Perceived Stress in Clinical Areas and Emotional Intelligence among Baccalaureate Nursing Students

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Nursing students experience potential sources of stress - inducing situations and emotions as they deal with patients in clinical areas. The study explored perceived stress in clinical areas and emotional intelligence among 135 baccalaureate nursing students from second year to fourth year attending College of Health Sciences, Bahrain. The Perceived Stress Scale and The Schutte Emotional Intelligence Scale were adopted. The highest perceived stress experienced by the nursing students was from assignments and workload and was found among the fourth year students. Moderate to severe overall stress levels were experienced by all baccalaureate nursing students in clinical areas. The Post hoc analysis of F-test revealed significant perceived stress levels from lack of professional knowledge and skills among the second year students. Emotional intelligence by gender and year of study was not statistically significant. Overall perceived stress scores and emotional intelligence showed a negative correlation.

Keywords: Stress, Emotional Intelligence, Clinical area, Nursing students, Perceived Stress.

Nursing is a complex profession requiring professional nurses to interact with a variety of individuals including colleagues, clients and families in high stress environment. Nursing programs strive to prepare students with knowledge and technological skills to practice in multiple settings. Clinical practice is a critical component and the largest part of nursing education, which helps nursing students to enhance their professional knowledge, skills and values (Ralph, Walker & Wimmer, 2009; Moscaritolo, 2009). Students develop an understanding of the patient problems, develop their clinical knowledge, develop problem solving abilities and technological skills as they proceed through various clinical specialties (Amr, El-Gilany, El-Moafee, Salama & Jimenz, 2011).

The concepts of stress among nursing and health care students have been widely discussed. It has been reported that these groups experience high levels of perceived stress (Birks, McKendree & Watt, 2009). Perceived stress can be conceptualized as the extent to which a situation in one's life is appraised as stressful and the ability of the person to successfully deal with the personal and environmental challenges

(Forushani & Besharat, 2011). Clinical training is demanding and stressful to nursing students, and this is attributed to the demands of the course work, unfamiliar clinical environment, client population, nursing staff, and faculty. In addition, concerns about applied clinical skills in providing quality nursing care, fear of failure and emotions involved in dealing with patients creates additional anxiety in students (Birks et al., 2009; Maville, Kranz & Tucker, 2004; Oermann & Standfest, 1997). Nursing students are expected to be knowledgeable in different areas like client diseases, treatment and medications, investigations and diagnostic tests, also should have skills in communication, patient-nurse interactions and multidisciplinary collaboration (Chen & Hung, 2014). Also, difficulty in balancing study and social activities, heavy course works, time pressures are contributing factors to increased levels of stress.

Major sources of stress among undergraduate nursing students also includes examinations, long hours of study, assignments and grades, lack of free time, and lack of social support (Maville et al., 2004). Three types of stressors in nursing students were also identified: academic

stressors, clinical stressors, and personal/ social stressors (Martos, Landa & Zafra, 2012). In a comparative and longitudinal study conducted among 1707 nursing students in Albania, Brunei, the Czech Republic, Malta, and Wales, the sufferings of patients, death of a patient, or learning from a dying patient were the most common clinical stressors reported by students (Burnard et al., 2008). In addition, difficulty in balancing home and college demands, time pressure, financial concerns, and stress associated with feeling unprepared for clinical practice, feelings of distance from faculty and staff in clinical areas and feeling incompetent in clinical skills were reported in literatures (Magnussen & Amundson, 2003).

Stress is a complex, dynamic process of interaction between a person and his/her life. It can positively or negatively affect individuals by either motivating or hindering academic and clinical achievement and can adversely affect their personal well-being and long term professional capabilities (Ray, 2006; Abhay, Krishnakumar, Paul & Shashidhar, 2011). Studies have shown that 40.2% of nursing students in Egypt and 71.8% of mid-level nursing students in Greece report high levels of perceived stress levels (Amr et al., 2011). By applying Neuman Systems Model to nursing students in clinical learning environment, Moscaritolo (2009) suggested that clinical stress invaded students' normal lines of defense and had resulted in anxiety. A strong positive association of situational stress with increase in errors due to its effect in decision making, concentration and recall (Reeves, 2005) and also with students' capability for problem solving and use of intellectual process have been reported (Shipton, 2002). Thus, stress can have an impact on nursing students by creating a poor professional image leading to difficulty in attracting new recruits to the profession, and also due to the dropout of distressed students who quit training as well as showing a poor performance outcome (Chan, Creedy, Chua & Lim, 2011). Conversely, Swafford (1992) suggests that anxiety among nursing students is less than would be expected and the anxiety they experience has positive effects (Ray, 2006).

