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Satisfaction, anxiety and depression among undergraduate nursing students

Satisfação, ansiedade e depressão entre estudantes de graduação em enfermagem

Satisfacción, ansiedad y depresión entre estudiantes de pregrado en enfermería

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ABSTRACT

Objective: to analyze the correlation between satisfaction with academic experience and anxiety and depression among nursing students. **Method:** cross-sectional study, carried out with 205 students from a public university. For data collection, the following were applied: a sociodemographic assessment instrument, the Satisfaction with Academic Experience Scale, the Beck Depression Inventory and the State-Trait Anxiety Inventory. Analyzes were performed using descriptive statistics, Kruskal Wallis test and Spearman correlation. **Results:** the academics were indifferent in the domains satisfaction with the course, opportunity for development and satisfaction with the institution. There was a weak correlation between the dimensions satisfaction with the course and opportunity for development with levels of depression and anxiety. **Conclusion:** moderate and severe depression was identified, as well as an average level of anxiety among students. Such variables are correlated with academic satisfaction.

Descriptors: Schools; Nursing Students; Personal Satisfaction; Anxiety; Depression.

RESUMO

Objetivo: analisar a correlação entre a satisfação com a experiência acadêmica e ansiedade e depressão entre estudantes de enfermagem. **Método:** estudo transversal, realizado com 205 estudantes de uma universidade pública. Para coleta de dados, aplicaram-se: instrumento de avaliação sociodemográfica, a Escala de Satisfação com a Experiência Acadêmica, o Inventário de Depressão de Beck e Inventário de Ansiedade Traço-Estado. As análises foram realizadas por meio de estatística descritiva, teste de Kruskal Wallis e correlação de Spearman. **Resultados:** os acadêmicos apresentaram-se indiferentes nos domínios satisfação com o curso, oportunidade de desenvolvimento e satisfação com a instituição. Observou-se correlação fraca entre as dimensões satisfação com o curso e oportunidade de desenvolvimento com os níveis de depressão e ansiedade. **Conclusão:** identificou-se depressão moderada e grave, bem como, nível médio de ansiedade entre os estudantes. Tais variáveis estão correlacionadas com a satisfação acadêmica.

Descritores: Instituições Acadêmicas; Estudantes de Enfermagem; Satisfação Pessoal; Ansiedade; Depressão.

RESUMEN

Objetivo: analizar la correlación entre la satisfacción con la experiencia académica y la ansiedad y depresión entre estudiantes de enfermería. **Método:** estudio transversal, realizado junto a 205 estudiantes de una universidad pública. Para la recolección de datos, se aplicaron: un instrumento de evaluación sociodemográfica, la Escala de Satisfacción con la Experiencia Académica, el Inventario de Depresión de Beck y el Inventario de Ansiedad Estado-Rasgo. Los análisis se realizaron mediante estadística descriptiva, prueba de Kruskal Wallis y correlación de Spearman. **Resultados:** los académicos se mostraron indiferentes en los dominios satisfacción con el curso, oportunidad de desarrollo y satisfacción con la institución. Hubo una débil correlación entre las dimensiones 'satisfacción con el curso' y 'oportunidad de desarrollo' con los niveles de depresión y ansiedad. **Conclusión:** se identificó depresión moderada y severa, así como un nivel medio de ansiedad entre los estudiantes. Dichas variables se correlacionan con la satisfacción académica.

Descriptores: Instituciones Académicas; Estudiantes de Enfermería; Satisfacción Personal; Ansiedad; Depresión.

INTRODUCTION

Entering university brings with it great changes for students. Many feel increased levels of stress, anxiety and depressive symptoms as a result of the high study load, the fact of being away from their family, as well as the imposition of demands on academic performance and future employment[1]. In view of this, there is a need for greater institutional efforts to maintain the quality of teaching and student satisfaction[2].

Student satisfaction with educational programs is a relevant aspect for the quality of teaching in nursing, given that many perceive the academic experience as difficult due to the organization of the institution, course load, practical activities and work overload[1,3]. This context can generate psychological disturbances, such as disappointment, irritability, worry and impatience, which can contribute to increased anxiety, depression and stress among students[1,4].

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These psychological impacts were observed in a Chinese study with 554 nursing students, of which 28.7% had depression, 41.7% anxiety and 20.2% stress symptoms[5]. An analytical study with 203 academics in Brazil found that 19.2% had moderate or severe levels of depression[6].

