

Perceived Stress among Moroccan Nurses Student: Effect of the Emotional Self-efficacy

Lahcen Bandadi^{1,2*}, Nadia Chamkal^{2,3}, Siham Belbachir⁴, Ahmed O. T. Ahami¹

¹Department of Biology, Cognitive Behavioral Neuroscience and Applied Nutrition Team, Faculty of Sciences, University of Ibn Tofail, Morocco; ²Higher Institute of Nursing Professions and Techniques of Health, Rabat, Morocco; ³Department of Biology, Laboratory of Nutrition, Health and Environment, Faculty of Science, Ibn Tofail University, Kenitra, Morocco; ⁴Unit of Pedagogy, Research in Psychiatry, Medical Psychology and History of Medicine, Faculty of Medicine and Pharmacy, Mohammed V University, Rabat, Morocco

Abstract

AIM: This study examines the impact of emotional self-efficacy on perceived stress among nursing students.

METHODS: To conduct this study, two instruments were used. The first is the 10-item perceived stress scale version and the second is the emotional self-efficacy test.

RESULTS: The study shows that 59.10% of the nurses' students have a risk perception of the situations stressful. About 19.20% have a psychopathological perception. In addition, the seven dimensions of emotional self-efficacy contribute to the perceived stress levels at 69%. However, the managing own emotions is the main contributor of the perceived stress level ($\beta = -0.67^{**}$).

CONCLUSION: These results show the importance of the emotional self-efficacy to prevent the stress and these harmful consequences. Therefore, it is important to integrate a specific emotion management module into the nursing students basic training program. Furthermore, special interest should be given to promote the nurses' students psychological health.

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***Correspondence:** Bandadi Lahcen, Department of Biology, Cognitive Behavioral Neuroscience and Applied Nutrition Team, Faculty of Sciences, University of Ibn Tofail, Morocco. E-mail: lahcen.bandadi@uit.ac.ma
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Introduction

Stress is a universal concept that has been studied in different contexts. According to the transactional model, stress is a cognitive process including primary appraisal and secondary appraisal. In fact, it is not events that cause the stress, but rather the events perception. In this perspective, perceived stress refers to the primary environment assessment [1].

In the nursing field, several stress studies have been conducted, among both professionals and students. Different facets have been addressed. Thus, we distinguish the stress factor and determinant studies [2], [3], [4], [5], [6], [7]. Others have been interested to the stress impact [8], [9], [10], [11], [12] and the coping stress strategies [2], [13], [14]. Similarly, some studies have examined the stress levels [15], [16], [17], [18], [19], [20], [21], [22]. In addition, other studies have focused on the relationship between emotional intelligence and stress [23], [24], [25], [26], [27], [28].

The nursing students training is described as also stressful [15], [29]. This stress can be observed both in the clinical and the academic settings [30]. However, the stress perceived nursing students are mainly due to the clinical stressors [31]. Diverse stress levels have been identified among nursing students: Higher stress levels [16], [17], [21], middle stress levels [32], [14] and low stress levels [13].

In relation to the stress consequences, stress exposes to the physical, the psychological, and the social risks [31] among others, the depressive and anxiety pathologies [33].

The emotional intelligence is an essential skill to better manage it. Indeed, there is a significant negative correlation between emotional intelligence and stress [25], [27]. It is also a means to prevent nurses stress and is a strategy to improve their health [23]. In the same vein as the emotional intelligence, another concept was designed and used by Kirk *et al.* [34] then by Deschênes *et al.* [35]. This concept is the emotional self-efficacy. To elaborate this, these authors drew on three basis theories. The first is Bandura's self-efficacy

theory, the second is the Mayer and Salovey emotional intelligence theory, and the third is the Petrides and Furnham emotional intelligence trait [35]. Self-efficacy is a belief in one's ability to achieve one's goals. It is a process that has a cognitive, motivational, and emotional component [36].

Promoting nurses' self-efficacy is a leadership strategy to improve practice [37]. This helps to better understand human phenomena and to better personalize care [38]. Among nursing students, self-efficacy is a main indicator to develop clinical skills and to help to overcome the challenges [39]. Emotional self-efficacy includes following dimensions: "Self-efficacy to perceive the own emotions and those of others, self-efficacy to use emotion, self-efficacy to understand the own emotions and those of the others, and self-efficacy to manage our own emotion and those of others" [40].

In Morocco, no study has addressed to the effect of the emotional self-efficacy on the perceived stress among nursing students.

The purpose of the study was to: identify perceived levels of stress among nursing students; evaluate the skills of the emotional self-efficacy among nursing students; and identify the effect of the emotional self-efficacy on the perceived stress.

Methods

Study setting and participants

The participants in the current study were the nurses student from the Higher Institute of Nursing Professions and Techniques of Health, Rabat. This higher education institution not belonging to the university is part of the system of Institutes of Training of Health Professionals under the Ministry of Health.

Instruments

Perceived stress scale

To measure perceived stress, the 10-item perceived stress scale [41] was used. It is an instrument whose original version was designed by Cohen *et al.* [42]. It allows to measure sensations and thoughts using a Likert scale ranging from 1 (never) to 5 (very often). A score below 25 is considered a low stress, while a score above 40 is a high stress [43].

