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RESEARCH ARTICLE **OPEN ACCESS**

Evaluation of the Psychological Needs of Students at Higher Institute of Nursing Professions and Health Techniques in Rabat: A Cross-sectional Study

Yassine El Aatik[1,*], Hassane Gazzaz[2,3], Mohammed El Feniche[4], Maha El Habchi[1], Banacer Himmi[3] and Hassan Kisra[1,5]

[1]*Research Laboratory of Psychiatry, Medical Psychology and History of Medicine, Faculty of Medicine and Pharmacy, Mohammed V University, 10100 Rabat, Morocco*
[2]*Faculty of Medicine and Pharmacy, Mohammed V University, 10100 Rabat, Morocco*
[3]*Ministry of Health and Social Protection, Higher Institute of Nursing Professions and Health Techniques, Rabat, Morocco*
[4]*Laboratory of Biostatistics, Clinical Research and Epidemiology, Faculty of Medicine and Pharmacy, Mohammed V University, Rabat 10100, Morocco*
[5]*Department of Child Psychiatry, Ibn Sina University Hospital Center, 10100 Rabat, Morocco*

Abstract:

Introduction: In Morocco, very little is known about the Psychological Needs (PNs) of students in higher education institutions. Even though there is a growing awareness of how crucial it is to support the psychological well-being of students, research in this area is still quite sparse. This study seeks to bridge this gap by exploring the PNs of students at the Higher Institute of Nursing Professions and Health Techniques in Rabat (ISPITSR).

Materials and Methods: A questionnaire based on the Likert scale was distributed *via* Google Forms to students from various tracks and majors over a two-week period starting February 15th, 2024. The study included a representative sample of 345 Moroccan students aged 18 to over 30. Statistical analyses were primarily conducted using the Chi-square test to assess associations between sociodemographic variables (such as age, gender, and level of education) and the levels of Psychological Needs (PNs) among students. P-values were calculated to determine the statistical significance of these associations.

Results: The sample comprised mostly women (84.9%) and students under 20 years (73.9%). Key findings revealed that 48.7% of students reported a strong need for mental health support, 32.17% for well-being, and 25.51% for self-esteem. Significant associations were found between PNs and the level of study ($p = 0.004$), with higher PNs observed in second and third-year students. Mental health emerged as the top priority for 48.7% of students, followed by well-being and self-esteem. Desired resources included access to psychological professionals (15.9%) and financial support.

Conclusion: This study contributes to a better understanding of the PNs of students in Morocco, offering insights that could be used to improve their well-being and the quality of their educational experience.

Keywords: Evaluation, Psychological needs, Well-being, Higher education, Health techniques, Psychological problems.

*Address correspondence to this author at the Research Laboratory of Psychiatry, Medical Psychology and History of Medicine, Faculty of Medicine and Pharmacy, Mohammed V University, 10100 Rabat, Morocco;
E-mail: yassineelaatik2018@gmail.com

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1. INTRODUCTION

University integration appears to be the foundation on which the collective structure currently relies through a single educational system that is accessible to all and tailored to student's individual needs [1]. This can lead to various psychological problems, such as stress [2], and even female students may experience psychological disturbances as a result of the menstrual cycle, according to a study conducted in Saudi Arabia [3]. In fact, the teacher plays an important role in encouraging the autonomy of students and tends to integrate activities that meet their psychological needs (PNs) [4].

Psychological suffering is a common phenomenon among university students. According to a 2013 survey by the American College Health Association, 10% of Canadian students sought professional help for depression and 12.3% for anxiety problems in the 12 months prior to the study. A study in Canada indicated that 30% of university students reported psychological distress [5].

Moreover, mental health problems, such as depression and sedentary behaviors, are on the rise. University students, as a particular group among emerging adults, are at increased risk due to their prolonged sitting time and susceptibility to mental disorders [6].

In recent decades, theoretical research has revealed that puberty marks the passage from childhood to adulthood, which may be accompanied by a number of changes [7]. At the same time, the transition from high school to higher education has prompted 60% of first year students to leave home [8].