A systematic review which analyzed studies with a total sample of 8,918 nursing students showed a high combined prevalence of depression reported by 34% of students. The findings also point to the need to improve institutional programs and services and additional research aimed at providing subsidies for interventions aimed at the psychological well-being of future nursing professionals[7].

Thus, it is reaffirmed that including student participation and perceptions in assessing the quality of educational programs is essential, since improving students' experience in their teaching environment can influence learning outcomes, satisfaction and mental health of students[8].

In this context, it is relevant to assess the satisfaction of nursing students with the teaching institution and its relationship with the psychological impacts of anxiety, transient (state) and permanent (trait), as well as depression. Recognizing these issues is of great importance to ensure mental health interventions focused on prevention and treatment of students.

Most studies on psychological impacts on university students have been generalized[9-11]. There is a scarcity of national and international studies related to academic satisfaction and its relationship with the mental health of undergraduate nursing students. Associated with this, it is important to understand aspects which are inherent to the mental health of this category of future professionals. Therefore, the present study aimed to analyze the correlation between satisfaction with the academic experience and anxiety and depression among nursing students.

METHOD

This is a cross-sectional, descriptive and correlational study carried out in March 2022 with undergraduate Nursing students at a public university in Ceará, Brazil. The population consisted of 340 students, however 205 students (60.2%) participated in the study.

The sample was intentional non-probabilistic mediated by the inclusion and exclusion criteria. The following inclusion criteria were considered: being actively enrolled, having attended at least one semester and being over 18 years old. Students who did not fully respond to the survey form were excluded.

The following instruments were used for data collection: the sociodemographic assessment instrument, Academic Experience Satisfaction Scale (*Escala de Satisfação com a Experiência Acadêmica - ESEA*), Beck Depression Inventory (BDI) and State-Trait Anxiety Inventory (STAI).

The *ESEA* is a scale composed of 35 items and investigates the academic satisfaction of higher education students, comprising three dimensions: satisfaction with the course, opportunity for development and satisfaction with the institution. The answers are measured by a five-point Likert-type scale, being: 1=not at all satisfied, two=dissatisfied, 3=indifferent, 4=satisfied and 5=completely satisfied[12].

The Beck Depression Inventory is a self-report scale that is widely used nationally and internationally to measure the degree of depression. The inventory consists of 21 items, measured at four points (0 to 3). The total scores vary from zero to 63, in which 0-13: minimal/no depression, 14-19: mild depression, 20-28 moderate depression and 29-63: severe depression[13,14].

In turn, the STAI consists of two scales with the aim of quantifying the degree of anxiety as a state (STAI-S) and trait (STAI-T). State anxiety is a transient affective cognitive condition, while trait represents a more stable personality trait. Each of these scales consists of 20 questions. The possible answers vary from 1 to 4, being: 1=almost never; 2=sometimes; 3=frequently; and 4=almost always. Scores range from 20 to 80 points, where 20-40 points: low level of anxiety, 41-60 points: medium level of anxiety, and 60-80 points: high level of anxiety[15].

All subjects who met the inclusion criteria received an invitation to participate in the study via email and WhatsApp. The students' telephone numbers were collected via the registration of students in the class group through the class leaders. After agreeing to participate, there was a request to sign the Informed Consent Form, followed by application of the data collection instruments via Google Forms® online.

Data were entered and compiled in the Microsoft Office Excel program (Excel 16.0 version). The reliability of data entry was initially tested by visually inspecting the spreadsheet and performing descriptive analyses. Instruments with 100% of responses to the items were considered for analysis. The data were subsequently analyzed using the Statistical Package for Social Sciences (IBM SPSS®) version 20.0.

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A descriptive analysis of quantitative variables was performed for sociodemographic characteristics of students with measurement of absolute value, frequency and 95% confidence interval. The central tendency measures of the scales were described as mean, median and standard deviation.

Due to the lack of normal distribution, the Kruskal-Walls test was used to test for significant differences between the sociodemographic data of university students with dimensional scores and total scores of the academic satisfaction scale, as well as the depression and anxiety (state and trait) levels.

