Fifth Hypothesis

The fifth hypothesis stated that there are differences in locus of control attributable to specialization. The Chi-square test of independence was used to examine this hypothesis.

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Table (14): Differences Among Specializations in Locus of Control

Internal–External Locus of Control Scale	Psychology	Social Psychology	Work and Organizational Psychology	Chi-square Value	Statistical Significance
Internal Locus of Control	5	3	3	1.85	0.39, not significant
External Locus of Control	37	19	22		
Total	42	22	25		

The table shows that the frequency of internal locus of control among Psychology students was 5, compared with 37 students with an external locus of control. Among Social Psychology students, 3 students had an internal locus of control and 19 had an external locus of control. Similarly, among Work and Organizational Psychology students, 3 students had an internal locus of control and 22 had an external locus of control. The Chi-square value was 1.85 with a significance level of 0.39, which was not statistically significant. Therefore, there are no differences attributable to specialization in locus of control, and the fifth hypothesis is rejected.

14.6 Results of the Sixth Hypothesis

The sixth hypothesis stated that there are differences in locus of control attributable to academic level. The Chi-square test of independence was used to test this hypothesis.

Table (15): Differences Between Academic Levels in Locus of Control

Internal–External Locus of Control Scale	Master's Sample	Bachelor's Sample	Chi-square Value	Statistical Significance
Internal Locus of Control	1	9	4.04	0.25, not significant
External Locus of Control	17	58		
Total	18	67		

The table indicates that the frequency of internal locus of control among Master's students was 1, while the frequency of external locus of control was 17. Among Bachelor's students, 9 students had an internal locus of control and 58 had an external locus of control. The Chi-square value was 4.04 with a significance level of 0.25, which was not statistically significant. Therefore, there are no significant differences between Master's and Bachelor's students in locus of control, and the sixth hypothesis is rejected.

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14.7 Results of the Seventh Hypothesis

The seventh hypothesis stated that there is a relationship between locus of control and psychological hardiness among students. To test this hypothesis, the point-biserial correlation coefficient was used to determine the significance of the relationship between psychological hardiness and locus of control.

Table (16): Correlation Between Psychological Hardiness and Locus of Control

Scale	Sample Size	Corrected Correlation Coefficient	Significance Level
Psychological Hardiness	90	0.21	0.04 Statistically significant
Internal–External Locus of Control	90		

The table shows that the corrected correlation coefficient (r) between the Psychological Hardiness Scale and the Internal–External Locus of Control Scale was 0.21. This value was statistically significant at the 0.04 level. Therefore, the alternative hypothesis, which states that there is a relationship between psychological hardiness and locus of control among the study participants, is accepted.

This finding suggests that students with a high external locus of control tend to exhibit lower levels of psychological hardiness, whereas students with a strong internal locus of control tend to demonstrate higher levels of psychological hardiness. Accordingly, the seventh hypothesis is accepted.

15. Discussion of the Results in Light of the Hypotheses

15.1 Discussion of the First Hypothesis

The first hypothesis stated that: **"There are differences in psychological hardiness among students attributable to gender."**

Based on the findings obtained, which revealed no differences in psychological hardiness between male and female university students, this result reflects the similarity of the university environment and the academic, psychological, and emotional demands and pressures experienced by both genders. In addition, contemporary socialization practices have become increasingly similar for males and females, leading to comparable patterns of psychological hardiness among both groups.

According to Muawiyah Abu Ghazal (2020), male and female university students may experience the same academic and psychological circumstances, such as examinations, academic obligations, and concerns regarding their future careers. This similarity in stressful stimuli consequently leads to the development of similar coping and adaptation strategies, which are reflected in comparable levels of psychological hardiness.

Similarly, Shaker Al-Mahamid and Hussein Al-Shara'ah (2021) argue that contemporary socialization no longer differentiates substantially between males and females in dealing with adversity. Modern societies encourage both genders to rely on themselves, assume

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Published by: Centro de Estudos Acadêmicos Press
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responsibility, and engage in academic and professional competition, thereby narrowing the psychological gap previously attributed to gender differences.

