

Adaptation to university and common mental disorders in nursing undergraduate student

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RESUMO

Our objective was to assess the adaptation to university and its relationship with the occurrence of Common Mental Disorders (CMD) among undergraduate nursing students. We conducted an analytical, cross-sectional and quantitative study with 92 nursing students from a Federal Institution of Superior Education in Minas Gerais. For the data collection, we used a sociodemographic and academic questionnaire, the *Questionário de Vivências Acadêmicas-reduzido* (QVA-r) and, the Self-Reporting Questionnaire (SRQ-20). We observed good adaptation level among participants, with better scores in the Career dimension and lower scores in the Personal dimension. We found a CMD indicative of 43.5% and an inverse correlation with the adaptation to university, indicating the better adaptation, the lower probability of CMD. The findings showed that the adaptation process to university is related to student's mental health and, it indicates the need of interventions directed to academic adaptation as a health promotion strategy.

Descritores: Education, Higher; Students, Nursing; Adaptation; Mental Disorders; Mental Health.

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INTRODUCTION

University admission configures a satisfying moment for the student due to the possibility of achieving professional training. However, despite being motivated to get a diploma, it does not mean that the student is entirely prepared to cope this challenge. Many times, the student can face difficulties in adapting to this new environment due to demands related to the course and institution, the interpersonal relationships and, the emotional matters, as stress and anxiety⁽¹⁻²⁾.

College life corresponds to a period of significant life changes for the student, and those are responsible for many stressful situations, as the distance from the family, new interpersonal relationships, loving relationships, adaptation to the academic life, decision about priorities and management of the financial life⁽³⁾. Stressful situations progressively increase, once at each step of the course, new requirements are demanding the development of skills and competencies from students⁽⁴⁾.

Together with the acquisition of new knowledge, the college life propitiates the contact with new values and beliefs, questionings and, academic and social experiences that propitiates personal maturing to students, and it will reflect on the chosen profession and the individual constitution of students⁽⁵⁾. Besides, the university environment can represent a health promotion environment to students, as well as, a space limiting it. It has the possibilities of harmful stress, for being a place where the student spends a considerable amount of the day, for many years, interacts with diverse people and with situations that lead the student to develop the survival strategies in the healthiest way possible⁽⁶⁾.

Thus, the adaptation to college life is not an easy process and the repercussions of this process, that in many times can lead to academic failure, goes beyond the education field and directly affect the health of the individual and community and, in the social and economic development of the country⁽⁷⁾.

Health students experience high levels of stress. Psychological and physiological manifestations happen in higher proportion among nursing students⁽⁸⁾. Many times, students feel vulnerable to the diverse university demands. For example, problems related to teaching quality, educational environment, personal situations, planning of the professional future, organization when facing a growing amount of information, stress from practice activities, and also, the fatigue caused by the contact with sick people and death⁽⁹⁾.

These and other situations, as the difficulties to adapt, can predispose the appearance of Common Mental Disorders (CMD). It refers to the least severe cases of mental disorder and include symptoms as forgetfulness, insomnia, irritability, difficulty to concentrate and to make decisions, fatigue and somatic complaints, as headache, lack of appetite, tremors, within others⁽¹⁰⁾. The CMD can be observed since the student's admission in the superior education and they are more frequent among students of the Health field, once in their academic routine, they deal with suffering and pain⁽¹¹⁾.

In most times, the CMD are not identified or correctly treated and, they tend to be underestimated by health professionals, notably when lacking physical symptoms, and therefore, they can progress and become chronic. The early and correct diagnosis of these disorders can prevent physical and psychological losses to individuals and the weight to the health system⁽¹²⁾.

In the university context, mental health issues among students have increased in number and severity and, they constitute a great challenge for superior education institutions and health services. Symptoms as stress,

anxiety, within others, related to academic experiences, can negatively impact the mental health, academic development, student's development and to result in consequences to the student's training and future action^(9,13).

Thus, comprehending that the nursing student will provide care in the future, attention and care are needed, to keep the student's physical and mental health in an adequate and satisfactory levels, in a way that it can reflect in the future professional action^(4,14-15).

Considering the context above and the lack of studies about the relationship between themes, our study aimed to assess the adaptation to university and its relationship with the CMD occurrence in nursing students.

METHODS

We conducted an exploratory, analytical, cross-sectional study, with a quantitative data approach, with Nursing students of a Federal Institution of Superior Education of Minas Gerais, during November of 2015 until February of 2016.

