Resistance to stress and depression in students...

RESISTANCE TO STRESS AND DEPRESSION IN STUDENTS OF NURSING TECHNICAL COURSES

RESISTÊNCIA AO ESTRESSE E DEPRESSÃO EM ESTUDANTES DE CURSOS TÉCNICOS EM ENFERMAGEM

ABSTRACT

Objective: to identify the presence of hardy personality and its correlation with depressive symptoms and academic aspects among students of nursing technical courses. Method: this was an exploratory, inferential and cross-sectional study, with a quantitative approach, carried out with 113 students, from September to October 2012, using the Beck Depression Inventory (BDI) and the Hardiness Scale (HS), after approval by Research Ethics Committee (CAAE: 02653512.7.0000.5504). Results: we identified 9.73% (11) of students were with suggestive symptoms of depression and 17.69% (20) had hardy personality. There was a negative correlation between the dimensions of hardiness and symptoms of depression, and positive correlation between these and the intention to drop out the course and have another profession. Logistic regression indicated the "course load" as predictor of depressive symptoms. Conclusion: it was found that the incidence of depressive symptoms is similar to that reported in undergraduate nursing students and the hardy personality was a protective factor, while the course load was predictor. Descriptors: Psychological Resilience; Depression; Students; Nursing.

RESUMO

Objetivo: identificar a presença de personalidade hardy e sua correlação com sintomas depressivos e acadêmicos entre alunos de cursos técnicos em enfermagem. Método: estudo exploratório, inferencial e transversal, com abordagem quantitativa, realizado com 113 estudantes, entre setembro e outubro de 2012, utilizando-se o Inventário de Depressão de Beck (BDI) e o Escala de Hardines (EH), após aprovação do projeto pelo Comitê de Ética e Pesquisa (CAAE: 02653512.7.0000.5504). Resultados: identificou-se que 9,73% (11) dos estudantes estavam com sintomas sugestivos de depressão e 17,69% (20) apresentaram personalidade hardy. Houve correlação negativa entre as dimensões de hardiness e sintomas de depressão, e correlação positiva entre estes, intenção de desistir do curso e possuir outra profissão. A regresão logística indicou a "carga horária" como preditor para sintomas depressivos. Conclusão: constatou-se que a incidência de sintomas depressivos é similar com a encontrada em graduandos de enfermagem e a personalidade hardy foi um fator protetor, enquanto que a carga horária do curso foi preditor. Descritores: Resiliência Psicológica; Depressão; Estudantes; Enfermagem.

RESUMEN

Objetivo: identificar la presencia de personalidad hardy y su correlación con síntomas depresivos y aspectos académicos entre alumnos de cursos técnicos en enfermería. Método: estudio exploratorio, inferencial y transversal con abordaje cuantitativo, realizado con 113 estudiantes, entre setiembre y octubre del 2012, utilizando-se el Inventario de Depresión de Beck (BDI) y la escala de Hardiness (EH), después de la aprobación del proyecto por el Comité de Ética e Investigación (CAAE: 02653512.7.0000.5504). Resultados: se identificó que 9,73% (11) de los estudiantes estaban con síntomas sugestivos de depresión y 17,69% (20) presentaron personalidad hardy. Hubo correlación negativa entre las dimensiones de hardiness y síntomas de depresión, y correlación positiva entre éstos, intención de desistir del curso y poseer otra profesión. La regresión logística indicó la "carga horaria" como vaticinadora para síntomas depresivos. Conclusion: se constató que la incidencia de síntomas depresivos es similar con la encontrada en graduandos de enfermería y la personalidad hardy fue un factor protector, mientras que la carga horaria del curso fue vaticinadora. Descriptores: Resistencia Psicológica; Depresión; Estudiantes; Enfermería.
INTRODUCTION

It is estimated that about 350 million people experience depressive disorders and that this number will increase significantly in the coming decades. According to the International Classification of Diseases, in its 10th edition (ICD-10), depression is an affective disorder that involves mood alterations, with a depression or euphoria, accompanied by changes in performance, behavior, patterns of thought and perception of individual, physical complaints and high risk of suicide.\(^2\)