Furthermore, the similarity of individual life experiences received by both genders from early childhood in modern Arab societies has contributed to comparable levels of psychological hardiness as a general personality trait among university students. Today, young women are expected to assume responsibilities similar to those of young men, which has encouraged them to enhance their levels of commitment, control, and challenge, thereby increasing their psychological hardiness. Conversely, young men often receive greater emotional and social support from the opposite gender, which may contribute to a relative decrease in the dimensions of commitment, control, and challenge and, consequently, psychological hardiness.

According to Kobasa (1979), psychological hardiness, with its three dimensions of commitment, control, and challenge, is a personality trait that is acquired and developed through individual life experiences and interactions with the environment rather than being a biological characteristic associated with gender. Therefore, exposure to similar life experiences promotes comparable levels of psychological hardiness among both genders.

The findings of the present hypothesis are consistent with the study conducted by Mishal Al-Azmi (2022), which emphasized that environmental and personal variables play a more significant role than gender in shaping psychological hardiness among university students.

The results are also in agreement with the study by Abed Bin Khudair Al-Shammari (2023), which demonstrated that equal educational and social opportunities within the university environment contribute to similar levels of psychological hardiness among males and females.

15.2 Discussion of the Second Hypothesis

The second hypothesis stated that: **"There are differences in psychological hardiness among students attributable to academic specialization."**

The findings revealed no significant differences in psychological hardiness among university students across different academic specializations, whether scientific, social, or humanities-oriented. Although academic disciplines differ in their knowledge content, students are subject to the same evaluation systems and administrative and academic procedures. This common framework contributes to similar levels of psychological hardiness among students regardless of their specialization, thereby reducing the influence of specialization on determining psychological hardiness.

Moreover, students belong to the same social environment, where Algerian students generally receive similar forms of socialization. This contributes to similarities in their psychological characteristics and predispositions, including psychological hardiness.

According to Nasser Al-Qahtani (2021), despite differences in the knowledge content of scientific and humanities disciplines, the fundamental challenges of university life remain largely the same. All students, regardless of specialization, are subject to the same evaluation systems, examination pressures, time-management demands, concerns about future careers, and challenges related to the labor market after graduation. This similarity in stressful stimuli

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elicits comparable adaptive responses, thereby explaining the similarity in psychological hardiness levels among students.

Kobasa (1979) also emphasized that psychological hardiness, consisting of commitment, control, and challenge, is a deep-rooted personality trait formed through prolonged family socialization, accumulated life experiences, and personal characteristics developed prior to university enrollment. Consequently, choosing an academic specialization during late adolescence or early adulthood is unlikely to produce a substantial transformation in such a relatively stable personality trait.

Furthermore, the integration of skills in modern education contributes to greater similarity among university students with respect to psychological hardiness. Contemporary university curricula impose common requirements; students in the humanities are increasingly exposed to complex research and technological demands, while students in scientific disciplines face intensive theoretical and analytical requirements. This overlap has balanced the cognitive and psychological burdens across different fields of study (Al-Anzi, 2023).

These findings are consistent with psychological literature suggesting that demographic and academic classification variables, such as specialization, often become less influential when compared with deeper psychological variables such as self-esteem and psychological resilience (Al-Rashidi, 2022).

The results are also supported by the study of Munirah Al-Otaibi (2022), which found that academic specialization does not influence cognitive appraisal mechanisms related to stress. Likewise, the study by Shaimaa Ahmed (2025) indicated that contemporary academic quality requirements have generalized psychological pressure across all academic disciplines, leading to similar levels of psychological hardiness among students.