Elfert (1976) has reported that nursing students found clinical experiences satisfying, but also a source of increasing stress throughout their nursing program. The leading stressors were the examinations, the level and intensity of academic work load, the theory-practice gap, and poor relationships with clinical staff (Yucha, Kowalski & Cross, 2009). Insecurity, anxiety and fear occur when learning, ability and performance of students are evaluated (Custodio, Pereira & Seco, 2010). The initial clinical experience is the most stressful and a major domain of threat to nursing students compared to the personal, academic and social domains (Jimenez, Navia-Osorio & Diaz, 2010). Dealing with new clinical situations, handling patients' emotional problems, giving first injections, seeing the first cardiac arrest, taking intimate care of both male and female patients, being critically evaluated by self and others are also potentially causes of concerns for nursing students (Ray, 2006). Increasing patient acuity, complex technology and nursing staff shortage also puts nursing students in demanding situations and in stress (Wolfgang, Lind, Lynne & Anne, 2001). Even though sources of stress and stress levels have been reported among nursing students in Western population, there has been limited research on clinical stress among the Arab population (Amr et al., 2011).

Many factors are identified to regulate and manage the level of stress an individual is experiencing. These moderator and mediator variables are important in contributing to a person's ability in coping with the stress situations. The moderator factors include the sex, socio-economic status or personality traits and the mediators are the individual's own coping process. Family as a social group also contributes to individual coping skills. Emotional intelligence is another mechanism to moderate stress experienced by persons (Berges & Augusto, 2007).

Emotional intelligence (EI), which is conceptualized in terms of perception, appraisal and expression of emotions, is increasingly discussed as having a significant role in medicine, nursing and other health care disciplines, both

for personal mental health and professional practice. Goleman (1998) suggested that life success depends more on emotional intelligence than cognitive intelligence. EI is the set of abilities (verbal and non verbal) that enable a person to regulate his own emotions and understand others emotions in order to guide thinking and action to successfully cope with environmental demands and pressures. It enables a person to accurately identify personal strengths and weakness leading to an attitude of self-confidence while improving the areas of weakness. EI also has been linked to leadership and better interactive skills and persons with high EI tend to be more cooperative and said to have more self-control against criticisms (Larin et al., 2011; Birks et al., 2009; Reeves, 2005). Trait emotional intelligence, which refers to the individual differences in the perception, processing, regulation and utilization of emotional information, is found as a protective factor with respect to mental health and psychological well-being of individuals as well as to deal with depression, chronic diseases, chronic pain, substance abuse, anxiety and somatic symptom reporting (Forushani & Besharat, 2011).

Goleman (1998) hypothesized that emotional intelligence plays a role in establishing and maintaining relationships and Saarni (1999) posited that emotional competence contributes to the quality of interpersonal relationships. In medical education, EI has been proposed as an important attribute of professional competence. Freshwater and Stickley (2004) discussed the role of emotions in caring for patients and how emotional intelligence can enhance nurses to deliver a more reflective practice. Some studies have demonstrated gender differences in the EI levels (Birks et al., 2009). Few studies conducted with nurses and other health care students have shown that EI minimizes negative stress consequences (Landa & Zafra, 2010; Birks et al., 2009; Pau & Croucher, 2003). EI allows nurses to develop empathy and help in establishing therapeutic relationships with clients and families, and help to better care for others and better manage stress (Landa & Zafra, 2010). As health care training involves patient contact, it may be hypothesized that students with high

EI would achieve more satisfactory patient outcomes than students with low EI (Berges & Augusto, 2007). The increasing recognition of the role EI plays in improving patient outcomes has led some researchers to recommend it as a criterion for the selection of medical and nursing students (Pau & Croucher, 2003).