Spearman's correlation coefficient was used for non-parametric samples to analyze correlations between variables. Correlation strength was considered: weak (+0.1 to +0.3/-0.1 to -0.3), moderate (+0.4 to +0.6/-0.4 to -0 .6), strong (+0.7 to +0.9/-0.7 to -0.9), and perfect (+1/-1). The significance level adopted in the statistical tests was $p< 0.050$ and error level <0.01. The research protocol was approved by the Research Ethics Committee of the institution involved. All participants voluntarily signed an informed consent form.

RESULTS

The sample consisted of 205 students, of which 176 (85.5%) were female. The average age of the participants was 21.8(±2.4) years. The predominant race was brown, represented by 116 (56.6%) students, 189 (92.1%) were single, and 196 (95.6%) did not have children. There was a predominance of Catholics, with 105 (52.5%) admitting to follow the religion. Most nursing students did not work (184 - 89.7%), 187 (91.21%) reported having <1 monthly minimum salary, while 95 (46.3%) reported family income of two to five minimum monthly salaries. The results of the degree of academic satisfaction assessment of nursing students are shown in Table 1.

TABLE 1: Degree of academic satisfaction with the experiences of nursing students (n=205). Fortaleza, CE, Brazil, 2022.

Items	Mean/SD
Dimension 1 – Satisfaction with the course	3.72 (±0.302)
1. Relationship with the teachers.	3.76 (±0.688)
5. Relationship with course colleagues.	4.08 (±0.784)
8. Adequacy between personal involvement in the course and academic performance obtained.	3.77 (±0.815)
12. Teachers' interest in assisting students during classes.	3.75 (±0.823)
13. Professionals' knowledge of the content of the disciplines they teach.	4.12 (±0.613)
14. Recognition by teachers of my involvement with my education.	3.53 (±0.843)
21. Institution's commitment to education quality.	3.81 (±0.838)
25. Assessment proposed by teachers.	3.46 (±0.899)
28. Lesson strategy used by teachers.	3.58 (±0.759)
31. Relevance of subject content.	4.13 (±0.611)
33. Availability of teachers to assist students outside the classroom.	3.51 (±0.837)
34. Adequacy of content for training.	3.90 (±0.661)
35. Adequacy between the tasks required in the course and the time set by the professors for carrying them out.	3.005 (±1.077)
Dimension 2 – Development opportunity	3.65 (±0.178)
2. Diversity of extracurricular activities offered by the institution.	3.77 (±0.850)
3. Course curriculum.	3.65 (±0.897)
6. Social events offered by the institution.	3.30 (±0.922)
9. Personal involvement in course activities.	3.87 (±0.756)
10. Student support programs or services offered by the institution.	3.53 (±0.947)
11. Conditions offered for my professional development.	3.78 (±0.776)
17. Conditions for entering the professional training area.	3.72 (±0.819)
23. Financial support program offered by the institution.	3.62 (±0.885)
Dimension 3 – Satisfaction with the institution	3.11 (±0.552)
4. Audiovisual resources and equipment available at the institution.	2.95 (±1.05)
7. Attendance and clarity of information provided by secretariat employees.	3.56 (±0.835)
15. Equipment and software provided by the computer lab.	2.8 (±0.909)
16. Service and clarity of information provided by library staff.	4.08 (±0.658)
18. Collection available in the library.	3.29 (±1.06)
19. Security offered by the institution.	2.47 (±1.04)
20. Physical infrastructure of classrooms.	2.44 (±1.063)
22. Physical infrastructure of the institution.	2.6 (±1.064)
27. Cleaning of the institution.	4.00 (±0.744)
29. Services offered by the library.	3.33 (±0.808)
30. Quality of the institution's facilities.	2.82 (±1.051)
32. Location of the different sectors which make up the institution.	3.0 (±0.980)

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Based on the satisfaction items, it is observed that the highest satisfaction averages in the three dimensions were respectively: relevance of the content of the disciplines (4.13), knowledge of professionals about the content of the disciplines they teach (4.12), relationship with course colleagues (4.08), service and clarity of information provided by library staff (4.08), cleanliness of the institution (4.0), personal involvement in course activities (3.87), adequacy between financial investment to pay for studies and training received (3.81), and diversity of extracurricular activities offered by the institution (3.77).

In turn, the items with the lowest averages were: physical infrastructure of classrooms (2.44), security offered by the institution (2.47), and physical infrastructure of the institution (2.6).