15.3 Discussion of the Third Hypothesis

The third hypothesis stated that: **"There are differences in psychological hardiness among students attributable to academic level."**

The findings revealed no statistically significant differences between Master's students and Bachelor's students in psychological hardiness. In other words, academic level was not associated with significant differences in psychological hardiness. This finding may be explained by the relatively short time span separating one academic level from another, which limits the potential impact of educational level on students' psychological hardiness.

The limited temporal distance between the two academic levels may account for this result. More pronounced differences in psychological hardiness might emerge if there were a wider developmental gap, such as the difference between primary or secondary education and university education. Such broader intervals expose individuals to a greater variety of life experiences, psychological pressures, and academic challenges that may substantially contribute to the development of personality traits such as psychological hardiness.

Furthermore, there appears to be a balance in the nature of pressures experienced by both groups. Although Master's students encounter greater research demands and higher levels of

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academic analysis, Bachelor's students face comparable pressures, including heavy coursework, periodic examinations, and the challenges associated with transitioning from secondary education to university life. This equivalence in psychological and academic burden results in similar levels of psychological resistance and hardiness among the two groups (Shehata, 2022).

Psychological hardiness is generally regarded as a relatively stable personality construct whose primary dimensions—commitment, control, and challenge—develop over extended periods through socialization and early life experiences (Kobasa, 1979). Since the age and time difference between Bachelor's and Master's studies is typically limited to approximately two to four years, this period is insufficient to produce substantial changes in such a deeply rooted personality characteristic (Al-Zughbi, 2021).

University students also represent a relatively mature and psychologically aware population. Students in advanced Bachelor's years and Master's programs belong to the category of emerging or young adults, a developmental stage characterized by similar cognitive and emotional characteristics. Both groups generally possess adequate awareness of the importance of academic success and the need to develop self-regulation and coping skills to manage concerns related to their academic and professional futures. This is reflected in comparable levels of psychological hardiness (Miqdad, 2023).

These findings are consistent with psychological studies indicating that the quality-of-life experiences and the nature of social support are the primary determinants of psychological hardiness rather than the mere progression from one academic level to another within the same educational context.

This result is also consistent with the findings of Muteb Bin Muslih Al-Anzi (2021), who concluded that the relatively short time interval between undergraduate and postgraduate studies does not produce radical changes in stable personality traits such as psychological hardiness.

15.4 Discussion of the Fourth Hypothesis

The fourth hypothesis stated that: **"There are differences in locus of control among students attributable to gender."**

Based on the findings obtained, which indicated no differences between male and female university students in locus of control, it can be inferred that there are no differences in the beliefs and perceptions of male and female students regarding locus of control. This may be attributed to the similarity of the cultural and educational environments experienced by both genders, as well as the similarity of socialization practices within Arab societies.

According to Bandar bin Mohammed Al-Otaibi (2021), contemporary generations of males and females live in highly similar educational and social environments. Educational, university, and academic institutions apply the same educational systems, evaluation standards, and success criteria to both genders. This similarity in academic experiences contributes to shaping comparable perceptions among students regarding their personal responsibility for success,

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failure, and academic and life outcomes, which is reflected in similar patterns of locus of control.

Rasha Abdel Fattah Hussein (2023) argues that significant transformations in modern socialization practices have altered traditional family upbringing patterns. The conventional approach, which previously granted males greater independence (internal locus of control) and encouraged females toward dependence or submission to circumstances (external locus of control), has gradually diminished. Contemporary families now encourage both genders equally to assume responsibility, make personal decisions, and confront life challenges, thereby reducing psychological differences between males and females.

According to Rotter's Social Learning Theory, locus of control is a cognitive construct that develops through cumulative learning experiences and reinforcement processes (Rotter, 1966). Since opportunities available to males and females in education, employment, and life experiences have become relatively equal, the likelihood of developing either an internal or external locus of control has likewise become comparable between genders, without favoring one over the other.