According to a review in Quebec, the PNs are concerned with personal development, self-esteem, and social relationships. When these remain unsatisfied, they have a direct impact on a person's motivation [9]. It has been reported that obese adolescents showed significantly lower satisfaction in terms of their needs for autonomy and competence in leisure activities than controls. Meanwhile, a negative correlation was found between social anxiety and satisfaction of needs for autonomy and competence in interpersonal relationships, general competence, and relationships with friends [10].

Moreover, learning objectives in physical education are qualitatively different from those in other academic subjects. There is evidence that healthy behaviors, such as levels of physical activity or exercise, may predict the satisfaction of basic PNs in physical education students, but the transferability of these effects to other subjects remains to be explored [11].

There exists a notable deficiency in scholarly investigations that specifically address these challenges within distinct geographic locales, such as Morocco, not with standing the prevalence of international research that elucidates the psychological barriers encountered by university students. This assertion holds particularly true within specialized educational institutions, exemplified by the Higher Institute of Nursing Professions and Health Techniques in Rabat (ISPITSR). The three year academic program at this institution, which encompasses fifteen distinct specializations, reported an enrollment of 1,011 students for the academic year 2023–2024 (ISPITSR studies department). The considerable student demographic within this framework necessitates a comprehensive examination; however, there is a pronounced scarcity of research focusing on the psychological needs of students in this environment. To address this identified gap, our research is dedicated to the evaluation of psychological needs among students at ISPITSR.

2. MATERIALS AND METHODS

2.1. Research Design

This cross-sectional study aims to conduct a comprehensive analysis of the results obtained concerning the PN of students at the ISPITSR level in order to highlight the current state of students psychologically. To ensure methodological rigor and transparency in the presentation of the results, we opted for the STROBE design [12], which allows potential bias to be minimized. Furthermore, a comprehensive and clear description of the methodology and results is provided while ensuring that the study is reproducible.

The main aim of this study is to assess the different PNs of students, focusing on the various suggestions made by study participants to guarantee that their PNs are met.

2.2. Participants and Sampling

The sample of 345 students was selected from a total of 1,011 enrolled at ISPITSR to ensure adequate representativeness of the target population. With a participation rate of 34.1%, this sample offers the possibility of taking into account a variety of psychological perspectives and needs while remaining flexible for in-depth analysis. A student population of this size ensures a reasonable margin of error and sufficient statistical power, increasing the reliability of the results and enabling significant trends to be identified within the sample. In addition, this selection is broad enough to reduce response bias while being representative of the various specialties and years of study at ISPITSR.

2.3. Inclusion and Exclusion Criteria

According to the study objectives, the inclusion criteria for study participants were: *a)* All three levels of undergraduate students at ISPITSR; *b)* Students enrolled in the 2023-2024 academic year; *c)* The following tracks: nursing, health techniques, midwifery, medical-social, rehabilitation and rehabilitation, and *d)* The following majors: general nurse, mental health nurse, pediatric neonatal nurse, emergency and intensive care nurse, speech therapy, orthoptics, physiotherapy, midwife, geriatric nurse, psychomotricity, anesthesia and intensive care nurse, dietetics, pharmacy technician, laboratory technician, and radiology technician. The master's students did not take part in the current study, as they are mainly health ministry employees.

2.4. Data Collection Procedure

Project staff contacted the coordinators of the various

majors to involve all students at different levels. Once the coordination staff agreed to take part, an information session was organized to ensure a representative response rate from certain majors.

The data collected in this study, aimed at exploring the impact of certain external factors on students' PNs, are based on a questionnaire distributed on February 15th, 2024, at ISPITSR. Responses were collected after two weeks, covering 15 majors with different levels (1st, 2nd, and 3rd years).