The sample size calculation considered a coefficient of prior determination of $R^2=0.13$, in a linear regression model with three predictors, with a significance level or error type I of $\alpha=0.05$ and error type II of $\beta=0.1$, therefore resulting in a prior statistical power of 90.0%. We used the application PASS (Power Analysis and Sample Size), version 2002, and we obtained a sample size of $n=99$ individuals who were randomly selected among the 275 students currently enrolled in the Nursing undergraduate course of the institution.

As inclusion criterion, we considered age equal or higher to 18 years and we excluded students who were on leave, withdrawn or who were locked out of the course during the data collection period. At the end, 92 students participated, therefore resulting on a sample loss of seven individuals (7.1%).

We used three self-reported instruments for the data collection: one sociodemographic and academic questionnaire, the *Questionário de Vivências Acadêmicas – reduzido* (QVA-r) and, the Self-Reporting Questionnaire (SRQ-20).

The researchers created the sociodemographic and academic questionnaire and it had variables to characterize the sample: date of birth, sex, marital status, skin color, number of children, chronic diseases, employment and weekly workload, monthly personal and family incomes, admission year in the course, period in which the student was at and, if they were retained in disciplines.

The *Questionário de Vivências Acadêmicas* is a self-reported instrument, built in Portugal, and aims to assess the perception of students about their academic experiences in the university and, to infer about the quality of the adaptation to the university. It has two versions, an integral one (QVA) and the reduced one (QVA-r)⁽¹⁶⁾.

The QVA-r was validated to be used in Brazil in 2005 and it has 55 items distributed in five dimensions: Personal (physical and psychological wellbeing, emotional balance, affective stability, optimism and self-confidence); Interpersonal (relationship with mates, relationship competencies in situations of more intimacy, establishment of friendships and search for health); Career (feelings related to the course, career perspectives and vocational projects); Study (study habits, time management, use of learning resources in the campus and preparation for exams) and Institutional (student's appreciation of the institution where they attend, desire to stay or change institution, knowledge and appreciation of the existing infrastructure)⁽¹⁶⁾. The items should be

assessed considering the academic trajectory until the actual moment and they are answered in a Likert-type scale of five points. In our study, we calculated the scores of each subscale considering the adaptation levels varying from one to five, being the lowest value related to the lowest level and the highest value to the higher level of adaptation.

The SQR-20 was developed by the World Health Organization to measure the suspicion level of mental disorders and it has a triage character, that is, it is destined to detecting symptoms and it does not offer diagnosis of the type of existing disorder. The symptoms which the SRQ-20 assesses is close to CMD and they are characterized as non-psychotics: fatigue, irritability, insomnia, difficulty to concentrate, forgetfulness and somatic complaints⁽¹⁷⁾.

The items should be assessed considering the pains and problems of the last 30 days. The answers are dichotomic and each positive answer receive one point, and the sum composes the final score. The obtained scores refers to the probability of the presence of a non-psychotic disorder and it varies from zero to 20, being none or extreme probability to present a CMD, respectively. As cut-point, we used the total score equal or lower than seven as a negative case and equal or higher than eight as a positive screening for CMD⁽¹⁷⁾.

We statistically analyzed the data using the program Statistical Package for the Social Sciences (SPSS), version 21.0. We conducted descriptive data analyses from the simple absolute and percentage frequencies for categorical variables and measures of centrality (mean, median, mode) and dispersion (standard deviation, minimum, maximum) for quantitative variables. For bivariate analyses, we used a significance level of 5.0% ($p \leq 0.05$) and we conducted the Student's t-test to compare quantitative variables between groups defined by categorical variables and to verify if the results obtained were statistically significant. We performed a Person's correlation between scores from QVA-r and SRQ-20, and we classified them as weak ($0 < r < 0.3$), moderate ($0.3 \leq r < 0.5$) or strong ($r \geq 0.5$).

We highlight that our study is part of a greater research entitled "Promotion and protection of the physical and mental health of university students", which was approved by the Ethics in Research with Human Beings Committee of the institution, according to protocol nº 1.226.066 and CAAE 44557015.3.0000.5154, and conducted according to the Brazilian guidelines regulating studies with human beings. The students' participation occurred after consent and signature of the Free and Informed Consent Term.