However, very little empirical work has examined EI in health professionals or its impact on professional and academic outcomes. Few research studies have demonstrated that EI was positively associated with lower perceived stress in dental undergraduates (Birks et al., 2009). Even though many studies have been conducted related to stress among nursing students, there is little empirical evidence about stress in clinical areas and emotional intelligence among nursing students.

Objectives:

1. To identify the sources of perceived stress among baccalaureate nursing students in clinical areas.

2. To assess the emotional intelligence among the baccalaureate nursing students.

3. To examine the relationship between the perceived stress and emotional intelligence among baccalaureate nursing students.

Method

Sample:

Three groups of Baccalaureate nursing students attending College of Health Sciences, University of Bahrain from second year to fourth year, including those students in internship were selected by stratified random sampling method. Participants were in the age group of 18-35 years. Only those who were exposed to clinical learning experience were included in the study. Questionnaires were distributed to 140 students out of which 135 were completed and returned (96.42%). The final sample consists of 112 females and 23 males.

Tools:

In addition to the demographic information which included the student's age, gender, year

of study and the clinical practice areas they were already exposed, the following questionnaires were used:

Perceived Stress Scale (PSS): Perceived stress was measured using PSS, developed by Sheu et al. in 1997 (Sheu, Lin & Hwang, 2002), after obtaining written permission from the author. The scale consists of 29 items on a five-point Likert Scale grouped into six factors: stress from taking care of patients, stress from teachers and nursing personnel, stress from assignments and workload, stress from peers and daily life, stress from lack of professional knowledge and skills & stress from clinical environment. The total scores ranged from 0 to 116, higher scores indicating higher degrees of stress. The Cronbach's alpha of the scale is 0.89 with a one -week test- retest reliability of 0.60.

Schutte Emotional Intelligence Scale: Emotional Intelligence among nursing students was measured using Schutte Emotional Intelligence Scale developed by Schutte et al., in 1998 (Schutte, Malouf & Bhullar, 2009). Permission was obtained from the author for using this scale. The internal consistency of the scale is 0.87 measured by Cronbach's alpha. It consists of 33 items and rated on a 5-point scale, three of which are reverse scored. The total scores ranged from 33 to 165, higher scores indicating higher emotional intelligence.

Procedure:

The study was approved by the Research Committee of the institution. The data was collected from May 2012 to February 2013. A descriptive correlational study design was used. Students received an information sheet explaining the purpose of the study and participation was on voluntary basis assuring confidentiality of the information. The questionnaires were distributed in the classrooms and allowed to be taken home to complete.

Descriptive and inferential data analyses were performed. Gender differences on perceived stress levels and emotional intelligence were calculated using t-tests. ANOVA (analysis of Covariance) was used to test the differences in stress levels of respondents according to year of study. Post hoc analysis was performed for statistically significant ANOVA findings. Additionally, Pearson correlation coefficient was used to determine the relationship between perceived stress levels and EI.

Results

Survey Response and Demographic Characteristics

A total of 135 nursing students, 112 females (83%) and 23 males (17%) participated in the study. When grouped according to the year of study, 52 of them were fourth years (38%), 39 were third years (29%) and the remaining 44 (33%) were second year nursing students.

Part A: Perceived Stress Levels

The highest perceived stress experienced by the nursing students were from assignments and workload (Mean = 3.90, SD=0.123) followed by stress from peers and daily life (Mean =3.22, SD=0.057). Stress from teachers and nursing staff, taking care of patients, lack of professional knowledge and skills and environment were comparatively low (Mean= 3.01, SD=0.041, 2.46, SD=0.077, 2.41, SD=0.181, 2.41,SD=0.014 respectively).