The present finding is consistent with the study conducted by Abdelrahman (2022), which demonstrated that environmental factors and individual awareness are the most influential determinants of locus of control, whereas gender has become less significant as a classificatory variable in contemporary psychological research.

The result is also supported by the study of Rami Saeed Mousa (2024), which confirmed the absence of gender differences in locus of control as a consequence of similar modern socialization practices emphasizing independence and self-reliance.

15.5 Discussion of the Fifth Hypothesis

The fifth hypothesis stated that: **"There are differences in locus of control among students attributable to academic specialization."**

The findings revealed no differences between academic specialization and students' locus of control. This indicates the absence of significant differences among university students regarding internal or external locus of control based on their field of specialization.

Academic specialization may play a role in shaping students' tendencies toward either an internal or external locus of control. However, since the sample of the present study consisted exclusively of students enrolled in Psychology, which itself is a branch of the social sciences, differences were not expected to emerge due to the similarity of the cognitive structures shared by students specializing in Clinical Psychology, Social Psychology, and Work and Organizational Psychology. These specializations belong to the same academic department, making it unlikely that differences in locus of control would occur. Consequently, students within the sample may exhibit either an internal or external locus of control regardless of their specific specialization.

Ali Mansour (2022) argues that scientific disciplines such as medicine, engineering, and the exact sciences are based on experimental methodologies, cause-and-effect relationships, and

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clearly defined laws. Students in these disciplines directly perceive that outcomes depend largely on precision and effort. This educational approach tends to foster an internal locus of control, whereby students believe that their success or failure is a direct consequence of their own decisions and perseverance. In contrast, humanities and social science disciplines focus on phenomena that are more flexible and influenced by environmental, social, and external variables. As a result, some students in these disciplines may be more inclined toward an external locus of control because they perceive surrounding factors as having a greater influence on outcomes (Mansour, 2022).

Similarly, Talal Al-Shammari (2023) argues that assessment and evaluation methods contribute to shaping patterns of locus of control. Evaluations in scientific disciplines are often highly objective, with clear right-or-wrong answers, reinforcing students' beliefs that grades accurately reflect their actual efforts. In contrast, assessments in humanities disciplines may involve subjective judgments and interpretive perspectives, potentially leading students to feel that outcomes are influenced by factors beyond their complete control.

Individual differences and personality characteristics also play a role in directing students toward specific fields of study from the outset. Individuals who possess high levels of independence and strong beliefs in their own abilities often gravitate toward scientific and technical disciplines that require direct problem-solving and continuous intellectual challenges. This perspective is consistent with Rotter's Social Learning Theory (Rotter, 1966), which emphasizes the role of expectations and reinforcement in shaping locus of control orientation.

This finding is consistent with the study conducted by Al-Khalidi (2021), which confirmed that the nature of academic and professional preparation within scientific colleges contributes directly to enhancing self-efficacy and strengthening an internal locus of control among students. However, such differences disappear when students belong to a single academic field, as was the case in the present study.

15.6 Discussion of the Sixth Hypothesis

The sixth hypothesis stated that: **"There are differences in locus of control among students attributable to academic level."**

The findings revealed no statistically significant differences between Bachelor's and Master's students in locus of control. As noted in the discussion of the third hypothesis, the absence of differences may be explained by the relatively short period separating the two academic levels, which limits the influence of educational level on shaping students' preference for a particular locus of control orientation.

The temporal gap between the two levels is relatively small. Differences in locus of control might have become more apparent if there had been a wider educational distance, such as that between primary or middle school education and university education. Broader developmental intervals expose individuals to more diverse life experiences, psychological pressures, and academic challenges that can significantly influence personality development and the adoption of either an internal or external locus of control orientation.