RESULTS

Ninety-two nursing students participated in this study. The majority was female (88.0%, $n = 81$), white (64.1%, $n=59$), aged varying between 18 and 43 complete years, mean 22.26 years (median 22.0 years, standard deviation 3.34 years), single marital status (94.6%, $n=87$), from the city where the study was conducted (62.0%, $n=57$), with no employment relationship (92.4%, $n=85$).

The course periods were re-coded in two groups: 25.0% ($n=23$) were freshmen (first and second periods) and 75.0% ($n=69$) were coursing other periods.

When analyzing the results of the QVA-r means, we observed better means obtained in the Career (3.85), Institutional (3.79) and Interpersonal (3.77) dimensions. The Study and Personal dimensions presented lower means, 3.52 and 3.32, respectively, according to Table 1.

Table 1: Centrality, dispersion and internal consistency measures of the QVA-r dimensions among Nursing students of a Federal Institution of Superior Education of Minas Gerais, Brazil, 2016.

QVA-r Dimensions	Mean	Standard Deviation	Minimum	Maximum	Cronbach's alpha
Personal	3.32	0.76	1.29	5.00	0.88
Interpersonal	3.77	0.73	1.33	5.00	0.88
Career	3.85	0.69	2.17	5.00	0.86
Study	3.52	0.79	1.44	5.00	0.87
Institutional	3.79	0.67	1.88	4.88	0.76

The internal consistency of the *Questionário de Vivências Acadêmicas* (QVA-r) was assessed using the Cronbach's alpha coefficient, allowing to evaluate participants' answers with a good reliability level (Table 1).

Students who were from the study location presented better scores of Academic Experiences in the Institutional dimension in comparison to the students coming from other cities, and the differences were significant ($p=0.043$). All other sociodemographic and academic variables did not present differences statistically significant.

Among participating students, we noted a prevalence of 43.5% of positive screening for CMD. The assessed symptoms were grouped in four categories, according to Table 2.

Table 2: Prevalence of CMD symptoms among Nursing students of a Federal Institution of Superior Education of Minas Gerais, according to the SRQ-20 Group of Symptoms, Brazil, 2016.

Group of Symptoms – SRQ-20	Yes	No
	% (n)	% (n)
Depressive/anxious mood		
Q-4 Are you easily frightened?	45.7 (42)	54.3 (50)
Q-6 Do you feel nervous, tense, or worried?	83.7 (77)	16.3 (15)
Q-9 Do you feel unhappy?	41.3 (38)	58.7 (54)
Q-10 Do you cry more than usual?	30.4 (28)	69.6 (64)
Somatic symptoms		
Q-1 Do you often have headaches?	49.0 (45)	51.0 (47)
Q-2 Is your appetite poor?	14.0 (13)	86.0 (79)
Q-3 Do you have sleep disturbances?	53.3 (49)	46.7 (43)
Q-5 Do your hands tremble?	18.5 (17)	81.5 (75)
Q-7 Is your digestion poor?	21.7 (20)	78.3 (72)
Q-19 Are you easily tired?	50.0 (46)	50.0 (46)
Decrease in vital energy		
Q-8 Do you have trouble thinking clearly?	34.8 (32)	65.2 (60)
Q-11 Do you find it difficult to enjoy your daily activities?	33.7 (31)	66.3 (61)
Q-12 Do you find it difficult to make a decision?	44.6 (41)	55.4 (51)
Q-13 Is your daily work suffering?	12.0 (11)	88.0 (81)
Q-18 Do you feel tired all the time?	40.2 (37)	59.8 (55)
Q-20 Do you have uncomfortable feelings in your stomach?	35.9 (33)	64.1 (59)
Depressive thoughts		
Q-14 Do you feel you are not usefully contributing in life?	20.7 (19)	79.3 (73)
Q-15 Have you lost interest in things?	35.9 (33)	64.1 (59)
Q-16 Do you feel that you are a worthless person?*	15.2 (14)	83.7 (77)
Q-17 Have you thought about ending your life?	4.3 (04)	95.7 (88)

* did not answer: 01 (1.1%)

In the category “Depressive/anxious mood”, the most reported symptom by the students was to feel nervous, tense or worried (83.7%). In the category “Somatic symptoms”, to sleep poorly (53.3%) and to feel easily tired (50.0%) were the most reported. In the group “Decrease in vital energy”, difficulty to make decisions was the most reported (44.6%), followed by to feel tired all the time (40.2%) and, in the group “Depressive thoughts”, to lose interest about things represented 35.9% of the answers.

