

# A Study of Work Related Depression, Anxiety and Stress of Nurses at Pantang Hospital in Ghana

Samuel Atindanbila PhD, University of Ghana (Legon), [atindanbila@ug.edu.gh](mailto:atindanbila@ug.edu.gh)

Edward Abasimi, University for Development Studies, Tamale, [abasimieddie@yahoo.com](mailto:abasimieddie@yahoo.com)

Michael T. Anim, University of Cape Coast, Cape Coast, [m.t.anim@uccsms.edu.gh](mailto:m.t.anim@uccsms.edu.gh)

## Abstract.

This study is aimed at finding out the distribution of depression, anxiety and stress among nurses at Pantang hospital with regards to demographic characteristics such as age, gender, rank, duration and hospital unit worked. A sample of 57 Nurses of Pantang Hospital was randomly selected for the study. ANOVA tests were used to analyze the data. The results indicated that there was a significant difference in all the emotional states of depression, anxiety and stress with regards to the ages of the nurses. The results showed that the higher the age of the Nurse the more he or she is exposed to these emotional conditions and the stress level was higher in Rehabilitation Unit as compared to the rest of the Units. It was therefore recommended that Nurses who are vulnerable should be screened with the DASS scale and those with high scores should be counseled.

Key words

Depression, Anxiety, Stress of Nurses and Pantang Hospital

## 1. Introduction

Nursing is characterized by exposure to a wide range of potentially stressful situations in the workplace. The sources of these stressors in the Nursing profession have been attributed to interactions with both patients and other nursing staff (McGowan 2001). According to Rosse and Rosse (1981) nurses have too many tasks to be done as compared to other professions. Working in long-term healthcare services, a stressful work environment, role conflict, an unequal position comparing to other healthcare professionals and limited staffing resources were all related to job stress. Another major source is role conflict which refers to the incompatible demands from various role senders or from multiple roles held simultaneously. According to Maslach et al. (2001), since the Nightingale era, nursing has been seen as a predominantly woman's work, and therefore, males who find themselves in the field go through a lot of stress. When males choose a traditionally female occupation, they tend to experience role conflict (Jinks & Bradley 2004, Genua 2005, Grady et al. 2008). Men are less satisfied in nursing than women (Lambert & Lambert 2001, Sochalski 2002), and male nurses have greater turnover intentions than do female nurses.

Numerous studies have shown that nurses with high job stress exhibit decreased job satisfaction, lesser hospital commitment, increased absenteeism and turnover intentions (McGowan 2001, Garrosa et al. 2008, Walker 2008). In addition, studies by Rosse and Rosse (1981) and Mohr and Puck (2007) suggest that high level of role conflict is related to lower job satisfaction, reduced organizational commitment and greater likelihood of turnover intention.

The negative effects of job stress on nurses have received increased attention in recent years. It has been found out that Nurses who work in very stressful environments with minimal control and organizational interaction from colleagues may actually have a negative effect on patient safety (Berland et al. 2008). In addition, nurses with frequent job stress could experience numerous psychological and physical problems (Wong et al., 2001). These include anxiety and depression on them. These psychological problems have been found to be related to the demographic variables including nurses' age, gender, educational level and work-related variables (e.g. employment status, work schedule) have been discussed in relation to occupational

burnout (Maslach et al. 2001, Piko 2006), and age has been shown to be a strong predictor of occupational burnout (Maslach et al. 2001, Nyssen et al. 2003).

According to Aguocho, (2011) the Nursing profession is linked with anxiety and that the hospital unit where the nurses work either amplifies or keeps under manageable control their anxiety level and manifestations. It is also noted that gender is associated with differences in anxiety manifestations and management (Aguocho, 2011).

This present study aims at finding out the stress, anxiety and depression of the Nurses at Pantang Hospital with reference to the demographic variables like age, sex, rank, hospital unit and duration of work in the hospital.