The scale for measuring the satisfaction of PNs of students at the ISPITSR was created by adapting it to the classroom context at the higher education level. For this purpose, the Likert scale was used [13] with 5 points, where 1 means “Strongly disagree”, 2 “Disagree”, 3” Neutral”, 4 “Agree”, and 5 means “Strongly agree”.

Sometimes, students may tend to give socially desirable answers or not respond entirely honestly, especially on sensitive topics, such as their Psychological Needs (PNs). To address this issue, the responses were likely given anonymously, encouraging greater sincerity from the participants. Additionally, the use of closed questions and a Likert scale may have helped reduce the impact of social desirability bias. This study was authorized by the Research Ethics Commission of the Faculty of Medicine and Pharmacy of Rabat, Morocco (Ref: 62 /24).

The authorization was also obtained from the general director of ISPITSR.

However, student participation in this research project is crucial, though there are some significant limitations. The World Medical Association (WMA, 2013) emphasized the ethical principles applicable to medical research involving human subjects, including the protection of participants [14]. Additionally, informed consent was obtained from all participants before they completed the questionnaire, which took only about 20 minutes of their time. Students were assured that their responses would remain confidential and would be used solely for research purposes. Participation was voluntary, and participants had the right to withdraw at any time.

2.5. Statistical Methods

The 5-point Likert data was used to describe the PN levels of students at ISPITSR [15]. Statistical methods used in the analyses included mainly descriptive analyses, where frequencies, percentages, means, and standard deviations were calculated to describe the socio-demographic characteristics of the students and their PNs. The Chi-square test was applied to assess the associations between categorical variables, such as level of education or gender, and levels of psychological needs. The statistical significance of the results was determined using p-values, with particular attention paid to associations with a p-value of less than 0.05, indicating statistically significant differences. All the above-mentioned analyses were carried out using the SPSS software version 26.

Table 1. Socio-demographic characteristics of students.

Variable	Category	Frequency
Age range	Under 20	255 (73.91%)
	21-25 years	82 (23.77%)
	26-30 years old	8 (2.32%)
Gender	Female	293 (84.93%)
	Male	52 (15.07%)
Education level	1st year	123 (35.65%)
	2nd year	88 (25.51%)
	3rd year	134 (38.84%)
Majors	General Nurse	86 (24.93%)
	Midwife	9 (2.6%)
	Dietetics	26 (7.54%)
	Pediatric Neonatal Nurse	37 (10.72%)
	Mental Health Nurse	4 (1.16%)
	Geriatric Nurse	6 (1.74%)
	Psychomotricity	35 (10.14%)
	Anesthesia and Intensive Care Nurse	34 (9.86%)
	Pharmacy Technician,	10 (2.9%)
	Emergency and Intensive Care Nurse	30 (8.7%)
	Speech Therapy	28 (8.12%)
	Orthoptics	1 (0.29%)
	Physiotherapy	6 (1.74%)
	Radiology Technician	11 (3.19%)
	Laboratory Technician	22 (6.38%)

(Table 1) contd.....

Variable	Category	Frequency
Fields	Nursing Care	103 (29.86%)
	Health Techniques	149 (43.19%)
	Midwife	35 (10.14%)
	Medical-Social	1 (0.29%)
	Rehabilitation	57 (16.52%)
Origin of provenance	Urban	292 (84.64%)
	Rural	53 (15.36%)
Type of your accommodation	With the family	203 (58.84%)
	University campus	49 (14.2%)
	Rent	93 (26.96%)
Scholarship	Yes	158 (45.8%)
	No	187 (54.2%)

3. RESULTS

3.1. Socio-demographic Characteristics

A total of 345 participants completed the questionnaire, representing a participation rate of 34.1% of the total number of students enrolled at ISPITSR during the 2023-2024 academic year.

The characteristics of the students who responded are presented in Table **1**. The average age of the students was 19.88 years, with a clear female predominance and a female/male sex ratio of 5.63%. Furthermore, 54.2% of the students questioned received a scholarship, 58.8% of the students lived with their families, and 84.6% lived in urban areas (Table **1**).