Emotional self-efficacy test

Emotional self-efficacy was assessed by the questionnaire designed by Deschênes *et al.* [35]. It is an instrument with 21 items with a Likert scale ranging from

1 (strongly disagree) to 6 (strongly agree). It measures seven emotional skills: The perception of one's emotions, the emotions others perception, the use of emotions, the understanding of one's emotions, the understanding of the emotions of others, the managing one's emotions, and the managing the emotions of others.

Statistical analyses

Descriptive statistics were used to present results. Qualitative variables such as the sex and the perceived stress were transformed into a qualitative variable (low, medium, and high stress level). They are presented to number and percentage. The quantitative variables with normal distribution are expressed as mean and standard deviation. Alpha of Cronbach's was calculated to measure the internal consistency of the different items. The Student's t-test was used for gender comparisons. In addition, Pearson's correlations were calculated to establish correlations between variables independent of emotional self-efficacy, as well as the correlation between these variables and perceived stress. A standard multiple linear regression analysis (method = enter) was adopted to examine the contribution of each element of emotional self-efficacy. The statistical significance was set at $\alpha = 0.05$.

Ethical considerations

To carry out this study, permission was obtained to collect data. Furthermore, the participants consent was granted after being informed of the study purpose and the right to decide to participate freely in the study and to withdraw at all times and without prejudice. They were also informed of the anonymity respect and the confidentiality.

Results

Sociodemographic characteristics of participants

The study population includes 320 Moroccan students from the Higher Institute of Nursing Professions and Techniques of Health, Rabat. The majority of participants were female (72.50%) with the rest (27.50%) who were male. The mean age was 21.29 ± 0.79 .

Nurse students level stress

The nursing students stress levels vary from the low to high. Thus, 21.70% have a low stress, 59.10% have moderate stress, and 19.20% have a high stress, Figure 1.

Emotional self-efficacy dimensions and perceived stress

The all emotional self-efficacy dimensions, Cronbach's alpha coefficient values were higher (0.73–0.87). In addition, the perceived stress items, Cronbach's alpha coefficient is higher (0.89), Table 1.

Significant differences between males and females were observed in the perception of emotions of others ($p < 0.01$) with a higher value among males, as well as for the understanding the emotions of others ($p < 0.01$), still with higher values in males. A significant gender-related difference was also observed in perceived stress ($p < 0.05$), Table 1.

Bivariate Pearson's correlations analysis

Bivariate Pearson's correlations analysis between the emotional self-efficacy dimensions shows significant positive correlations ranging from low to moderate (0.26 to 0.60). As regards the relationship between each emotional self-efficacy dimensions and perceived stress, the study results revealed a significant negative correlations between each dimension of emotional self-efficacy and perceived stress score (-0.28 – -0.80), Table 2.

Standard multiple regression

The value of R square is 0.69. This means that the independent variables (emotional self-efficacy dimensions) contribute at 69% to the perceived stress

(dependent variable). Furthermore, we found $F=104.84$ and $p < 0.01$, which confirms the relationship. However, managing one's emotions is the main variable that has a significant effect on perceived stress (Beta = -0.67 , $p = 0.01$). Other emotional self-efficacy dimensions have a weak significant effect such as the one's emotions perception (beta = -0.16 , $p < 0.01$), the emotions of others perception (beta = -0.12 , $p = 0.01$), and the use of emotions (beta = -0.12 , $p < 0.01$), Table 3.

Discussion

The purpose of this study is to identify the level of perceived stress and the emotional self-efficacy dimensions and to elucidate the relationship between the two concepts. The results show that the level of stress varies from low to high. This is reminiscent of the results of other studies [13], [44], [45]. In addition, the middle perceived stress in the all study population is 30.88 (± 9.61), value greater than that raised by Singh *et al.* [46] whose value is 28.67 (± 5.32). Similarly, a significant difference between the male sex 23.48 (± 9.42) and the female sex 33.68 (± 8.09) was observed. This reminds us of the results of Singh *et al.* and Laraqui *et al.* [46], [47].

About 78.20% of the nurses' students have a perceived stress level ranging from medium to high with predominance of the medium level (59.10%

Table 1: Means, standard deviations, and Cronbach's alpha coefficient of the study variables

Variables	Coefficient alpha de Cronbach's	Mean all group (SD)	Mean males (SD)	Mean females (SD)	p (males, females)
Perceiving own emotions	0.80	3.29 (1.14)	3.67 (1.22)	3.14 (1.08)	>0.05
Perceiving other's emotions	0.83	3.58 (1.38)	4.36 (1.54)	3.29 (1.19)	<0.01
Using emotions	0.82	4.26 (1.46)	4.56 (1.41)	4.14 (1.46)	>0.05
Understanding own emotions	0.85	4.64 (1.25)	4.78 (1.05)	4.59 (1.32)	>0.05
Understanding other's emotions	0.87	4.46 (1.43)	5.20 (0.93)	4.18 (1.48)	<0.01
Managing own emotions	0.85	4.08 (1.25)	4.78 (1.05)	3.81 (1.22)	>0.05
Managing other's emotions	0.73	3.76 (0.71)	4.08 (0.60)	3.64 (0.71)	>0.05
Perceived stress	0.89	30.88 (9.61)	23.48 (9.42)	33.68 (8.09)	<0.05