## **2. Objective of the Study**

The study has the following objective:

To find out the distribution of depression, anxiety and stress among nurses at Pantang hospital with regards to demographic data

## **3. Hypotheses**

1. There will be a significant difference in the emotional level (depression, anxiety and stress) in the Nurses with regards to age
2. There will be a significant difference in the emotional level (depression, anxiety and stress) in the Nurses with regards to gender
3. There will be a significant difference in the emotional level (depression, anxiety and stress) in the Nurses with regards to rank
4. There will be a significant difference in the emotional level (depression, anxiety and stress) in the Nurses with regards to duration
5. There will be a significant difference in the emotional level (depression, anxiety and stress) in the Nurses with regards to the hospital unit.

## **4. Methodology**

The study was conducted on the Nurses at 3 Units in the Pantang Psychiatric Hospital in Accra. The Units were OPD, Wards and Rehabilitation. The tool used for the study was the DASS scale which comprised of depression, anxiety, and stress. It has a total of twenty-one items scored on a 4 point likert scale (ranging from strongly disagree = 0 to strongly agree = 4). These items are grouped into three subscales: depression (7 items), anxiety (7 items) and stress (7 items). The cronbach's alpha coefficient of internal reliability varies from .67 to .94.

## **5. Results**

The present study examined the distribution of depression, anxiety and stress among nurses at Pantang hospital with regards to demographic characteristics such as age, gender, rank, duration or tenure and hospital unit of work. Descriptive and inferential statistics were used to report the results. The results are as follows.

### **5.1 Demographic Data of Respondents**

The results show that majority (39%) of the respondents had worked as nurses for a duration of 1-2 years while 28% had worked for a duration ranging from 3-5 years. With regards to rank, 61% of the respondents were staff nurses while only 35.6% were senior staff nurses.

### **5.2 Differences of Emotional States among the various Ages of Nurses in the Hospital**

The aim of this hypothesis is to find out the differences of depression, anxiety and stress in the Nurses with regards to the various ages of the Nurses. From Table 1 it can be seen that there is a significant difference in all the emotional states with regards to the ages of the nurses. For depression,  $F(1,53) = 4.98, p = 0.03$ ; for Anxiety,  $F(1,53) = 8.41, p = 0.005$  and for stress,  $F(1,54) = 4.17, p = 0.046$ . The results imply that the higher the age of the nurse the more he or she is exposed to these emotional conditions.

### **5.3 Differences of Emotional States among Gender**

The second hypothesis is to find out the differences of depression, anxiety and stress with regards to gender of the Nurses in the hospital. Table 2 demonstrates that there is no significant difference in these emotional states with regards to gender. This implies that gender has no influence on the emotional states.

### **5.4 Differences of Emotional States among the various Ranks of Nurses in the Hospital**

The aim of this hypothesis is to find out the differences of depression, anxiety and stress in the nurses with regards to the various ranks of the nurses. From Table 3 it can be seen that there is no significant difference in all the emotional states with regards to the ranks of the nurses. This implies that the rank of the nurse has no effect on these emotional conditions.

### **5.5 Differences of Emotional States due to duration of work in the Hospital**

The aim of this hypothesis is to find out the differences of depression, anxiety and stress in the Nurses with regards to the number of years they served in the hospital. From Table 4 it can be seen that there is a significant difference in all the emotional states with regards to the duration of the nurses. For depression,  $F(2, 52) = 8.491, p = 0.001$ ; for Anxiety,  $F(2, 52) = 6.384, p = 0.003$  and for stress,  $F(2, 53) = 4.173, p = 0.021$ . A post hoc analysis of the results revealed that nurses who had served for a period of 5 years + was ranked first on depression, anxiety and stress followed by those who had served for a period of 1-2 years and 3-4 years respectively.

### **5.6 Differences of Emotional States among Units**

The aim of the third hypothesis is to find out the differences of depression, anxiety and stress in the three units of the hospital. From Table 5 it can be seen that it is only the ward that there is a significant difference in the stress level as compared to the rehabilitation and OPD which is  $F(2,52) = 4.72, p = 0.012$ . The scores for depression and anxiety were not significant. A post hoc analysis shows that the Rehabilitation unit has the highest level of stress followed by the OPD and then the ward.