Table **2** presents the associations between various socio-demographic factors and the psychological needs (PN) of students at ISPITS in Rabat. Among the variables studied, only the level of study showed a statistically significant association with PN ($p = 0.004$), indicating that needs vary according to the year of study. In contrast, other factors, such as age, gender, specialty, track of study, place of origin, type of accommodation, and receipt of a scholarship, did not show significant associations with psychological need levels, as indicated by their high p-values.

Table 2. Factors associated with the PNs of students at ISPITS RABAT.

Variables	Categories	Level of PN			Chi-2 (p-value)
		Low	Medium	Strong	
Age range	Under 20	109(31.59%)	99(28.70%)	47(13.62%)	0.432
	21-25 years	38(11.01%)	27(7.83%)	17(4.98%)	
	26-30 years old	3(0.9%)	5(1.45%)	0(0%)	
Gender	Female	130(37.68%)	107(31.01%)	56(16.23%)	0.414
	Male	20(5.8%)	24(6.96%)	8(2.32%)	
Education level	1st year	69(20%)	35(10.15%)	19(5.51%)	0.004
	2nd year	27(7.83%)	39(11.3%)	22(6.38%)	
	3rd year	54(15.65%)	57(16.52%)	23(6.67%)	
Majors	General Nurse	37(10.72%)	30(8.7%)	19(5.51%)	0.166
	Midwife	3(0.87%)	2(0.58%)	4(1.16%)	
	Dietetics	16(4.64%)	8(2.32%)	2(0.58%)	
	Pediatric Neonatal Nurse	18(5.22%)	14(4.06%)	5(1.45%)	
	Mental Health Nurse	2(0.58%)	2(0.58%)	0(0%)	
	Geriatric Nurse	1(0.29%)	2(0.58%)	3(0.87%)	
	Psychomotricity	18(5.22%)	11(3.19%)	6(1.74%)	
	Anesthesia and Intensive Care Nurse	11(3.19%)	13(3.77%)	10(2.9%)	
	Pharmacy Technician,	5(1.45%)	2(0.58%)	3(0.87%)	
	Emergency and Intensive Care Nurse	11(3.19%)	15(4.35%)	4(1.16%)	
	Speech Therapy	16(4.64%)	10(2.9%)	2(0.58%)	
	Orthoptics	0(0%)	1(0.29%)	0(0%)	
	Physiotherapy	150(43.5%)	131(38%)	64(18.6%)	
	Radiology Technician.	3(0.87%)	6(1.74%)	2(0.58%)	
	Laboratory Technician	9(2.61%)	10(2.9%)	3(0.87%)	

(Table 2) contd.....

Variables	Categories	Level of PN			Chi-2 (p-value)
		Low	Medium	Strong	
Tracks	Nursing care	80(23.19%)	76(22.03%)	41(11.88%)	0.193
	Health Techniques	33(9.57%)	31(8.99%)	11(3.19%)	
	Midwife	3(0.87%)	2(0.58%)	4(1.16%)	
	Rehabilitation	34(9.86%)	22(6.38%)	8(2.32%)	
Origin of provenance	Urban	126(36.53%)	111(32.18%)	55(15.95%)	0.937
	Rural	24(6.98%)	20(5.8%)	9(2.61%)	
Type of your accommodation	With the family	80(23.19%)	83(24.06%)	40(11.59%)	0.436
	University campus	24(6.96%)	18(5.22%)	7(2.03%)	
	Rent	46(13.33%)	30(870%)	17(4.93%)	
Scholarship	Yes	70(20.3%)	61(17.7%)	27(7.8%)	0.814
	No	80(23.2%)	70(20.3%)	37(10.7%)	
Total	-	150(43.5%)	131(38%)	64(18.6%)	-

Table **3** indicates the prioritization of PNs among students at ISPITS in Rabat. The results show that mental health is the top priority, with 48.7% of students presenting a strong need in this area. Well-being is the second priority, with 32.17% of students classified as “strong”. Self-esteem comes third, with 25.51% of students having a high need. Needs linked to a sense of belonging, social relationships and autonomy are less marked, while personal development and skills are the lowest priority, with less than 20% of students indicating strong needs in these areas.

