

Psychological Needs of University Students

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Abstract

This research aims to explore the psychological needs of university students, specifically analyzing a cohort of 120 individuals from Hassiba Ben Bouali University in Chlef, Algeria. Utilizing a descriptive research methodology, this study incorporates the Psychological Needs Scale, as Arabized and standardized by Mohammad Alyan in 2005, originally developed by Deci and Ryan in 2000. Data analysis was conducted using SPSS software, employing statistical techniques such as arithmetic mean, hypothesized mean, and T-tests.

The results reveal that the levels of psychological needs satisfaction among university students are significantly high. In order of precedence, relatedness was found to be the most satisfied need, followed by autonomy, and competence. Furthermore, the study identified no statistically significant disparities in the satisfaction levels of psychological needs when segmented by gender or academic discipline.

Keywords: Psychological Needs, Relatedness, Autonomy, Competence, University Students.

Introduction

Human beings, across various stages of development, have intrinsic needs that are crucial for maintaining psychological equilibrium. Hankins & Bailey (1993) define a need as a deficiency or disruption that, once fulfilled, restores balance to an individual's personality, irrespective of the individual's conscious recognition of this need. These deficiencies, whether material or immaterial, catalyze an innate drive within individuals to seek fulfillment and equilibrium restoration. Amongst these essential needs are psychological needs.

Psychological needs, as delineated by Deci and Ryan (2000), comprise autonomy, competence, and relatedness. These needs have been extensively researched and discussed in various studies (Al-Qotnani, 2011; Gadja & Gadja, 2021; Ben Halilim, 2023; Kwadri Boujelatia, 2024). Universities, serving as pivotal educational environments, are committed to fostering settings that promote positive interrelations among students and between students and faculty, thereby nurturing these psychological needs and supporting robust personal development.

Universities distinguish themselves from earlier educational stages by providing a unique educational framework. This framework grants students freedoms, such as optional lecture attendance and the responsibility for various academic engagements like research presentations, assignments, and practical experiments.

Such freedoms also extend to selecting a discipline that aligns with their abilities and interests, ultimately culminating in thesis preparation and diploma acquisition processes. These academic demands require students to adapt and keep pace with the evolving educational expectations.

Research Questions

This investigation seeks to address the following questions to gauge the fulfillment of psychological needs among university students:

- What is the level of satisfaction of psychological needs among university students?
- Are there statistically significant differences in the satisfaction of psychological needs among university students attributed to gender?
- Are there statistically significant differences in the satisfaction of psychological needs among university students attributed to their field of study?

Study Hypotheses

- The level of satisfaction of psychological needs among university students is high.
- There are no statistically significant differences in the satisfaction levels of psychological needs among university students based on gender.
- There are no statistically significant differences in the satisfaction levels of psychological needs among university students based on their field of study.

Study Objectives:

- To determine the level of satisfaction of psychological needs among university students.
- To ascertain differences in the satisfaction levels of psychological needs among university students based on gender and discipline.

Study Importance:

- This study aims to heighten student awareness of their psychological needs and the significance of fulfilling these needs for optimal psychological adjustment.
- Gaining insights into the extent of students' psychological needs is vital for psychological experts to pinpoint deficiencies and provide necessary support for mental health enhancement.
- The findings could enlighten faculty members on effective interaction strategies with students, fostering an environment that supports the fulfillment of students' psychological needs.
- Additionally, understanding the level of students' psychological needs could aid the Ministry of Higher Education and Scientific Research in allocating resources efficiently and minimizing educational wastage.

Definition of Psychological Needs:

Psychological needs are delineated by Deci and Ryan (2000) as "innate psychological necessities that are crucial for maintaining well-being, personal integrity, and ongoing psychological growth, and include the needs for competence, relatedness, and autonomy" (p. 229). These needs are empirically quantified in this study through the scores attained by university students on the scale developed by Deci and Ryan (2000).

Literature Review

Study by Al-Qotnani (2011):

This comprehensive study examined the interplay between psychological needs, self-concept, and the level of aspiration among students at Al-Azhar University - Gaza. Employing a substantial sample of 530 students and utilizing the Psychological Needs Scale (Deci & Ryan, 2000), as Arabized and standardized by Mohammad Alyan (2005), the findings highlighted that the need for relatedness emerged as the most prominent psychological need, followed sequentially by competence and autonomy. Notable differences in the need for relatedness were observed between students from arts and science faculties, with arts faculties showing higher needs, and no significant gender disparities in psychological needs were identified.