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According to Rotter, locus of control is considered, within the framework of classical psychological literature and Social Learning Theory, a cognitive construct and belief system characterized by relative stability once individuals reach mature adulthood (Rotter, 1966).
Murad Ali Issa (2022) argues that the age and temporal differences between Bachelor's students, particularly those in their final years, and Master's students are relatively small. Consequently, this period is insufficient to produce a structural change in how students perceive the relationship between their behaviors and the outcomes that result from them.
In addition, Bachelor's and Master's students share the same organizational and academic environment. They study within the same university setting and are exposed to similar academic cultures emphasizing evaluation, perseverance, and personal responsibility for achievement. This common environment promotes similar cognitive responses among both groups. Students in both levels recognize that academic excellence requires personal effort (internal locus of control) while acknowledging that administrative and financial challenges affect everyone (external locus of control), resulting in similar scores on locus of control measures (Saleh, 2023).
Cognitive awareness, intellectual maturity, cultural knowledge, and emotional development also contribute to shaping students' locus of control. Faisal Ghazi Mubarak (2021) argues that students at both academic levels belong to a category of educated young adults who possess critical thinking skills and self-evaluation abilities. This maturity generally inclines them toward an internal locus of control and self-reliance in managing research requirements and examinations. Therefore, the formal transition to the Master's level does not create a statistically significant gap separating them from their counterparts at the Bachelor's level.
This finding is consistent with contemporary research trends indicating that academic classification variables, such as academic level, often lose explanatory power when compared with deeper psychological variables and the transformative life experiences that individuals encounter personally.

15.7 Discussion of the Seventh Hypothesis

The seventh hypothesis stated that: **"There is a relationship between locus of control and psychological hardiness among university students."**
Based on the findings obtained, which demonstrated the existence of a relationship between internal and external locus of control and psychological hardiness among university students, it can be concluded that students with a high external locus of control tend to exhibit lower levels of psychological hardiness, whereas students with a high internal locus of control tend to demonstrate higher levels of psychological hardiness.
Internal locus of control represents the cognitive core of the control dimension, which constitutes a fundamental component of Suzanne Kobasa's theory of psychological hardiness. Kobasa (1979) proposed that control is one of the three principal dimensions underlying psychological hardiness, alongside commitment and challenge. Individuals who possess a strong internal locus of control believe that they are active agents in their lives and that life

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outcomes are primarily the result of their own efforts and decisions. This belief provides them with a sense of competence in managing crises and controlling stressful situations, thereby enhancing their psychological hardiness.

When students believe that their effort and perseverance are responsible for their outcomes (internal locus of control), they tend to perceive academic difficulties as "solvable challenges" rather than "inevitable threats." This positive cognitive appraisal encourages commitment to personal goals and active confrontation of stressors, resulting in higher overall levels of psychological hardiness.

The study conducted by Al-Zubaidi (2023) supports this interpretation by reporting a strong positive association between internal locus of control and psychological hardiness, indicating that internal control functions as a catalyst for self-efficacy. Similarly, the study by Saleh and Al-Obaidi (2024) found that students characterized by an internal locus of control were more resilient and psychologically hardy when confronting educational crises.

In contrast, individuals with a strong external locus of control tend to attribute life events, success, and failure to factors beyond their personal influence, such as luck, chance, or the authority of others (Rotter, 1966). This cognitive orientation often generates feelings of learned helplessness, causing individuals to perceive environmental stressors as uncontrollable threats. Consequently, their psychological defenses weaken, leading to lower levels of commitment and challenge, which are essential dimensions of psychological hardiness (Mansour, 2021).

Students characterized by an external locus of control attribute life events to external forces such as luck, examination difficulty, or favoritism by instructors. This cognitive orientation deprives them of a sense of personal effectiveness and increases their susceptibility to learned helplessness. As perceptions of control diminish, the dimensions of commitment and challenge are weakened accordingly. As a result, psychological hardiness decreases, making such students more vulnerable to academic burnout and more likely to surrender when confronted with obstacles.