## **6. Discussion**

The objective of the study was to find out the distribution of depression, anxiety and stress among nurses at Pantang hospital with regards to demographic characteristics such as age, gender, rank, duration or tenure and hospital unit worked. The results indicate that there is a significant difference in all the emotional states of depression, anxiety and stress with regards to the ages of the nurses. The results showed that the higher the age of the Nurse the more he or she is exposed to these emotional conditions. This finding is consistent with previous findings that revealed that age is a predictor of mental health of nurses in Korea (Lambert et al., 2004). It is also consistent with studies like that of Maslach et al. (2001), Nyssen et al. (2003) and Hayes et al. (2006) who identified age as a predictor of occupational burnout. It is however inconsistent with Boya, Demiral, Ergor, Akvardar & Witte (2008) finding that nurses under 28 years experienced higher anxiety than those who are 28 years and above since the present study revealed that the higher the age of the nurse, the more he or she is exposed to anxiety.

The present study revealed that the rank of a nurse does not affect his or her emotional state as the results indicate no significant difference between staff nurses (SN) and the senior staff nurses (SSN) with regards to the work related emotional states of depression, anxiety and stress.

The results also indicate that the length of service (duration) of a nurse has an influence on his or her emotional states of depression, anxiety and stress. The results revealed that nurses who had served for a period of 5 years + were ranked first on depression, anxiety and stress followed by those who had served for a period of 1-2 years and 3-4 years respectively. This finding is partly inconsistent with the findings of Boya et al.(2008) which indicates that depression levels for nurses whose working duration was under one year was significantly higher than those working one year and above. The reason for the high rate of depression, anxiety and stress in the nurses who had served 5 years + followed by those who served for 1-2 and 3-4 years respectively is still unclear to the researchers.

Gender as a demographic variable did not have any significant effect on any of the emotional states. Nurses, regardless of gender experienced similar levels of work related emotional states of depression, anxiety and stress. This result is partly consistent with the findings of Boya et al. (2008) which revealed that gender has no effect on depression and anxiety. The findings of the present study, however, seem to be partly inconsistent with Maslach et al.(2001) findings that male nurses are more likely to be stressed since nursing is traditionally considered a woman's occupation. It also runs counter to the assertion that males experience role conflicts when they are in predominantly female occupation (Jinks & Bradley 2004, Genua 2005, Grady et al.2008). The present study's results also seem to be inconsistent with that of Uwaoma et al.( 2011 ) who conducted a study on nurses anxiety in Nigeria and found that gender had a significant effect on nurses anxiety with females showing a greater degree of anxiety than males.

The results of the study also showed that the hospital unit where a nurse works was a predictor of stress but not depression and anxiety. This implies that the levels of stress vary depending on whether the nurse works at the Rehabilitation unit, OPD or the ward. Further investigations showed that stress is higher at the rehabilitation unit compared to the other units. It is however surprising that though there was significant level of stress at the rehabilitation unit, the levels of depression and anxiety at the same unit was not significant. It is possible that the level of stress experienced at the rehab unit does not reach levels that can precipitate anxiety and depression. The results of the present study thus departs from that of Uwaoma et al.(2011) who found that hospital unit has a significant effect on nurses anxiety. They found that nurses in the intensive care unit suffer more anxiety than those in the non- intensive care unit. Again this difference could be explained by the fact that the conditions and situations in the general hospitals where their study was conducted and the psychiatric hospital where the present study was conducted are different. For example in the psychiatric hospital, there is no intensive care unit.

## **7. Recommendations**

The first important finding of the study is that the higher the age of the Nurse in the Hospital, the more she or he is exposed to the three emotional states. In view of this, it is recommended that all nurses especially those who have worked for two or more years should be screened on the three emotional states and given the appropriate counselling if their scores on the instruments are high. The study also revealed that those who worked for more than five years had exhibited higher levels of all the three emotional states as compared to the rest. It is therefore, recommended that those nurses who had served the hospital for 2 years and above should also be screened with the DASS instruments and those who have clinically significant values should be taught stress management techniques. They should also be encouraged to use these techniques at work place to control the effects of the emotional states. It was also found out that the stress level in the

rehabilitation ward was higher than the other units. It is recommended that in addition to the measures above, the nurses there should be made to go on transfers to other units instead of staying in that ward for long.