The most common symptoms of depression are depressed mood, loss of interest and pleasure, reduced energy with increased fatigue, reduced concentration and attention, reduced self-esteem and self-confidence, guilt and worthlessness ideas, bleak and pessimistic views of the future, self-injurious or suicidal ideas or acts, disturbed sleep and decreased appetite. In some cases, symptoms may be masked by additional features such as irritability, excessive consumption of alcohol, histrionic behavior, exacerbation of pre-existing phobic or obsessive symptoms or hypochondriac concerns.\(^3\)

Health care students are not a population exempt to the occurrence of this serious public health problem. Students in vocational training phase in this area are more exposed to stress and depression due to practical activities, internships and characteristics of these professions.\(^4\) The student deals with feelings of vulnerability, management of the volume of information, planning of professional career, stress arising from situations of internships, difficulties linked to individual characteristics and personal situations (psychological vulnerabilities, socioeconomic status, family problems), problems concerning the quality of education and the educational environment, and wear related to contact with sick people and death.\(^4\)

Such situations, considered stressful, may favor the development of mood disorders, being depression the most common.\(^2\) However, sometimes the subjects respond to stressful situations with exhaustion or depression. Some personality traits have been studied in order to identify types of people who may be refractory to stress and depression. Research indicates that stress-resistant individuals have a different personality structure characterized by the term hardiness, hardy personality or resistant personality.\(^5,6\)

Hardiness is a set of qualities or personality traits that promote greater resistance to stress and is characterized by three domains: Commitment, Control and Challenge.\(^7\) To be considered hardy, the individual must submit high scores in all three domains of the construct, that is, believe they can control or influence the events of their lives (Control Domain), feel involved in the activities of life (Commitment Domain) and believe that the changes in their lives are a challenge and contribute to their personal growth (Challenge Domain).\(^8\)

Studies conducted with nurses and nursing managers, aiming to reduce the work-related stress, have shown that hardiness can be taught and learned and has been considered a predictor of health.\(^9\) Hardy individuals report fewer diseases related to chronic stress and burnout syndrome, which are considered precursors of depression.\(^5,9\)

In conducting the study with students of undergraduate degree in nursing, it was observed the incidence of depression in this population and the negative correlation between hardiness and depressive symptoms. Considering these findings and the fact that the surveyed students were engaged exclusively with academic activities, the question about how the health of students of nursing technical courses and their coping were arouse, since this is a population with a different sociodemographic profile and that is, theoretically, exposed to different stressors.

Given the presented, this study is justified by the importance and relevance of the subject, by the lack of national research relating hardiness and depression and the by the novelty of this research topic with students of professional courses in nursing.

This study aimed to identify the presence of hardy personality and its correlation with depressive symptoms and academic aspects of students of nursing technical courses, defending the following assumptions: the hardy personality interferes directly in the assessment and in the presence of depressive symptoms; and the incidence of depressive symptoms among the students of nursing technical courses has higher levels than those found among undergraduate students in nursing.

METHOD

This study is part of the research project << Stress, Coping, Burnout, depressive symptoms and Hardiness in students of nursing technical courses >> approved by the Research Ethics Committee (CEP - UFSCar), with the opinion...
This is an exploratory, inferential study, with a quantitative approach, carried out with students of two professional courses in nursing, one of a public institution and the other of a private institution, in the city of São Carlos (SP), from September to October 2012. The population consisted of 145 students, of which 113 met the inclusion criteria, namely: students enrolled in the course and aged over 18 years old; and exclusion criteria: students who did not wish to participate and under 18 years old.

Data were collected through a research protocol, which was applied to students by the researchers, in classroom, after the presentation of the study, guidance for filling out the instruments and signing the Informed Consent Form. Schedules were previously arranged with professors of disciplines opinion of and with the consent of the coordinators of the courses. Students who were not present in the previously scheduled groups were individually contacted for scheduling.

The protocol was composed by a biosocial form, developed by the authors, with sociodemographic data and about training of interest, namely: gender, age, family income, having another profession, having already thought about giving up the course and course load of the current module; the Hardiness Scale (HS) and the Beck Depression Inventory (BDI).