We observed a higher occurrence of CMD between male students (45.8%) in comparison to women (43.2%), however, we did not observe significant statistical differences.

Students from the study place had higher CMD occurrence (50.9%) in comparison to migrants (31.4%), however, the differences were not statistically significant ($p=0.06$, $RP= 1.615$, $CI=0.932-2.811$)

Freshmen students (first and second periods) had higher CMD occurrence (60.9%) compared to all other periods (37.7%) and the differences were marginally significant ($p=0.052$, $RP=1.615$, $CI=1.034-2.525$).

Table 3 presents the comparison of CMD dichotomized scores and of Academic Experiences. We observed lower Academic Experiences scores among students with a positive screening for CMD, when compared to students with negative screening. Similarly, students with better scores in Academic Experiences did not present CMD.

Table 3: Comparison between the scores of Academic Experiences and CMD in nursing students of a Federal Institution of Superior Education of Minas Gerais, Brazil, 2016.

Academic Experiences	CMD	
	Yes	No
Personal Dimension		
Mean	2.71	3.79
Standard Deviation	0.50	0.55
Minimum	1.29	2.79
Maximum	3.64	5.00
Interpersonal Dimension		
Mean	3.65	3.85
Standard Deviation	0.78	0.69
Minimum	1.33	1.50
Maximum	4.92	5.00
Career Dimension		
Mean	3.64	4.01
Standard Deviation	0.73	0.62
Minimum	2.25	2.17
Maximum	4.92	5.00
Study Dimension		
Mean	3.27	3.73
Standard Deviation	0.87	0.65
Minimum	1.44	2.11
Maximum	5.00	5.00
Institutional Dimension		
Mean	3.66	3.88
Standard Deviation	0.70	0.63
Minimum	2.25	4.88
Maximum	1.88	4.88

In fact, we found a statistically significant inverse correlation between the scores of Academic Experiences and CMD (Table 4), indicating that the better the adaptation to university, the smaller the students' predisposition for CMD. We observed weak correlations between CMDs and the Interpersonal (-0.22) and Institutional (-0.22) dimensions, moderate between CMD and Career (-0.31) and Study (-0.39) dimensions and, strong between CMD and Personal (-0.77) dimension.

Table 4: Correlation between the Academic Experiences scores and CMD of nursing students of a Federal Institution of Superior Education of Minas Gerais, Brazil, 2016

Academic Experiences (QVA-r)	CMD (SRQ-20)	
	r*	p
Personal Dimension	-0.77	<0.001
Interpersonal Dimension	-0.22	0.032
Career Dimension	-0.31	0.003
Study Dimension	-0.39	<0.001
Institutional Dimension	-0.22	0.033

* Person's correlation coefficient

DISCUSSION

The student's profile of this study is similar to other Brazilian studies describing a higher number of nursing students as young adults, females, and single, in public as well as in private institutions⁽¹⁸⁻¹⁹⁾.

About the adaptation to the university context, we verified in this study that participants scored above the average scale score⁽³⁾ in all dimensions, demonstrating good adaptation level. The best means were obtained in the Career, Institutional and Interpersonal dimensions, while inferior means were obtained in Study and Personal dimensions.

Studies conducted with university students of other courses also pointed the Career dimension as the one with the best mean among the students and the Personal dimension as the one with the lowest means⁽¹⁾.

The Career dimension has great importance for identity development and student's adaptation to college life, as it is related to the chosen course, vocational projects and professional accomplishment. Yet, the Personal dimension pools variables related to the student's physical and psychological well-being, including sleep habits, health, autonomy, self-confidence, optimism, life satisfaction, concentration, emotional balance, within others⁽¹⁾.

Thus, we can infer that students of this study are more involved with learning in the course and with their career perspectives, they are interested in the institution and they desire to continue in it, they know the existing services and structures, they relate with their peers and they are involved in extra-curriculum activities. But, they need to improve their competences of study, time management, the use of many learning resources and, especially, their perceptions of physical and psychological well-being⁽¹⁶⁾.

Local participants had better adaptation to the university context in the Institutional dimension when compared to student from other cities. This result can relate to the fact that students had more knowledge about the university, quality of services and existing structures, and they desired to continue their studies there⁽¹⁶⁾.

About the CMDs, the prevalence found in this study (43.5%) can be considered of high quality when compared to other Brazilian studies with nursing students or from other courses^(11,20-22).