Study by Bakr (2021):

This research aimed to evaluate both psychological needs and self-regulation and their interconnectedness within a sample of 128 students at Salahaddin University, Erbil. The study utilized the psychological needs scale by Deci & Ryan (2000), supplemented with an extensive review of theoretical frameworks and previous studies. The outcomes indicated a low prevalence of psychological needs with no significant variations attributed to gender or academic discipline.

Study by Gadja & Gadja (2021):

This study focused on assessing the satisfaction of psychological needs among university students during the COVID-19 pandemic, incorporating 150 students from the University of Chlef, Algeria. Utilizing the Deci and Ryan (2000) scale as Arabized by Mohammad Alyan (2005), the results revealed high levels of satisfaction of psychological needs, with relatedness ranked as the highest, followed by autonomy and competence. Additionally, no significant differences were noted concerning gender or academic discipline.

Study by Habaza & Boussalb (2022):

This research aimed to ascertain the level of psychological needs among 150 students at the University of Oum El Bouaghi, employing the psychological needs scale (Deci & Ryan, 1999) as Arabized by the researchers themselves. The findings demonstrated moderate levels of needs for autonomy and competence, whereas the need for relatedness was highly satisfied, with no gender-based differences in the dimensions of psychological needs observed.

Study by Ben Halilim (2023):

This investigation explored the relationship between psychological needs and academic adjustment among 121 students from the University of Sidi Bel Abbes. Utilizing the Deci and Ryan (2000) scale, it was discovered that the levels of psychological need satisfaction were notably high, with relatedness being the most satisfied need, followed by autonomy and competence.

Study by Kwadri Boujelatia (2024):

This study endeavored to determine how psychological needs and social support predict psychological happiness among 480 students at the University of Chlef, using several scales including the Deci & Ryan (2000) scale as Arabized by Mohammad Alyan (2005). The findings indicated a moderate prevalence of psychological needs, with relatedness, autonomy, and competence diminishing respectively.

Commentary on Literature Review:

A review of the aforementioned studies unveils a consistent selection of university students as the research sample and the adoption of the Deci and Ryan (2000) scale. Conducted in diverse locales including Gaza, Erbil, Chlef, Sidi Bel Abbès, and Oum El Bouaghi, these investigations varied in their conclusions concerning the levels and dimensions of psychological needs and generally did not identify significant differences based on gender or academic discipline.

This current study, distinct in its execution post-COVID-19 pandemic by 2024, builds upon previous research by identifying the study problem, employing the same measurement instrument, and interpreting the findings in a contemporary context.

Methods and Tools

Methodology:

A descriptive approach was utilized, fitting the study's objectives and subject matter.

Population and Sample:

The study population consisted of all students from Hassiba Ben Bouali University of Chlef. A random sample of 120 students was selected. Below is the distribution of the study sample according to gender and discipline.

Table 1: Distribution of the Study Sample by Gender and Discipline

Variables	Variable Categories	Number	Percentage
Gender	Male	42	35%
	Female	78	65%
Discipline	Science	26	21.66%
	Arts	94	78.33%
Total		120	100%

Source: Prepared by the researchers based on the personal data of the study sample.

From the table, it is noted that the sample comprises 120 students, with 42 males and 78 females, and while 26 students are in the scientific discipline, 94 are in the arts discipline.

Study Tool:

Description of the Scale: The researchers adopted the Psychological Needs Scale developed by Deci & Ryan (2000), Arabized and standardized by Mohammad Alyan (2005). The scale consists of 27 items distributed over three dimensions (9 items for autonomy, 10 for relatedness, and 8 for competence).

Responses on the scale are rated on a five-point scale (5-very much, 4-much, 3-moderate, 2-little, 1-very little). Items 1, 2, 5, 6, 8, 9, 10, 12, 13, 14, 17, 21, 22, 26 are scored positively, while items 3, 4, 7, 11, 15, 16, 18, 19, 20, 23, 25, 27 are reverse scored. Scores range from 27 to 135, where a lower score indicates lesser needs and a higher score indicates greater needs (Al-Qotnani, 2011).