The HS, validated in Brazil, is a Likert-type scale, self-administered, with 30 items, with answers ranging from zero (no true) to three (completely true). The results can be obtained by summing the scores for each item in each domain. The domains were dichotomized into “high” and “low” from the calculation of weighted averages. It was considered hardy individuals that had high average in all three domains.\(^5\)

The BDI, also adapted in Brazil, is self-administered, contains 21 questions with four alternatives ranging from zero (no symptoms) to three (greater presence of depressive symptoms).\(^10\) The results can be obtained by summing the scores of items categorizing them as: absence of depression (score less than 15), dysphoria or mild depression (score be/tween 15 and 20), moderate depression (score between 21 and 30) and severe depression (score above 31), as recommended by scholars on the theme to non-clinical and not suspected sample.\(^11-13\)

The collected data were statistically analyzed using Statistical Package for Social Sciences (SPSS) version 17.0 by a professional with a degree in biostatistics who performed the descriptive and correlation analysis by Spearman test and Kolmogorov-Smirnov, with a significance level of \(p < 0.05\), reliability analysis of the instruments by Cronbach’s Alpha and logistic regression.

**RESULTS**

Instruments proved to be reliable to measure constructs, with Cronbach’s Alpha values of 0.725 for the general HS and 0.863 for the BDI. However, the analysis of the dimensions of the HS showed intermediate reliability for Commitment (0.638) and low for Control and Challenge (0.490 and 0.440, respectively).

It was found that most of the students are female, young adult, has another job and has never thought about giving up the course. In addition, 44 (40%) students reported having monthly family income between one and two minimum wages. Added to this, the mean course load in the current professional course module is 558.50 hours (minimum = 300; maximum = 600, SD = 72.01).
Regarding the presence of signs and symptoms suggestive of depression, it was found that 90 (79.64%) students presented values compatible with normality. However, it is emphasized that 23 (20.33%) students showed signs suggestive of depressive symptoms, from mild to severe.

There was a significant positive correlation between depressive symptoms and intention to give up the course ($Z = 8.311; p = 0.0039$) and between depressive symptoms and having another profession ($Z = 14.163; p = 0.0002$).

Analyzing the means for Hardiness dimensions, it was found that students exhibited higher means for the Commitment domain and lower to the Challenge (Table 2). Regarding Hardiness personality, we identified 20 (17.69%) hardy students.

| Table 1. Characterization of the students as the biosocial variables and vocational training. São Carlos, SP, 2013. |
|-------------|-----|-----|
| Variable    | N   | %   |
| Sex         |     |     |
| Female      | 94  | 83.19|
| Male        | 19  | 16.81|
| Age group   |     |     |
| ≤20         | 32  | 29.36|
| 21 - 30     | 41  | 37.61|
| 31 - 40     | 21  | 19.27|
| ≥41         | 15  | 13.76|
| Has ever thought about giving up the course |     |
| Yes         | 41  | 36.28|
| No          | 72  | 63.72|
| Has another profession |     |
| Yes         | 60  | 54.05|
| No          | 51  | 45.95|

There was also negative and significant correlation between depression and dimensions of HS (Table 3).

| Table 2. Means for the hardiness domains. São Carlos, SP, 2013. |
|------------|-------|-------|
| Domains    | Interval 0 - 30 | Interval 0 - 3 |
| Commitment | 20.61 | 2.07  |
| Control    | 19.93 | 2.01  |
| Challenge  | 15.17 | 1.54  |

As for logistic regression, it was found that only the variable “course load” (Ex (β) = 1.000; confidence interval = 0.997 to 1.003) appeared as a predictor for symptoms suggestive of depression.

| Table 3. Correlation matrix between HS and BDI. São Carlos, SP, 2013. |
|----------------|-------------|-------------|-------------|
| HS X BDI       | Commitment  | Control     | Challenge   |
| BDI            | -0.2833     | -0.3664     | -0.2586     |
| p              | p = 0.002   | p = 0.006   | p = 0.006   |

DISCUSSION

In the analysis of the reliability of the dimensions, it was found that Challenge dimension has the lowest coefficient ($α = 0.440$). This fact was detected in the scale adaptation and validation study for the Brazilian Portuguese, in which it was observed a Cronbach’s Alpha of 0.441 for the mentioned dimension. Similar results were found in national studies, in which we obtained the Challenge dimension with the lowest coefficient, being, respectively, 0.343, 0.513 and 0.550. However, in an American study there was a 0.820 Cronbach’s Alpha for the Challenge dimension and it was the coefficient with the highest score among the three dimensions.