## 8. Conclusion

This study is aimed at finding out the distribution of depression, anxiety and stress among nurses at Pantang hospital with regards to demographic characteristics such as age, gender, rank, duration and hospital unit worked. The results indicate that there is a significant difference in all the emotional states of depression, anxiety and stress with regards to the ages of the nurses. The results showed that the higher the age of the Nurse the more he or she is exposed to these emotional conditions and the stress level was higher in Rehabilitation Unit as compared to the rest of the Units. It was therefore recommended that Nurses who are vulnerable should be screened with the DASS scale and those with high scores should be counseled.

## References

- Aguocha, H.(2011). *Gender and hospital units as indices of nurses' anxiety*. Unpublished B.Sc theses, Imo State University.
- Berland, A., Natvig ,G.K.& Doris Gundersen, D.(2008). Patient safety and job-related stress: A focus group study. *Intensive and Critical Care Nursing* 24, 90—97
- Boya, F.O., Demiral, Y., Ergör,A., Akvardar, Y. & Whitte, H.D.(2008). Effects of Perceived Job Insecurity on Perceived Anxiety and Depression in Nurses. *Industrial Health*46, 613–619.
- Garrosa, E., Moreno-Jimenez, B., Liang, Y. & Gonzalez, J.L.(2008). The relationship between socio-demographic variables, job stressors, burnout and hardy personality in nurses:An exploratory study. *International Journal of Nursing Studies* 45(3) 418–427
- Genua, J.A.(2005). The vision of male nurses: Roles, barriers and stereotypes. *Interactions*, 4-7.
- Grady, C.A., Stewardson, G.A.& Hall, J.L.(2008). *The journal of nursing Education*,47(7), 314-23
- Jinks, A.M. & Bradley, E.(2004). Angel, handmaiden, battleaxe or whore? A study which examines changes in newly recruited student nurses attitude to gender stereotypes. *Nurse Education today: An Empirical Investigation of Nursing personnel*, 24, 121-127.
- Lambert, V.A. & Lambert, C.E.(2001). Literature review of role stress/strain on nurses: An international perspective. *Nursing & Health Sciences* 3(3), 161–172
- Lambert,V., Lambert,C., Itano, J., Inouye,J., Kim,S. & Kuniviktikul, W. *et al.*(2004). Cross-cultural comparison of workplace stressors, ways of coping and demographic characteristics as predictors of physical and mental health among nurses in Japan, Thailand,South Korea and the USA (Hawaii). *International Journal of Nursing Studies*, 41, 671–684
- Maslach, C., Schaufeli, W.B., & Leiter, M.P.(2001). Job Burnout. *Annual Review of Psychology*,52, 397-422.
- McGowan B.(2001).Self-reported stress and its effects on nurses. *Nursing Standard* 15(42),33-8.
- Mohr, A.T & Puck, J.F. (2007). Role Conflict, General Manager Job Satisfaction and Stress and

the Performance of IJVs. *European Management Journal* 25 (1), 25–35.

Nyssen, A.S., Hansez, I., Baele, P., Lamy, M. & De Keyser, V.(2003). *Occupational stress and burnout in anaesthesia*. *British Journal of Anaesthesia* 90 (3): 333-337.

Piko, B.F. (2006). Burnout, role conflict, job satisfaction and psychosocial health among Hungarian health care staff: A questionnaire survey. *International Journal of Nursing Studies* 43, (3), 311–318.

Rosse, J.G. & Rosse, P. H., (1981). Role conflict and Ambiguity. *Evaluation and the Health Professions*, 4(4), 385-405

Sochalski, J. (2008). *Nursing Shortage Redux: Turning the corner on an enduring problem*. *Health Affairs*, 21,(5) 157-164.