Regarding the evaluation of the students' level of depression, it is observed that 57.6% (n=118) did not have any depression signs; 21.5% (n=44) had a mild depression score; 14.1% (n=29) moderate and 6.8% (n=14) severe. Table 2 presents the prevalence of trait and state anxiety levels of nursing students. There was a predominance of an average level of anxiety in both conditions, with scores between 41 and 60 points.

TABLE 2: State-Trait Anxiety Inventory scores among nursing students (n=205). Fortaleza, CE, Brazil, 2022.

Anxiety level (score)	STAI - trait n (%)	STAI - state N (%)
Low (20 to 40)	81 (39.5)	78 (38.0)
Medium (41 to 60)	87 (42.4)	93 (45.3)
High (61 to 80)	37 (18.0)	34 (16.5)

Table 3 shows the correlation between the satisfaction level of university students and the depression and anxiety (trait and state) level.

Table 3: Correlation between the satisfaction level of nursing students and the depression and anxiety (trait and state) level (n=205). Fortaleza, CE, Brazil, 2022.

Variables	Dimension 1		Dimension 2		Dimension 3		General satisfaction	
	R	p-value	R	p-value	R	p-value	R	p-value
Level of depression	-0.321	0.001	-0.269	0.001	0.053	0.445	-0.135	0.061
Level of anxiety (trait)	-0.309	0.001	-0.291	0.001	0.083	0.237	-0.173	0.016
Level of anxiety (state)	-0.307	0.001	-0.332	0.001	0.447	0.122	-0.180	0.012

The findings show that there is a correlation between the dimensions of satisfaction with the course and opportunity for development with the depression and anxiety (trait and state) levels of nursing students (p=0.001), as well as overall satisfaction with trait anxiety (p = 0.016) and state anxiety (p= 0.012). However, it should be noted that there was no strong correlation between the variables.

DISCUSSION

Based on the academic satisfaction scale between one and five points, it was observed that the general averages of the domains remained indifferent, meaning that the students were neither satisfied nor dissatisfied. This result may be related to little involvement with the course and the institution. This distancing process may have influenced the participants' perception of the evaluated items. Thus, academic satisfaction is directly related to the student's involvement with the choice of profession, with the institution, as well as with their decision to remain in it or to drop out[16].

Regarding mastery in the course, the students were satisfied with the content of the disciplines, knowledge of professionals about the content they teach and relationship with their colleagues in the course. These findings are relevant, as the student's decision to enter the university is determined by the skills of the faculty and the study plans; these items additionally reveal quality in teaching[17].

Another highlight is that students have good friendships, and this fact can provide better knowledge exchanges, in addition to benefiting students' mental health, since a good interpersonal relationship creates a harmonious and welcoming environment.

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It is noteworthy that a potential way to promote a good relationship between students is to provide integration moments for them, as these interventions can minimize feelings of anxiety, depression, disability, loneliness and frustration in students, and in the same way can bring benefits to the teaching process[18]. It is also expected that these relationship skills can lead to better performance and team coexistence in future professional practice. A study carried out in Turkey with 172 nurses showed that solidarity and good relationships between co-workers have a significant effect on the motivation of professionals[19].

All items in the development opportunity dimension were evaluated indifferently, meaning that there was no satisfaction in any factor individually. This result may be related to several aspects, such as the student's involvement with the course, the semester, and even personal characteristics such as gender and age. It is observed that students' personal variables are associated with academic involvement in non-compulsory activities[20].

There were good ratings regarding satisfaction with the institution on topics such as cleanliness of facilities, customer service and clarity of information provided by library staff. It is considered that academic libraries are important support resources for higher education, and therefore the quality of service provided by librarians is essential.

Studies corroborate these findings by finding that the services offered by libraries are reliable and that employees understand the needs of users[21]. Likewise, the transmitted reliability and empathy of professionals positively influence students' satisfaction in using the library[17].

In addition to the analysis of the students' satisfaction factors, the findings related to their anxiety and depression stand out. The average assessment of depression levels showed that most participants are not depressed. However, the other half of the students had severe, moderate and mild depression, with the last two levels being the most representative of the sample.