Table 2: Correlation between the study variables

Study variables	1	2	3	4	5	6	7	8
Perceiving own emotions	1							
Perceiving other's emotions	0.55**	1						
Using emotions	0.38**	0.43**	1					
Understanding own emotions	0.30**	0.28**	0.27**	1				
Understanding other's emotions	0.26**	0.35**	0.45**	0.43**	1			
Managing own emotions	0.37**	0.60**	0.50**	0.27**	0.280**	1		
Managing other's emotions	0.45**	0.56**	0.43**	0.35**	0.35**	0.55**	1	
Perceived stress	-0.48**	-0.62**	-0.37**	-0.28**	-0.29**	-0.80**	-0.55**	1

** $p < 0.01$; * $p < 0.05$.

Table 3: Standard multiple regression of the emotional self-efficacy dimensions

Emotional self-efficacy dimensions	Model summary	ANOVA	Standardized coefficients Beta	t	Sig.	Collinearity statistics Tolerance	VIF
Perceiving own emotions	R square=0.70	F=104.84**	-0.160	-4.17	0.000	0.65	1.55
Perceiving other's emotions	Adjusted		-0.125	-2.80	0.005	0.48	2.10
Using emotions	R square=0.69		0.117	2.99	0.003	0.628	1.59
Understanding own emotions	F change=104.84**		0.004	0.12	0.903	0.75	1.33
Understanding other's emotions			-0.041	-1.09	0.274	0.68	1.48
Managing own emotions			-0.673	-15.88	0.000	0.53	1.88
Managing other's emotions			-0.077	-1.85	0.064	0.56	1.78

** $p < 0.01$; * $p < 0.05$.

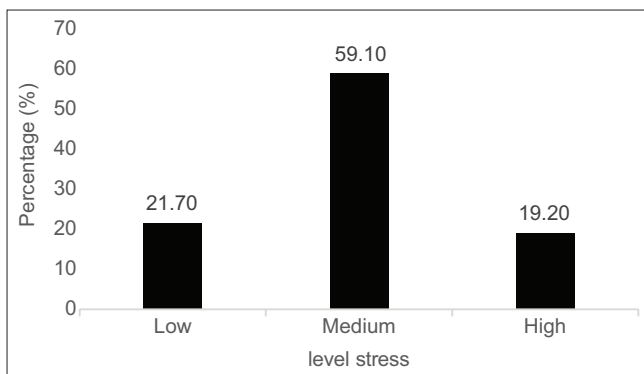


Figure 1: Nurse students level stress

of students). Therefore, stress could be a serious problem, especially since a large number of students (19.20%) have a high stress level. These stress levels elucidate possible psychological risks [31], [33]. Indeed, a perceived stress score above 28 is a threshold for to onset of anxiety and depression [33]. Similarly, other studies report that a high level of stress is significantly related to physical-psychosocial health problems [48].

Concerning to emotional self-efficacy, the average values of the all emotional self-efficacy dimensions are lower than the required average. Significant differences between male and female ($p < 0.01$) were observed in the perception of the emotions of others [(mean female = 3.58 (1.38), mean male = 4.36 (1.54)] and understanding of other people's emotions [(female 4.46 (1.43), male 5.20 (0.93)]. In the same vein, the study of Deschênes and Capovilla also showed that the averages of the emotional self-efficacy dimensions are below the average. However, significant differences between males and females were observed in the perception of his emotions, the understanding of the emotions of others, and the management of his emotions [49].

As for, the relationship between perceived stress and emotional self-efficacy, the results indicate that the seven emotional self-efficacy dimensions are negatively correlated with perceived stress scores. In addition, multiple linear regression analyses show a strong link between managing one's emotions and perceived stress. These results support those of Foster *et al.* [24], Görgens-Ekermans and Brand [25], Karimi *et al.* [26], Por *et al.* [27] which showed a significant negative correlation between emotional intelligence and perceived stress. The same of the Deschênes *et al.* [49] which highlighted a significant negative relationship between emotional self-efficacy and burnout symptoms, given that the previous studies have shown relationships between stress and burnout [50], [51].

Conclusion

The present study shows that 59.10% of the nurses student has a risk profile and 19.20% have a perceived stress higher level and consequently a psychopathological perception of the training environment. In addition, the seven emotional self-efficacy dimensions contribute to the perceived stress levels at 69%. However, the management of one's own emotions is the main contributor of the perceived stress level ($\beta = -0.67^{**}$).

These results show the importance of the emotional self-efficacy to prevent the stress and these harmful consequences. Therefore, it is important to integrate a specific emotion management module into the nursing students basic training program. Furthermore, special interest should be given to promote the nurses students psychological health.

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