Psychometric Properties of the Scale: The researchers administered the scale on a pilot sample of 30 students from Hassiba Ben Bouali University of Chlef to verify its psychometric properties, yielding the following results:

- **Reliability:**

Cronbach's alpha and Guttman split-half reliability were calculated, yielding values of 0.80 and 0.76 respectively, statistically significant.

- **Validity:**

Criterion validity was assessed using the extreme group comparison method by selecting the top and bottom 33.33% of student scores and computing the significance of differences using a T-test, which resulted in a T-value of 7.75, with a p-value of 0.000, significant at the 0.01 level.

Statistical Methods:

The following statistical methods were applied: hypothetical mean, arithmetic mean, standard deviation, and T-test, with data processed using SPSS statistical software.

Results

Results of the First Hypothesis:

Hypothesis Statement: The level of satisfaction of psychological needs among university students is high. To test this hypothesis, the arithmetic mean, hypothetical mean, and T-test were calculated for student responses, as shown in the following table:

Table 2: T-test Results for Differences Between the Means of University Students' Responses on the Psychological Needs Scale

Dimensions	Hypothetical Mean	Arithmetic Mean	Standard Deviation	T-value	P-value	Significance Level	Satisfaction Level
Autonomy	27	30.43	4.29	8.73	0.000	Significant at 0.01	High
Relatedness	30	33.38	5.43	6.80	0.000	Significant at 0.01	High
Competence	24	26.85	3.78	8.25	0.000	Significant at 0.01	High
Total Score	81	90.65	10.14	10.42	0.000	Significant at 0.01	High

Source: Prepared by the researchers based on SPSS outputs.

The analysis demonstrates that the arithmetic mean consistently surpasses the hypothesized mean across all evaluated dimensions, with T-values ranging from 6.80 to 8.73, and an exceptionally high T-value of 10.42 for the total score.

This statistical significance, underscored by a uniform p-value of 0.000 at a significance level of 0.01 with 119 degrees of freedom, robustly suggests a high satisfaction level of psychological needs across the three dimensions among university students. Specifically, relatedness was identified as the most satisfied need, followed by autonomy and competence.

Results of the Second Hypothesis

Hypothesis Statement: There are no statistically significant differences in the level of psychological needs among university students attributed to gender. To test this hypothesis, arithmetic means, standard deviations, and a "T" test for the significance of differences in the

Psychological Needs Scale between males and females were used. The following table illustrates the results:

Table 3: T-test Results for Differences Between Means of University Students' Responses on the Psychological Needs Scale by Gender

Psychological Needs	Gender	Sample Size	Mean	Standard Deviation	T-value	P-value	Significance Level
Autonomy	Male	42	29.88	4.35	1.01	0.31	Not significant at 0.05
	Female	78	30.72	4.25			
Relatedness	Male	42	32.36	6.06	1.51	0.13	Not significant at 0.05
	Female	78	33.92	5.02			
Competence	Male	42	26.98	4.26	0.26	0.79	Not significant at 0.05
	Female	78	26.78	3.52			
Total Score	Male	42	89.21	11.68	1.13	0.25	Not significant at 0.05
	Female	78	91.42	9.19			

Source: Prepared by the researchers based on SPSS outputs.

The data above reveal gender-based distinctions in mean scores, where females recorded a total score arithmetic mean of 91.42, which exceeds the mean of 89.21 observed in males. The range of mean scores for males spanned from 26.98 to 32.36, whereas for females, it extended from 26.78 to 33.92.

However, with T-values fluctuating between 0.26 and 1.51 and probability values invariably exceeding 0.05 at 118 degrees of freedom, these results indicate no significant gender-based differences in the satisfaction levels of psychological needs across all dimensions.