The results found in this study are similar to a study which used the same instrument (the Beck Depression Inventory) with 203 nursing students. In this study, 57.2% did not show depression signs or symptoms, 23.6% presented mild symptoms, 14.8% moderate and 4.4% severe[6]. A similar level of depression was also evidenced in an international study, with 43.18% presenting mild depression, 21.25% moderate and 4.25% severe[3]. These findings highlight the high prevalence of this condition among health students in the national and international scenario.

Depression has a considerable negative impact on academic performance, as it can lead to higher absenteeism in classes and lower averages in evaluations. Therefore, early identification of depressed students is essential to contain the negative consequences of this condition. The need for mental health facilities in educational institutions is also highlighted, which should be available for regular student assessment and immediate management of depressive symptoms with professional assistance[3].

In addition to depression, another common condition among university students is anxiety. This problem has been surpassing depression as the reason why college students seek professional help[22]. Anxiety can be considered an adaptive response when it is associated with a specific event, called a state. However, when it negatively affects the quality of life and impairs the emotional and physical well-being of the individual, it is a pathological condition, defined as a trait[23].

The students in this study had similar means of trait and state anxiety at the three levels. There was a predominance of the medium level of anxiety, followed by low and high levels. A study with 154 nursing students from Turkey corroborates these findings; in addition, a positive correlation was observed between state-anxiety and trait-anxiety ($p<0.01$)[24].

Literature findings show a prevalence of anxiety of 36.1%, while 62.2% among students considered to have some level of anxiety had a mild form, 27.9% a moderate level and 9.9% a level considered severe. It is noteworthy that the nursing course had a higher prevalence of mild anxiety (76.9%) compared to other courses in the health area[25].

Many students especially showed increased stress and anxiety levels and depressive symptoms in the pandemic period as a result of changes in university education, technological concerns about accessing online classes, being away from home, decreasing family income and future employment[2,26]. These impacts were observed in studies carried out in Portugal and in the United States, which showed a significant increase in psychological problems (anxiety, depression and stress) among university students during the pandemic period[9,10].

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In view of this, the importance of counseling centers on campuses and remotely is highlighted, in addition to occupational and behavioral therapies. The importance of these practices is reinforced through a study that demonstrated clinically significant improvement in depressive and anxiety symptoms among students who participated in an intervention program proposed by the educational institution. Seven therapy sessions were applied on: the connection between thinking, feeling and behavior; positive thinking habits; coping with stress; problem-solving; and coping skills in stressful situations[22].

The domains of academic satisfaction with the course and opportunity for development showed a negative, weak and significant correlation with anxiety and depression. The domain of satisfaction with the institution showed a positive, weak and non-significant correlation. Therefore, this study shows that less satisfied students may have depression and anxiety when compared to those who were satisfied with the course.

These findings are consolidated by a study which identified academic satisfaction items associated with the presence of depression and anxiety, such as the variables of unsatisfactory relationship with classmates ($p<0.001$), family ($p<0.001$) and friends ($p=0.005$); the fact of not being in the course chosen as the first option ($p=0.019$); and not practicing physical activity ($p=0.003$). It is noteworthy that the sociodemographic variables did not show significant associations with depression, while anxiety was associated with gender[25].

Likewise, another study highlights the relationship between anxiety and depression and satisfaction with studies and students' academic performance, in which anxiety levels were also higher in females[27]. This finding reinforces the importance of implementing strategies to reduce anxiety in female students.

The study also reinforces the benefits of using web-based interventions, which offer an acceptable and effective method of psychological treatment within higher education institutions. Online therapy can attract students who do not attend or cannot access mental health counseling due to a number of barriers, such as stigma related to mental health issues. Furthermore, web-based interventions can be combined with face-to-face support to achieve better improvements in emotional well-being among college students[27].

Study limitations

The main limitation of this study was its performance with a specific population of a public university in Ceará, which does not enable generalizing the results to other regions of Brazil.

The importance of identifying academic satisfaction factors and how these are related to mental health problems among higher education students is highlighted. These findings may support individualized interventions in nursing courses and contribute to improving student satisfaction, and consequently their physical and mental well-being.

It is also suggested that new studies be carried out with the aim of evaluating academic satisfaction and its relationship with anxiety and depression among university students from other public and private universities, as well as from other courses in the health area.