Stress level of baccalaureate nursing students as per the year of study. All the three groups of respondents had high mean stress levels in terms of assignments and workload, and was the highest among the fourth year students (Mean= 4.01,SD=0.739 vs. Mean= 3.97, SD=0.539 and Mean = 3.68,SD=0.763 for fourth, second and third years respectively). This could be attributable to the nature of courses they were undertaking during their final year of study like Pediatric Nursing, Nursing Research, Professional issues and the Internship, in which each of them has its own mastery requirements and professional competencies. Moderate to severe overall stress levels were experienced (Mean= 2.96, SD=0.071) by all groups of respondents when classified as per their year of study. However, the test of difference on the stress level of the respondents using ANOVA showed that students have an incomparable stress level from lack of professional knowledge and skills as denoted by p-value of .006 at 0.05 level of significance (see Table 1).

Table 1. Perceived Stress Level of Respondents as per the Year of Study with Test of Difference on Stress Levels

Stress Indicators	Mean	S.D	Year of Study		F	Sig.
Taking Care of Patients	2.61	0.868	Second	Between Groups	2.173	.118
	2.25	0.849	Third	Within Groups		
	2.49	0.726	Fourth	Total		
Teachers and Nursing Staff	3.01	0.797	Second	Between Groups	1.796	.170
	2.83	0.742	Third	Within Groups		
	3.15	0.823	Fourth	Total		
Assignments and Workload	3.97	0.539	Second	Between Groups	2.938	.056
	3.68	0.763	Third	Within Groups		
	4.01	0.739	Fourth	Total		
Peers and Daily Life	3.22	0.712	Second	Between Groups	.872	.420
	3.35	0.699	Third	Within Groups		
	3.14	0.797	Fourth	Total		
Lack of Professional Knowledge and Skills	2.80	1.216	Second	Between Groups	5.257	.006*
	2.06	0.855	Third	Within Groups		
	2.35	1.054	Fourth	Total		
Environment	2.61	1.019	Second	Between Groups	.719	.489
	2.79	1.019	Third	Within Groups		
	2.85	1.042	Fourth	Total		
Composite Mean	3.04	0.642	Second			
	2.83	0.506	Third			
	3.00	0.536	Fourth			
Overall Stress Levels	2.96	0.071				

* $p < 0.05$

In the Post Hoc analysis of the F-test on the stress levels of the respondents, the second year nursing students have significantly greater perceived stress levels from lack of professional knowledge and skills (Mean difference 0.743, p-value of 0.007 at 0.05 level of significance) than third year nursing students (Table 2). Therefore, it can be concluded that respondents' stress levels from lack of professional knowledge and skills differs significantly with their year of study in the nursing program. However, the overall perceived stress levels of students according to the year of study were not significant (F- value is 1.599 and p - value 0.206 at 0.05 level of significance).

Stress level of baccalaureate nursing students as per gender. The mean stress scores of male and female nursing students were 2.99, SD=0.591 and 2.96, SD=0.567 respectively (Table 3). However, there were no significant differences in the perceived stress levels of students in the clinical areas when grouped according to their gender (t-value of 0.280 and p-value of 0.780 at a level of significance of p ≤ 0.05) except for the indicators three and five. Indicator three, i.e., stress from assignments and workload, with a t-value of -2.667 and p-value of 0.012, at 0.05 level of significance shows that males can handle stress better than their female counterparts as reflected by their mean scores 3.56, SD=0.662 vs. 3.97, SD=0.687 as shown

Table 2. Post Hoc Test Result on Stress Levels of Respondents when Grouped According to Year of Study

Dependent Variable	(I)	(J)	Mean Difference (I-J)	Std. Error	Sig.	95%Confidence Interval	
						Lower Bound	Upper Bound
Stress from Lack of Professional Knowledge and Skills	Second	Third	.743*	.233	.007	.17	1.32
		Fourth	.457	.217	.113	-.08	.99
	Third	Second	-.743*	.233	.007	-1.32	-.17
		Fourth	-.286	.224	.445	-.84	.27
	Fourth	Second	-.457	.217	.113	-.99	.08
		Third	.286	.224	.445	-.27	.84

* The mean difference is significant at the 0.05 level.