This finding is entirely consistent with the study conducted by Hanan Abdullah (2022), which demonstrated that reliance on an external locus of control negatively predicts psychological hardiness and increases levels of psychological alienation among university students. It is also consistent with the study by Mustafa Barakat (2025), which confirmed that dominance of an external control orientation weakens individuals' psychological defenses and undermines their psychological hardiness.

Furthermore, Munirah Al-Otaibi (2023) argued that locus of control is reflected in behavioral coping patterns. Individuals with an internal locus of control, who are generally more psychologically hardy, tend to adopt active coping strategies and direct problem-solving approaches. In contrast, individuals with an external locus of control, who are generally less psychologically hardy, are more likely to rely on avoidant or emotion-focused coping strategies, such as wishful thinking or resignation. Such strategies intensify the impact of stressful experiences on psychological functioning and further support the statistical findings of the present study (Al-Otaibi, 2023).

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The present findings are also structurally consistent with the principles of positive psychology and with the study conducted by Abdel Latif (2022), which demonstrated that restructuring cognitive orientations toward a more internal locus of control constitutes a fundamental approach to strengthening individuals' psychological resilience and enhancing their capacity to cope effectively with burnout and life crises.

Conclusion

The present study was undertaken to explore and clarify the relationship between locus of control and psychological hardiness among university students. These variables are considered key psychological factors that help students cope with the diverse pressures they encounter while striving for personal, social, and academic adjustment. This adjustment can be strengthened through guidance, support, and training aimed at promoting a more adaptive locus of control orientation, particularly an internal locus of control, which in turn enhances the level of psychological hardiness.

To achieve this objective, university students remain in continuous need of training in cognitive restructuring, goal reorganization, and the development of positive coping strategies. Such interventions can strengthen their ability to confront challenges effectively and maintain psychological well-being.

Based on the findings presented in this study, the results may be summarized as follows:

- No significant differences were found in psychological hardiness among university students with respect to gender, academic specialization, or academic level.
- No significant differences were found in locus of control among university students with respect to gender, academic specialization, or academic level.
- A significant relationship was found between locus of control and psychological hardiness among university students.

Recommendations and Suggestions

Based on the findings presented in this study, a number of recommendations and suggestions can be proposed, summarized as follows:

At the Institutional Level

- University institutions, families, and society should provide continuous support and guidance to university students in order to help them overcome psychological and academic pressures and make appropriate decisions.
- It is necessary to integrate mandatory courses, modules, or workshops for newly enrolled students that focus on practical training in time management and self-regulation strategies as part of preventive educational programs.
- Experiences and skills aimed at developing psychological hardiness should be incorporated into all educational stages and across various academic disciplines.

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At the Psychological Counseling Level

- University counseling centers should move beyond reactive treatment approaches toward organized preventive interventions based on the principles of positive psychology and the promotion of psychological hardiness.
- Counseling programs should be designed to help university students develop positive psychological characteristics, particularly psychological hardiness, in order to strengthen their resistance to psychological stress.
- Training workshops should be established to promote an internal locus of control among students, enhance self-confidence, strengthen beliefs in personal control over outcomes, and improve decision-making skills.
- Students should be trained in cognitive restructuring, goal reorganization, and the development of positive coping strategies.

At the Research Level

- There is a need for further comparative studies across different academic disciplines, such as medicine versus humanities or social sciences, to better understand how academic context influences locus of control orientation and levels of psychological hardiness.
- Similar studies should be conducted on different populations, including students with disabilities, international students, and students living under exceptional circumstances.
- Future research should examine the effectiveness of intervention programs designed to strengthen internal locus of control and evaluate their impact on enhancing psychological hardiness, reducing depression and anxiety, improving stress management, and promoting the overall mental health of university students.

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Published by: Centro de Estudos Acadêmicos Press
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Cadernos de Pós-Graduação em Direito Político e Econômico
Published by: Centro de Estudos Acadêmicos Press
ISSN: 1678-2127
Volume 26 *Issue 1,* 2026
Website: https://ceapress.org

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