CONCLUSION

The findings showed that undergraduate nursing students were indifferent in terms of academic satisfaction in the domains of satisfaction with the course, opportunity for development and satisfaction with the institution. In turn, 14.4% and 6.8% had moderate and severe levels of depression, while 42.43% and 45.36% had medium level of trait and state anxiety, respectively. Furthermore, weak correlations were shown between the dimensions of satisfaction with the course and opportunity for development with the depression and anxiety (trait and state) levels of nursing students.

REFERENCES

1. Fernandes MA, Rocha FE, Silva VJS, Avelino FVSD, Santos JDM. Prevalence of anxious and depressive symptoms in college students of a public institution. Rev Bras Enferm. 2018 [cited 2022 Mar 23]; 71(5):2169-75. DOI: https://doi.org/10.1590/0034-7167-2017-0752.
2. Fawaz M, Samaha AE. Learning: depression, anxiety, and stress symptomatology among Lebanese university students during COVID-19 quarantine. Nurs Forum. 2021 [cited 2022 mar 23] 56(1):52-7. DOI: https://doi.org/10.1111/nuf.12521.
3. Njim T, Mbanga C, Mouemba D, Makebe H, Toukam L, Kika B, Mulango I. Determinants of depression among nursing students in Cameroon: a cross-sectional analysis. BMC Nurs. 2020 [cited 2022 Mar 23]; 19:26. DOI: https://doi.org/10.1186/s12912-020-00424-y.
4. Wilczewski M, Gorbaniuk O, Giuri P. The psychological and academic effects of studying from the home and host country during the COVID-19 pandemic. Front Psychol. 2021 [cited 2022 Mar 25];9(12):644096. DOI: https://doi.org/10.3389/fpsyg.2021.644096.