The information presented in Table **4** highlights the concerns of students about the resources and services they desire for their psychological and academic well-being. The most urgent need, identified by 15.9% of students, is the presence of someone with a good background in psychology, ready to assist and give advice. This highlights a growing awareness among students of the importance of psychological support and the need for professional assistance in dealing with the mental difficulties they face.

Table 3. Prioritization of PN among students at ISPITSR.

PN	Mean ± SD	PN level			Prioritizing PN
		Low	Average	Fort	
Mental health	3.45±1.25	74(21.45%)	103(29.86%)	168(48.7%)	Prority1: > 40
Well-being	3.14±1.15	86(24.93%)	148(42.91%)	111(32.17%)	Priority 2: 31-39
Self-esteem	2.82±1.19	127(36.81%)	130(37.68%)	88(25.51%)	Priority 3: 21-29
Sense of belonging	2.68±1.23	145(42.03%)	121(35.07%)	79(22.9%)	
Social relationships	2.72±1.21	145(42.03%)	125(36.23%)	75(21.74%)	
Autonomy	2.54±1.29	169(48.99%)	103(29.86%)	73(21.16%)	
Personal development	2.49±1.16	167(48.41%)	116(33.621%)	62(17.971%)	Priority 4: <20
Skills	2.47±1.13	179(51.88%)	108(31.3%)	58(16.81%)	

Table 4. Ranking of resources and services desired by students.

Resources and Desired Behaviors	Frequency in Order	Ranking
Having a well-trained psychologist available to assist, support, and advise students.	55(15.9%)	1
Helping students with financial difficulties.	46 (13.33%)	2
Managing exam stress.	44 (12.75%)	3
Extracurricular activities and student associations.	39(11.3%)	4
Organizing sports sessions.	33 (9.56)	5
Engaging the family in psychological support.	28 (8.11%)	6
Scheduling regular yoga and relaxation sessions alongside classes.	27 (7.82%)	7
Establishing support centers at ISPITS	21 (6.08%)	8
Evaluating and improving teacher behavior in the classroom.	17 (4.92%)	9
Providing continuous and tangible motivation by fostering fair competition among students.	14 (4.05)	10
Support and encouragement from teachers.	13 (3.76%)	11
A sense of comfort and belonging from teachers rather than fear.	8 (2.31%)	12

Secondly, 13.33% of students state they need help with their financial difficulties. This indicates the economic difficulty for some students, who feel that their financial concerns have a direct impact on their overall well-being and academic success. There is a good literature on the correlation between financial problems and psychological stress, which makes this request particularly relevant.

Managing exam stress is also important, with 12.75% of students requesting resources to help them better manage this pressure. It is important to note that academic stress plays a key role in student distress, requiring more effective management strategies.

Finally, measures, such as setting up support centers within ISPITS (6.08%), reviewing teacher behavior (4.92%), and promoting fair competition between students (4.05%), testify to a desire for structural changes in the academic environment. Students are looking not only for resources for their well-being, but also for a more encouraging and motivating academic environment.

4. DISCUSSION

Personal development is essential to support university students [16, 17]. This study, which aimed to assess the PNs of students at the ISPITSR, is the first of its kind to be conducted in Morocco. The study was carried out using a quantitative method [18] to assess the PNs of participants.

The results of data analysis are particularly worrying when it comes to the PNs of students [19]. It is important to note that a large proportion of students under 20, who made up the majority of the sample (73.91%), expressed significant PNs (13.62%). On the other hand, female students, accounting for the overwhelming majority (84.93%), also reported high PNs, with 16.23% affected. These figures reveal a worrying gender difference, where female students appear to be particularly at risk, a finding also proven by Morneau-Sévigny, Flore in her meta-analytical study of female students at the University de Laval [20].