In questioning the reason for the discrepancy between the findings of Brazilian and international studies, one can assume that it is related to the personality characteristics of the population itself, considering the cultural differences, or as a result of difficulties in the interpretation of the sentences that compose the scale or intelligibility of these sentences. Thus, there was the need to review the HS seeking to identify whether there were language interference that may impact the data analysis.

The predominance of women was expected since there is a historical predominance ratio of women in the nursing profession, a relationship built over time and the relationship between woman and care.
Regarding age, there was a predominance of the age group between 21 and 30 years old (37.61%), showing a young adult population profile. These young professionals will have early opportunities, which can lead to greater perspective of growth and progress. However, they will face commitments and challenges of the nursing profession at a younger age, in addition to the existence of doubts about the choice of profession. 

When considering family income, 80% of students reported having a monthly income of up to three minimum wages. It can be assumed that this factor is motivating the search for professional and social advancement, considering the employability of nursing technicians category. However, it is a contributory factor to stress, in that students need to work to compose the family income and keep the course, simultaneously. 

Most students (54.05%) have another profession. It is known that individuals with lower family income start working earlier, which meets the population studied. In the analysis of the occurrence of depressive symptoms, it was found that 10.61% of the students had dysphoria and 9.73% suggestive symptoms of depression. Studies with undergraduate nursing students found from 10.3% (19) and 16.92% (16) with dysphoria and from 6.7% (19) to 6.15% (16) with symptoms of depression. It was found that the incidence of depressive symptoms among the students of nursing professional courses has an elevation of three percentage points compared to undergraduate students.

There was a significant positive correlation between depressive symptoms and intention of giving up the course, which is consistent with the literature, since it is common that people with depression experience reduced performance in studies, at work and in their daily chores with loss of interest and pleasure in carrying out activities and reduced energy. 

There was also significant correlation between depressive symptoms and having another profession. This may be related to the negative consequences that in some cases the work can bring, such as the difficulty in juggling it with other activities such as study, leisure and family life.

With respect to hardiness, 17.69% of students were identified as hardy personality. This finding is similar to that found in a study conducted with undergraduate nursing students, in which 19.23% of the subjects were identified as hardy individuals.

There was also a negative correlation of low intensity and statistically significant between BDI x Commitment, Control and Challenge, which allows us to infer that those students with hardy characteristics do not present depressive symptoms.

There was no statistical correlation between depressive symptoms and biosocial or academic characteristics.

In logistic regression analysis, it was found that only the variable “course load” appeared as a predictor for symptoms suggestive of depression and for all the three Hardiness dimensions, namely, Commitment, Control and Challenge. Thus, it was found that for each increase of one hour in the variable “course load” there is an increase of a value (1) in the BDI score and HS scales. In other words, course load presents a predictive factor for both students with depressive symptoms and dysphoria, and also for those with hardy personality.

**CONCLUSION**

The hardy personality interferes directly in the assessment and in the presence of depressive symptoms and allows us inferring that those students with hardy characteristics do not present depressive symptoms, confirming the findings in studies of other populations. 

The study found that the percentage of individuals with symptoms suggestive of depression approximates that found in the general population, however, slightly higher than the one identified in undergraduate nursing students.

It is concluded that the hardy personality is present among the students, however, by the results, most subjects are more susceptible to stress and depression due to the lack of this type of personality.

It stands out as study limitations the absence of a pilot test to the population studied, the lack of familiarity of individuals as research subjects, with difficulties in the interpretation of the sentences of the instruments, especially HS, and the time of collection have occurred during theoretical classes, giving the impression that some students wanted to respond quickly to the instruments in order to resume class.

As recommendations, it is suggested: efforts to implement curricular changes that provide challenging learning situations for students, encouraging them to build their knowledge with more autonomy from the beginning of their training, allowing them to feel in control of their learning and thereby
developing hardy personality; creating strategies that allow better monitoring of the mental health status of students for symptoms of depression and referral of suspected cases for professional assistance; and promoting strategies to facilitate the discussion on the subject and the development of hardy personality in students.

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REFERENCES
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