Table 3. Perceived Stress Level of Respondents by Gender with Test of Difference on Stress Levels

Stress Indicators	Gender	Mean	S.D	Levene's Test for Equality of Variances		t-test for Equality of Means			
				F	Sig.	t	df	Sig. (2-tailed)	Mean Difference
Taking Care of Patients	Male	2.66	0.771	.708	.402	1.367	33.161	.181	.244
	Female	2.42	0.824	1.079	.301	-.028	34.898	.978	-.005
Teachers and Nursing Staff	Male	3.01	0.713	.000	1.000	-2.667	32.488	.012*	-.407
	Female	3.01	0.816	1.458	.229	.597	37.767	.554	.087
Assignments and Workload	Male	3.56	0.662	4.324	.040*	.806	133	.422	.202
	Female	3.97	0.687	.397	.530	.458	33.433	.650	.100
Peers and Daily Life	Male	3.3	0.609	.708	.402	1.367	33.161	.181	.244
	Female	3.21	0.764	1.079	.301	-.028	34.898	.978	-.005
Lack of Professional Knowledge and Skills	Male	2.58	1.334	.000	1.000	-2.667	32.488	.012*	-.407
	Female	2.38	1.039	1.458	.229	.597	37.767	.554	.087
Environment	Male	2.84	0.958	4.324	.040*	.806	133	.422	.202
	Female	2.74	1.012	.397	.530	.458	33.433	.650	.100
Composite Mean	Male	2.99	0.591						
	Female	2.96	0.567						

* At 0.05 level of Significance

in Table 3. In Indicator five, i.e., stress from lack of professional knowledge and skills, p-value of .040 shows that males have more stress than females, which was reflected by their mean scores of 2.58,SD=1.334 vs. 2.38,SD=1.039 respectively.

Part B: Emotional Intelligence of students as per year of study and gender

Higher EI scores were observed among the third year students (Mean =131.31, SD=0.17.58) than fourth and second year students (Mean= 129.50, SD=14.01 and 126.52, SD=16.395 respectively). Female respondents had higher

EI scores over their male counterparts (Mean= 129.42, SD=16.86 vs. Mean =127.26, SD=9.98). The scores also showed a comparative variance: F-value of 3.146 and p-value of .078 at 0.05 level of significance and a t-value of -.574 and p-value of .567. However, the EI scores were not statistically significant by gender as well as the year of study.

Part C: Relationship of Student's overall stress level and Emotional Intelligence

A highly negative significant relationship (r-value of -0.276 and p-value of .001) between the over-all stress level and EI was observed among the respondents tested at 0.01 level of significance.

Discussion

The major focus of our study was to identify relationships between perceived stress in clinical areas and emotional intelligence among baccalaureate nursing students. The findings of the study shows that the stress experienced by the nursing students in clinical areas were slightly higher (Mean=2.96, SD=0.071) than the stress levels among Associate Degree Nurses and BSN nursing students (Mean= 2.34) [Oermann & Standfest, 1997]. It was also much higher than the stress reported in Hong Kong nursing students (Mean=2.10, SD=0.44), and among Taiwan nursing students (Mean=1.75, SD= 0.43) in their initial period of nursing practice (Chan & So, 2009; Sheu et al., 2002). In contrast, nursing students experienced lower levels of perceived stress than other groups like Dental, Medical, and Physiotherapy and Engineering students (Abhay et al., 2011).

Stress by year of nursing program

In this study, second year students experienced greater amounts of overall perceived stress levels than third and fourth year baccalaureate nursing students similar to other studies (Chan & So, 2009; Tully, 2004; Custodio et al., 2010; Jimenez et al., 2010; Sharif & Masoumi, 2005). Most of their stress levels stemmed up from lack of professional knowledge and skills. The person is more prepared to cope with stress when he or she had similar experiences (Berges & Augusto, 2007). This is lacking in second year students

as they are exposed to the clinical areas for the first time, where they develop their professional skills as a beginner in taking care of patients. The clinical instructors or mentors can provide more support and encouragement to students to boost their self-confidence and independence which strengthens their clinical competencies (Sharif & Masoumi, 2005).

Among various types of clinical stressors, fourth year students experienced highest levels of stress in terms of assignments and workload than second year and third year students. Whereas environmental factors, frequent exams and assignments, and unfair clinical evaluations are reported to be most negative and stress inducing in the clinical practicum in other studies (Abhay et al., 2011; Ralph et al., 2009 & Custodio et al., 2010).