5. Zeng Y, Wang G, Xie C, Hu X, Reinhardt JD. Prevalence and correlates of depression, anxiety and symptoms of stress in vocational college nursing students from Sichuan, China: a cross-sectional study. Psychol Health Med. 2019 [cited 2022 Mar 26]; 24(7):798-811. DOI: https://doi.org/10.1080/13548506.2019.1574358.
6. Facioli AM, Barros AF, Melo MC, Moura IC, Custódio ORJM. Depression among nursing students and its association with academic life. Rev Bras Enferm. 2020 [cited 2022 Mar 26]; 73(1):20180173. DOI: https://doi.org/10.1590/0034-7167-2018-0173.
7. Tung YJ, Lo KKH, Ho RCM, Tam WSW. Prevalence of depression among nursing students: a systematic review and meta-analysis. Nurse Educ Today. 2018 [cited 2022 Mar 26]; 63:119-29. DOI: https://doi.org/10.1016/j.nedt.2018.01.009.
8. Fernández-García D, Giménez-Espert MDC, Castellano-Rioja E, Prado-Gascó V. What academic factors influence satisfaction with clinical practice in nursing students? regressions vs. fsQCA. Front Psychol. 2020 [cited 2022 Mar 27]; 11:585826. DOI: https://doi.org/10.3389/fpsyg.2020.585826.
9. Maia BR, Dias PC. Ansiedade, depressão e estresse em estudantes universitários: o impacto da COVID-19. Estud Psicol. 2020 [cited 2022 Mar 27]; 37:e200067. DOI: https://doi.org/10.1590/1982-0275202037e200067.
10. Browning MHEM, Larson LR, Sharaievska I, Rigolon A, McAnirlin O, Mullenbach L, et al. Psychological impacts from COVID-19 among university students: risk factors across seven states in the United States. PLoS One. 2021 [cited 2022 Mar 27]; 16(1):e0245327. DOI: https://doi.org/10.1371/journal.pone.0245327.
11. Islam MA, Barna SD, Raihan H, Khan MNA, Hossain MT. Depression and anxiety among university students during the COVID-19 pandemic in Bangladesh: a web-based cross-sectional survey. PLoS One. 2020 [cited 2022 Mar 27]; 15(8):e0238162. DOI: https://doi.org/10.1371/journal.pone.0238162.
12. Schleich ALR, Polydoro SAJ, Santos AAA. Escala de satisfação com a experiência acadêmica de estudantes do ensino superior. Aval Psicol [Internet]. 2006 [cited 2022 Apr 30]; 5(1):11-20. Available from: http://pepsic.bvsalud.org/scielo.php?script=sci_arttext&pid=S167704712006000100003&lng=pt.
13. Beck AT, Steer RA. Beck Depression Inventory Manual. San Antonio: Psychological Corporation; 1993.
14. Cunha JA. Manual da versão em português das Escalas Beck. São Paulo: Casa do Psicólogo; 2001.
15. Biaggio AMB, Natalício L. Manual para o Inventário de Ansiedade Traço-Estado (IDATE). Rio de Janeiro: Centro Editor de Psicologia Aplicada-CEPA; 1979.
16. Admi H, Moshe-Eilon Y, Sharon D, Mann M. Nursing students' stress and satisfaction in clinical practice along different stages: a cross-sectional study. Nurse Educ Today. 2018 [2022 May 15]; 68:86-92. DOI: http://dx.doi.org/10.1016/j.nedt.2018.05.027.
17. Lubis HM. The effect of service quality on students' satisfaction using the library of senior high school 1 of padangsidimpuan. J Soc Sci. 2020 [cited 2022 May 15]; 1(2):16-20. Available from: https://jsss.co.id/index.php/jsss/article/view/18.
18. Santos AAA, Zanon C, Ilha VD. Self-efficacy on higher education: Its predictive role to satisfaction with academic experience. Estud Psicol. 2019 [cited 2022 May 15]; 36:e160077. DOI: http://dx.doi.org/10.1590/1982-0275201936e160077.
19. Göktepe N, Yalçın B, Türkmen E, Dirican Ü, Aydın M. The relationship between nurses' work-related variables, colleague solidarity and job motivation. J Nurs Manag. 2020 [cited 2022 May 15]; 28(3):514-21. DOI: https://doi.org/10.1111/jonm.12949.
20. Fior CA, Mercuri E. Envolvimento acadêmico no ensino superior e características do estudante. Rev Bras Orientac Prof. 2018 [cited 2022 May 20]; 19(1):85-95. Available from: http://pepsic.bvsalud.org/scielo.php?script=sci_abstract&pid=S1679-33902018000100010&lng=pt&nrm=iso.
21. Cardoso ALMS, Silveira RZ, Miguel MC. Percepção da qualidade de serviços na Biblioteca Municipal Murilo Mendes de Juiz de Fora na perspectiva do usuário. Rev Inst Cien Hum Inf. 2019 [cited 2022 May 25]; 32(2):5-29. DOI: http://dx.doi.org/10.14295/biblos.v32i2.6925.
22. Hart Abney BG, Lusk P, Hovermale R, Melnyk BM. Decreasing depression and anxiety in college youth using the creating opportunities for personal empowerment program (COPE). J Am Psychiatr Nurses Assoc. 2019 [cited 2022 Jun 30]; 25(2):89-98. DOI: http://dx.doi.org/10.1177/1078390318779205.
23. Takagi A, Usai F, Ganesh G, Sanguineti V, Burdet E. Haptic communication between humans is tuned by the hard or soft mechanics of interaction. PLoS Comput Biol. 2018 [cited 2022 Jun 30]; 14(3):e1005971. DOI: http://dx.doi.org/10.1371/journal.pcbi.1005971.
24. Sancar B, Yalcin AS, Acikgoz I. An examination of anxiety levels of nursing students caring for patients in terminal period. Pak J Med Sci. 2018 [cited 2022 Jun 40]; 34(1):94-9. DOI: https://doi.org/10.12669/pjms.341.14285.
25. Leão AM, Gomes IP, Ferreira MJM, Cavalcanti LPJ. Prevalência e fatores associados à depressão e ansiedade entre estudantes universitários da área da saúde de um grande centro urbano do nordeste do Brasil. Rev Bras Educ Med. 2018 [cited 2022 Jun 30]; 42(4):55-65. DOI: http://dx.doi.org/10.1590/1981-52712015v42n4RB20180092.
26. Aristovnik A, Keržič D, Ravšelj D, Tomaževič N, Umek L. Impacts of the Covid-19 pandemic on life of higher education students: global survey dataset from the first wave. Data Brief. 2021 [cited 2022 Jun 30]; 39:107659. DOI: http://dx.doi.org/10.1016/j.dib.2021.107659.
27. Awadalla S, Davies EB, Glazebrook C. A longitudinal cohort study to explore the relationship between depression, anxiety and academic performance among Emirati university students. BMC Psychiatry. 2020 [cited 2022 Jun 30]; 20(1):448. DOI: https://doi.org/10.1186/s12888-020-02854-z.