Results of the Third Hypothesis

Hypothesis Statement: There are no statistically significant differences in the level of satisfaction of psychological needs among university students attributed to discipline. The means, standard deviations, and T-test were used to test for significance differences in the Psychological Needs Scale between science and arts disciplines. The following table shows the results:

Table 4: T-test Results for Differences Between Means of University Students' Responses on the Psychological Needs Scale by Discipline

Psychological Needs	Discipline	Sample Size	Mean	Standard Deviation	T-value	P-value	Significance Level
Autonomy	Arts	94	30.40	4.01	1.10	0.92	Not significant at 0.05
	Science	26	30.50	5.26			
Relatedness	Arts	94	33.16	5.60	0.82	0.41	

	Science	26	34.15	4.78			Not significant at 0.05
Competence	Arts	94	26.78	3.71	0.40	0.68	Not significant at 0.05
	Science	26	27.12	4.09			
Total Score	Arts	94	90.41	10.07	0.60	0.54	Not significant at 0.05
	Science	26	91.77	10.60			

Source: Prepared by the researchers based on SPSS outputs.

The analysis indicates that the average total score for the art discipline (90.41) is slightly lower than that for the science discipline (91.77). However, the average scores for the sub-dimensions of psychological needs in the art discipline range from 26.78 to 33.16, whereas those for the science discipline range from 27.12 to 34.15.

The calculated t-value for the overall dimensions was 0.60, and the t-values for the sub-dimensions ranged from 0.40 to 1.10. The probability value (sig) was consistently above 0.05 at a degree of freedom of 118, indicating non-significant differences and thus no substantial disparities in the psychological needs satisfaction levels between students in the art and science disciplines.

Discussion

First Hypothesis Results

The results of the study reveal that the satisfaction levels of psychological needs among university students are high, both overall and across the specific dimensions: Belonging, Autonomy, and Competence. Our findings are consistent with the results from studies by Al-Qatnani (2011), Gadjia & Gadjia (2021), and Ben Halilim (2023), which reported similarly high levels of psychological needs satisfaction.

However, they differ from the findings of Arbil (2021), who reported lower levels of satisfaction, and Kwadri Boujeltia (2024), who found medium levels of satisfaction. Furthermore, the current study aligns with the findings of Gadjia & Gadjia (2021), Ben Halilim (2023), and Kwadri Boujeltia (2024) regarding the ranking of psychological needs dimensions but diverges from the results of Al-Qatnani (2011) in the ordering of the needs for autonomy and competence.

The elevated satisfaction of psychological needs can be attributed to the significant role families play in nurturing their children, complemented by the contributions of previous educational stages. Subsequently, the university continues this role alongside the family. Josh (1993) highlighted that satisfying psychological needs is a primary approach to achieving balance in an individual's physiological, psychological, and social aspects, guiding them to harmonize with themselves and others (Al-Astal, 2013, p.3).

Therefore, students strive to fulfill their psychological needs during this phase by building relationships through collaborative activities such as preparing research papers, working on graduation projects, visiting libraries together, and sharing meals due to the extensive time spent

on campus. Those living near the university return home in the evenings, while others may stay at university residences, often dining and even sharing rooms together.

Students also experience high levels of satisfaction in their needs for belonging, autonomy, and competence because the university provides a conducive environment through various practices, including:

Directed work sessions and practical activities within the university curriculum rely heavily on what students present in terms of research, experiments, and training in collaboration with their peers, allowing them a degree of autonomy to demonstrate their competence and fostering positive interaction among them during these activities in classrooms or laboratories.

Informing students electronically about everything they need, whether through the university's official page in general or each faculty's page in particular. Examples include publishing timetables for class attendance, exam schedules, professors' announcements, and creating online platforms for distance learning and checking test scores, with the ability to appeal decisions easily on the same platform; all these facilitate access to new information without the need to physically visit the university to inquire and ask, thereby allowing students to share information with each other on social media, enhancing their sense of competence and belonging.

Educating and guiding students through pedagogical support and offering assistance to those in need at psychological centers from the time they enter university until they complete their studies; in addition, faculties provide students with various activities parallel to teaching, such as study days and symposiums under the supervision of the university director, the dean of the faculty, and a select group of professors. These activities introduce scientific topics that benefit the students and open doors for them to further understand and engage in discussions, while some faculties also establish clubs where students can engage in various activities and hobbies, organize some trips, and conduct competitions under the supervision of faculty deans and professors, like the Quran memorization competition and sports competitions for students, offering motivational prizes to the winners.