Stress by gender

There were no significant gender differences in the perceived stress levels among nursing students. However, male nursing students experienced higher stress levels than female students in regard to lack of professional knowledge and skills whereas female students experienced greater amount of stress in regard to assignments and workload. It could be due to the fact that female students have to cope up with the increasing demands of personal and familial responsibilities apart from their academic and professional demands. Similarly, higher level of perceived stress among female students is reported in other studies (Custodio et al., 2010; Pau & Croucher, 2003; Amr, Gilany & Hawary, 2008). In contrast, few studies reported no gender differences in level of perceived stress among students in professional courses (Abhay et al., 2011; Yucha et al., 2009).

Emotional Intelligence by year of study

In our study, emotional intelligence scores were higher among third year students than fourth and second year students, but it was not statistically significant. Though emotional intelligence scores were not indicated by year of the nursing program in other studies, however, it appears that emotional intelligence is linked with the perceived stress scores. Third year students, who obtained higher emotional intelligence

scores, were experiencing comparatively lower levels of perceived stress than fourth and second year students in our study, similar to other studies (Birks et al., 2009; Por, Barriball, Fitzpatrick & Roberts, 2011).

Emotional Intelligence by gender

Higher EI scores among female respondents over their male counter parts were observed in our study, but it was not statistically significant, whereas, a significantly higher EI score among female students than male students were observed among dental undergraduates (Pau & Croucher, 2003). In contrast, higher EI scores among male students than female students were found in other studies, even though it was also statistically not significant (Por et al., 2011; Namdar, Sahebihagh, Ebrahimi & Rahmani, 2008).

Emotional Intelligence & Stress

Emotional intelligence is found to act as a moderator of stress and to a certain level found to reduce the pronounced effects of stress. Our study results support the findings of previous research, and shows that there is a negative correlation between EI and perceived stress (Por et al., 2011; Birks et al., 2009; Pau & Croucher, 2003; Sunil & Rooprai, 2009). It appears that individuals with higher EI scores are better able to regulate and express their emotions and to adapt with the demanding situations experiencing lesser amounts of stress. It is also possible that students with higher EI were able to maintain and generate positive moods even in vulnerable situations, and are able to better handle the negative emotions by channelizing them in a positive way.

Conclusion

The findings provide insight into the stressful nature of the nursing practice in the clinical area and the benefit of having high emotional intelligence to ameliorate stress to a certain level. Students experience high levels of stress while dealing with clients and their families in addition to interacting with the health care staff and nursing faculty in a complex environment. Students need to be monitored when they come across difficult situations in regard to their course work and clinical assignments and provided

with the support whenever necessary. Also, academic assignments have to be balanced and workload of assignments needs to be reviewed with the requirements of clinical based practice so that it will be more interesting for them to learn. Faculty and nursing staff can prepare students for reality in practice, by which students acquire professional self-concept by developing independent learning and decision-making capabilities.

Our main study limitation was that it was conducted in one setting, which may affect the generalization of the study results to other institutions. Secondly, most of the participants in our study were females since an equal ratio of males were not available.

We hope that the present paper gives an insight into understanding the baccalaureate nursing students stress levels in a clinical environment. Further studies are required to explore the other variances which could interfere with stress and performance attributed to EI and to determine perceived stress levels of students in clinical area in relation to various courses, so that specific strategies for overcoming stressors can be determined. It would be also helpful to investigate whether teaching EI can bring positive outcomes to enhance nursing students' emotional intelligence skills, to help in developing self-control and reducing stress, for better personal and professional growth and psychosocial adaptation so as to include EI as a special component when they attract students for the profession. Emotional intelligence can be considered as an attribute in future to recruit candidates with caring and compassionate qualities to serve others especially in the present nursing arena where personal attitudes and technical competence is valued equally along with intellectual abilities.

References

Abhay, M. B., Krishnakumar, M.K., Paul, N.C., & Shashidhar, H.G. (2011). Differences in Perceived Stress and its Correlates among Students in Professional Courses. *Journal of Clinical and Diagnostic Research, Nov (suppl-1), 5*(6), 1228-1233.