Furthermore, the level of study appears to be a key factor, showing a significant correlation with PNs ($p = 0.004$). This is in line with a study carried out in Canada on 40 universities, which revealed that psychological distress depends not only on gender but also on the level of study [21]. Most first-year students seem less affected, with a majority having low PNs (20%). However, as students progress through their course, stress and academic demands increase, leading to a significant increase in medium and high PNs in the second and third years. This was also mentioned by Bonnaud-Antignac *et al*. (2015) in their study based on the follow-up of a cohort in France [22]. This worrying trend suggests that students are becoming increasingly psychologically vulnerable as they progress through their studies, requiring increased attention and concrete interventions.

In addition, PNs are not significantly related to other variables, such as age, gender, majors, tracks of study, geographical origin, type of accommodation, or receipt of a scholarship.

However, it was found that students were aware of the many factors that influence their well-being and success, and they indicated the requirement for an integrated approach to meeting their needs, as depicted by the last question on the distributed questionnaire. Their requests, ranging from psychological to financial support, as also recommended by students in a Canadian study [23], as well as extracurricular activities, underline the importance of a strong and varied institutional response to promote a healthy and harmonious academic environment.

Several suggestions are put forward by the results of this study to improve student well-being. The establishment of counseling services and support centers is crucial to strengthening psychological support, especially for students at the end of their studies. It is also essential to improve financial aid to better support students in difficult situations and promote regular extracurricular activities, such as sports, yoga, and relaxation, to manage stress, particularly during vacations. It is recommended that teachers adopt more inclusive and caring support methods, continuing to train in positive communication, in order to reduce psychological suffering.

Moreover, it is advisable to involve families in the psychological support of students by setting up tracks that encourage their involvement. The aim of these measures is to foster a balanced, welcoming academic environment that meets the varied needs of students throughout their university careers.

Finally, certain constraints should be mentioned in the current study. The lack of a mixed-method approach, such as the use of interviews or focus groups, may have limited the overall understanding of students' PN because combining different approaches to collect similar data can increase the reliability of results. Moreover, since the sample is limited to a single institute and a predominantly female and urban population, caution should be exercised when generalizing these results to other healthcare institutions in Morocco. It would be necessary to conduct additional studies using more diverse samples to verify the external validity of our conclusions in different educational and geographical contexts.

CONCLUSION

In summary, this study highlighted significant PNs among students at ISPITSR. The findings indicated that psychological demands tend to increase with each level of study, suggesting that students become more vulnerable as they progress through their university careers. This vulnerability underscores the need for targeted measures to address these challenges. To create a supportive and balanced learning environment, it is crucial for institutions to enhance their response, incorporating both psychological and financial support as well as extracurricular activities. Further research is needed to assess the psychological needs of students in higher education more comprehensively.

AUTHORS' CONTRIBUTION

It is hereby acknowledged that all authors have

accepted responsibility for the manuscript's content and consented to its submission. They have meticulously reviewed all results and unanimously approved the final version of the manuscript.

LIST OF ABBREVIATIONS

ISPITSR	=	Higher Institute for Nursing Professions and Health Techniques in Rabat
PNs	=	Psychological needs

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

This study was authorized by the Research Ethics Commission of the Faculty of Medicine and Pharmacy of Rabat, Morocco (Ref: 62 /24).

The authorization was also obtained from the general director of ISPITSR.

HUMAN AND ANIMAL RIGHTS

All human research procedures followed were in accordance with the ethical standards of the committee responsible for human experimentation (institutional and national) and with the Helsinki Declaration of 1975, as revised in 2013.

CONSENT FOR PUBLICATION

Informed consent was obtained from all participants.

STANDARDS OF REPORTING

STROBE guidelines and methodology were followed.

AVAILABILITY OF DATA AND MATERIALS

The data and supportive information are available within the article.

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CONFLICT OF INTEREST

The authors declare no conflict of interest, financial or otherwise.

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