Discussion of the Second and Third Hypotheses Results

The study showed no significant differences in the satisfaction levels of psychological needs attributable to gender, aligning with the results of studies by Bakr (2021), Al-Qotnani (2011), Gadjia & Gadjia (2021), Habaza and Boussalb (2022), and Bouhara (2023). Similarly, no differences were found in satisfaction levels attributable to the field of study, confirming findings by Bakr (2021) and Gadjia & Gadjia (2021), aligning with the results of Al-Qotnani (2011) in the dimensions of autonomy and competence, yet differing in the dimension of belonging.

The absence of differences in satisfaction levels that could be attributed to both gender and field of study may be explained by the mixed-gender educational setting in our country, where students receive the same education from the same professors, enjoy the same privileges such as free transportation, accommodation, and meals, can join university clubs, participate in competitions, and live in the same environment, receiving the same university services, and are subject to the same laws regardless of their gender or field of study.

Conclusion

The study revealed that the level of satisfaction of psychological needs among university students was notably high, with relatedness emerging as the predominant need, succeeded by

autonomy, and then competence. Furthermore, the analysis indicated no significant differences in the satisfaction levels of psychological needs across gender or academic disciplines. This uniformity suggests that the university is effectively providing a conducive environment that caters to the diverse psychological needs of all students.

Through a range of practices and activities, the university has implemented several measures to support student well-being. These include the electronic dissemination of vital student-related information, the facilitation of online learning platforms, the provision of comprehensive pedagogical support, and the establishment of university psychological help centers (CAPU) that offer guidance and raise awareness.

Recommendations

- Educate students about their various psychological needs through seminars led by experts and specialists in psychological counseling and therapy.
- Raise awareness among families and professors about the psychological needs of students to better support their fulfillment.
- Increase attention to university psychological help centers (CAPU), providing necessary resources to assist students.
- Evaluate the pedagogical support process between professors and students, identify deficiencies to avoid them, and work to strengthen areas of success.

References

- Al-Astal, S. D. M. (2013). *Psychological Needs of Basic Stage Students in Gaza Governorates: A Comparative Study Between Deprived and Non-Deprived of Mother*. Unpublished master's thesis, Al-Azhar University, Gaza, Palestine.
- Al-Qotnani, A. S. M. (2011). *Psychological Needs and Self-Concept and Their Relationship with the Level of Ambition Among Students of Al-Azhar University in Gaza in Light of Self-Determination Theory*. Unpublished master's thesis, Al-Azhar University, Gaza, Palestine.
- Al-Ruwaidhi, R. b. M. b. S. (2013). *The Guidance Needs of the Second Cycle Students of Basic Education in South Al Batinah Governorate*. Unpublished master's thesis, University of Nizwa, Sultanate of Oman.
- Bakr, M. H. (2021). The level of satisfaction of psychological needs and self-control among university students in Erbil city. *Journal of the College of Basic Education, Al-Mustansiriyah University*, 27(110), 1079-1096.
- Ben Halilim, A. (2023). Psychological needs and their relationship with academic adjustment of university students during the COVID-19 pandemic. In K. Gadjia, A. Ben Halilim, & F. Sheiha (Eds.), *The Guidance Needs of University Students* (pp. 293-317). Alpha for Documents.
- Bouhara, H. (2023). Psychological needs and their relationship with professional maturity among university students. In K. Gadjia, A. Ben Halilim, & F. Sheiha (Eds.), *The Guidance Needs of University Students* (pp. 319-347). Alpha for Documents.
- Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227-268.



- Gadja, K., & Gadja, R. (2021). The level of satisfaction of psychological needs among university students during the COVID-19 pandemic. Paper presented at the International Conference on Psychological Counseling (Reality and Challenges), Martyr Hamma Lakhdar University, El Oued, April 7-8.
- Habaza, M., & Boussalb, A. (2022). The psychological needs of university students in light of self-determination theory. *Journal of the Criterion, University of Tissemsilt*, 13(1), 690-704.
- Kwadri Boujelatia, A. (2024). *Psychological Needs and Social Support and Their Relationship with Psychological Happiness Among University Students*. Unpublished doctoral thesis, University of Chlef, Algeria.