Amr, M., El- Gilany, H.A., El-Moafee, H., Salama, L., & Jimenez, C. (2011). Stress among Mansoura (Egypt) Baccalaureate Nursing Students. *Pan African Medical Journal 2011*- ISSN 1937-8688 (http://www.panafrican –med-jounal.com/content/article/8/26/full/).

Amr, M., El –Gilany, A.H., & El-Hawary, A. (2008). Does Gender Predict Medical Students' Stress in Mansoura, Egypt? *Medical Education Online [serial online], 13* (12). doi: 10.3885/ meo.2008. Res00273

Berges, M.B., & Augusto, J.M. (2007). Exploring the Relationship Between Perceived Emotional Intelligence, Coping, Social Support and Mental Health in Nursing Students. *Journal of Psychiatric and Mental Health Nursing, 14* (2), 136-171.

Birks, Y., McKendree, J., & Watt, I. (2009). Emotional Intelligence and Perceived Stress in Health Care Students: a Multi-Institutional, Multi-Professional Survey. *BMC Medical Education, 9*(61), doi: 10.1186/1472-6920-9-61

Burnard, P et al. (2008). A Comparative, longitudinal Study of stress in Student Nurses in five countries: Albania, Brunei, the Czech Republic, Malta, and Wales. *Nurse Education Today, 28*, 134-145.

Chan, C.K.L., & So, W.K.W. (2009). Hong Kong Baccalaureate Nursing Students' Stress and their Coping Strategies in Clinical Practice. *Journal of Professional Nursing, 25*(5), 307-313. http://dx.doi.org/10.1016/j.profnurs.2009.01.018

Chan, M.F., Creedy, D.K., Chua, T.L., & Lim, C.C. (2011). Exploring the psychological health related profile of nursing students in Singapore: a Cluster Analysis. *Journal of Clinical Nursing, 20*, 3553-3560. doi: 10.1111/j.1365-2702.2011.03807.x

Chen, Y.W., & Hung, C.H. (2014). Predictors of Taiwanese Baccalaureate Nursing Students' Physio- Psycho- Social Responses during Clinical Practicum. *Nurse Education Today, 34*, 73-77. http://dx.doi.org/10.1016/j.nedt.2013.02.021

Custodio, S., Pereira, A., & Seco, G. (2010). *Stress Factors in Clinical Teaching in Nursing: the Students' Perspective*. Comunicação apresentada na International Conference of Psychology and Education: Practices, Training and Research, que decorreu em 2009 na Universidade da Beira Interior. http://hdl.handle.net/10400.8/315

Freshwater, D., & Stickley, T. (2004). The heart of the Art: emotional Intelligence in Nurse Education. *Nursing Inquiry, 11* (2), 91-98.

Forushani, N.Z., & Besharat, M.A. (2011). Relation between Emotional Intelligence and Perceived Stress among Female Students. *Procedia- Social and Behavioral Sciences, 30*, 1109-1112. doi:10.1016/j.sbspro.2011.10.216

Jimenez, C., Navia-Osorio, P.M., & Diaz, C.V. (2010). Stress and Health in Novice and Experienced Nursing Students. *Journal of Advanced Nursing, 66*(2), 442-455. doi:10.1111/j.1365-2648.2009.05183.x

Larin, M. H. et al. (2011). Examining Change in Emotional –Social Intelligence, Caring, and Leadership in Health Professions Students. *Journal of Allied Health, Summer; 40* (2), 96-102.

Landa-Augusto, J.M., & Zafra-Lopez, E. (2010). The Impact of Emotional Intelligence on Nursing: An Overview. *Psychology, 1*, 50-58. doi:10.4236/psych.2010.11008

Magnussen, L., & Amundson, M.J. (2003). Undergraduate Nursing Student Experience. *Nursing and Health Sciences, 5*, 261-267.