A study conducted with Biology, Nursing, Physiotherapy and Psychology students in Rio Grande do Sul, identified 20.0% of participants with pre-disposition for CMD, and the higher occurrence was observed among Physiotherapy (40.0%) and Nursing (25.0%) students⁽¹¹⁾.

In Alagoas, a research with students of health-related courses also found high positive classification for CMD among participants, of 43.2%. However, when stratifying by courses, Nursing students had a 22.1% CMD prevalence⁽²⁰⁾.

Another study conducted with Psychology and Nursing university students identified an occurrence of CMD indicative factors in 35.71% of students⁽²¹⁾.

A recent study with 134 Medical students of the first to the fourth year, of a public university in the South of Brazil, found high prevalence of CMD, being 35.8% at the beginning and of 51.5% at the end of the semester⁽²²⁾.

The high prevalence of positive screening for CMD found in this and other Brazilian studies points to a concerning situation of mental health among students, especially the ones of the health field, and it indicates the need for early identification and adequate intervention when facing CMDs. Besides, preventive measures directed to university students should be implemented, as services of psycho-pedagogical support, actions favoring a healthier environment and better interpersonal relationships, orientations and awareness for physical and mental health care⁽¹⁴⁾.

Regarding the course period, although the differences found were marginally significant, we observed higher occurrence of CMD among freshmen students when compared to other periods. Similar results were seen university students of the Health field, with higher predisposition to CMD during academic admission phase (43.0%) compared to intermediate steps (28.0%) and end of course (28.0%)⁽¹¹⁾.

An international study conducted with 308 university students found an association between the academic level variable and stress ($r=0.12$, $p<0.05$), indicating that freshmen students or from the second year were more propense to stress symptoms than all other course levels⁽²³⁾. These data lead to reflect that freshmen students can be more susceptible to CMD, due to many stressful situations related to the admission in the college life, the need to adapt to the new context and, many demands of this context.

In our study, although we did not find significant statistical differences, we descriptively observed a higher occurrence of CMD among local students. We expected the contrary, as well as, in a prevalence study about anxiety and depression symptoms conducted with Medical students where being a local student emerged as a protection factor for depressive symptoms ($p<0.05$, $RP=0.55$, $CI=0.33-0.93$)⁽²⁴⁾.

Nevertheless, based on results of a Chinese research with Nursing students, where the good relationship of students with their parents and the freedom to make their own decisions were inversely related with depression prevalence⁽¹⁵⁾, it is likely that demands and pressure made by the parents, as well as, less autonomy of students living with their family, can justify the found result.

In our study, we observed the better adaptation to university, the lower were the students' predisposition to CMD. Similarly, results of a study with 2,203 students of a public university abroad revealed that the students who had negative experiences at university were more predisposed to mental health worsening and, the most satisfied with aspects related to the institution, the better their mental health⁽⁷⁾.

We observed correlations varying from weak to strong among scores of adaptation to university and CMD. We highlight the Personal dimension that was the one with lower adaptation score and that presented strong and negative correlation with CMD scores, showing the strict relationship between the aspects assessed by this dimension and the indicating symptoms for CMD.

In summary, the results show that the adaptation process to superior education needs particular attention, once it has repercussions not only in the academic trajectory, but also, in the students' health. Therefore, when considering the complexity and dynamism of the theme and, the variety of intervenient factors, more studies are needed. Also, actions towards all the different student demands, being health, adaptation and consequently, health improvement, quality of life, as well as, the development of students' potentialities^(1,25).

CONCLUSION

The results found in this study showed that participants presented good levels of adaptation to university, especially about their involvement in the course and vocational project, satisfaction with their institution, extra-curriculum activities and, interpersonal relationship. We observed high prevalence of positive screening for CMD and an inverse and significant correlation with adaptation, indicating the better adaptation to university, the lower predisposition to CMD.

Additionally, the results point the need of interventions directed to academic adaptation as a health promotion strategy for university students, besides contributing with better performance and academic success.

We highlight that this study has limitations, considering the depth of the subject and the diversity of influencing elements. Another relevant limitation refers to the cross-sectional design that allows to establish general relationships from the comparison of individuals in the same temporal cut, therefore, it does not enable to determine cause-effect associations.

At last, we recommend new investigations, especially longitudinal ones, to better comprehend this relationship and intervention that will provide evidence to develop actions related to this theme.

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