Martos, P. M., Landa, A., & Zafra- Lopez. (2012). Sources of Stress in Nursing Students: a Systematic Review of Quantitative Studies. *International Nursing Review, International Council of Nurses, 59*(1), 15-25. doi: 10.1111/j.1466-7657.2011.00939.x

Maville, A. J., Kranz, L. P., & Tucker, A.B. (2004). Perceived Stress Reported by Nurse Practitioner Students. *Journal of American Academy of Nurse Practitioners, 16*(6), 257-262. ProQuest Health and Medical Complete.

Moscaritolo, L. M. (2009). International Strategies to Decrease Nursing Student Anxiety in the Clinical Learning Environment. *Journal of Nursing Education, 48* (1),17-23.

Namdar, H., Sahebihagh, M., Ebrahimi, H., & Rahmani, A. (2008). Assessing Emotional Intelligence and its Relationship with Demographic Factors of Nursing Students. *IJNMR, Autumn; 13*(4), 145-149.

Oermann, H.M., & Standfest, M.K. (1997). Differences in Stress and Challenge in Clinical Practice among ADN and BSN Students in Varying Clinical Courses. *Journal of Nursing Education, 36*(5), 228-233. ProQuest Health & Medical Complete.

Pau, A.K.H., & Croucher, R. (2003). Emotional Intelligence and Perceived Stress in Dental Undergraduates. *Journal of Dental Education, 67* (9), 1023-1028.

Por, J., Barriball, L., Fitzpatrick, J., & Roberts, J. (2011). Emotional Intelligence: It's Relationship to Stress, Coping, Well-being and Professional Performance in Nursing Students. *Nurse Education Today, 31*, 855-860.doi:10.1016/j.nedt2010.12.023

Ralph, E., Walker, K., & Wimmer, R. (2009). Practicum and Clinical Experiences: Postpracticum Students' Views. *Journal of Nursing Education, 48* (8),434-440.doi:10.3928/01484834-20090518-02

Ray, H. (2006). Fears, Worries and Experiences of First-Year Pre-Registration Nursing Students: a Qualitative Study. *Nurse Researcher, 13*(3), 32-49. ProQuest Health and Medical Complete.

Reeves, A. (2005). Emotional Intelligence-Recognizing and Regulating Emotions. *AAOHN J, 53*(4), 172-176. ProQuest Health & Medical Complete.

Schutte, N.S., Malouff, J.M., & Bhullar, N. (2009). The Assessing Emotions Scale. C.Stough, D. Saklofske, J.Parker (Eds), *The Assessment of Emotional Intelligenc*e. New York: Springer Publishing. 119-135.

Sharif, F., & Masoumi, S. (2005). A qualitative Study of Nursing Student Experience of Clinical Practice. *BMC Nursing, 4* (6). doi:10.1186/1472-6955-4-6

Sheu, S., Lin, H.S., & Hwang, S.L. (2002). Perceived Stress and Physio-Psycho-Social Status of Nursing Students During their Initial Period of Clinical Practice: the Effect of Coping Behaviors. *International Journal of Nursing Studies, 39*: 165-175.

Shipton, S.P. (2002). The Process of Seeking Stress-care: Coping as Experienced by Senior Baccalaureate Nursing Students in Response to Appraised Clinical Stress. *Journal of Nursing Education, 41*(6), 243-256. ProQuest Health & Medical Complete.

Sunil, K., & Rooprai, K.Y. (2009). Role of Emotional Intelligence in Managing Stress and Anxiety at Work Place. *ASBBS Annual Conference* 2009: Las Vegas, 16(1).

Tully, A. (2004). Stress, Sources of Stress and Ways of Coping Among Psychiatric Nursing Students. *Journal of Psychiatric and Mental Health Nursing, 11*, 43-47. doi:10.1111/j.1365-2850.2004.00682.x

Wolfgang, L., Linda, T., Lynne, E.Y., & Anne, B. (2001). Student Nurse Health Promotion: Evaluation of Mindfulness-Based Stress Reduction Intervention. *Canadian Nurse, 97*(6), 23.

Yucha, B.C., Kowalski, S., & Cross, C. (2009). Student Stress and Academic Performance: Home Hospital Program. *Journal of Nursing Education, 48*(11), 631-637. doi:10.3928/01484834-20090828-05

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