Uwaoma, N.C., Obi-Nwosu, H. & Aguocha, H.C.P.(2011). Effect of gender and hospital unit on nurses' anxiety. *Asian Journal of Business and Management Sciences*, 1(4),48-53

Walker, M.J. (2008). Effects of the Medication Nursing Assistant Role on Nurses' Job Satisfaction and stress in long term care. *Nursing Administration Quarterly*, 32 (4), 296-300

Wong, D., Leung, S., So, C. & Lam, D. (2001). "Mental Health of Chinese Nurses in Hong Kong: The Roles of Nursing Stresses and Coping Strategies" *Online Journal of Issues in Nursing*.Vol. 6(2)

**Table 1. ANOVA of Age on Emotional States**

Variable	N	Mean	SD	df	F	Sig
<b>Depression</b>						.030
20-30yrs	43	6.05	6.13	1,53	4.98	
31-40yrs	12	10.83	8.02			
<b>Anxiety</b>						.005
20-30yrs	43	9.16	7.38	1,53	8.41	
31-40yrs	12	16.33	8.26			
<b>Stress</b>						.046
20-30yrs	42	9.29	6.62	1,54	4.17	
31-40yrs	14	13.71	8.18			

**Table 2. ANOVA of Gender on Emotional States**

Variable	N	Mean	SD	df	F	Sig
<b>Depression</b>		7.92	8.16	1,53	.622	.434
Male	24					
Female	31	6.45	5.60			
<b>Anxiety</b>						
Male	24	11.67	8.68	1,53	.571	.453
Female	31	10.00	7.64			
<b>Stress</b>						
Male	25	11.20	7.51	1,54	.558	.458
Female	31	9.74	7.06			

**Table 3. ANOVA by Rank**

Variable	N	Mean	SD	df	F	Sig
<b>Depression</b>					.047	.829
SN	36	6.94	6.39	1,53		
SSN	19	7.37	7.72			
<b>Anxiety</b>						
SN	36	9.78	7.98	1,53	1.452	.234
SSN	19	12.53	8.16			
<b>Stress</b>						
SN	35	10.10	6.55	1,54	.198	.658
SSN	21	10.95	8.38			

**Table 4. ANOVA of duration on Emotional states**

	N	Mean	SD	df	F	Sig
<b>Depression</b>				2,52	8.491	.001
1-2yrs	23	8.96	6.52			
3-4yrs	17	2.12	2.87			
5yrs+	15	9.87	7.65			
<b>Anxiety</b>				2,52	6.384	.003
1-2yrs	23	11.48	8.07			
3-4yrs	17	5.88	5.72			
5yrs+	15	15.07	7.89			
<b>Stress</b>				2,53	4.173	.021
1-2yrs	22	11.55	6.67			
3-4yrs	17	6.47	5.94			
5yrs+	17	12.82	7.85			

**Table 5. ANOVA of Units on Emotional States**

	N	Mean	SD	df	F	Sig
<b>Depression</b>				2,52	2.322	.108
Ward	40	6.20	7.10			
OPD	11	8.00	5.22			
Rehab	4	13.50	4.43			
<b>Anxiety</b>				2,52	2.794	.070
Ward	39	9.64	8.49			
OPD	11	11.09	5.82			
Rehab	5	18.40	4.98			
<b>Stress</b>					4.792	.012
Ward	40	9.25	7.51			
OPD	11	10.55	4.11			
Rehab	5	19.200	4.15			



This academic article was published by The International Institute for Science, Technology and Education (IISTE). The IISTE is a pioneer in the Open Access Publishing service based in the U.S. and Europe. The aim of the institute is Accelerating Global Knowledge Sharing.

More information about the publisher can be found in the IISTE's homepage:

<http://www.iiste.org>

## CALL FOR PAPERS

The IISTE is currently hosting more than 30 peer-reviewed academic journals and collaborating with academic institutions around the world. There's no deadline for submission. **Prospective authors of IISTE journals can find the submission instruction on the following page:** <http://www.iiste.org/Journals/>

The IISTE editorial team promises to review and publish all the qualified submissions in a **fast** manner. All the journals articles are available online to the readers all over the world without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. Printed version of the journals is also available upon request of readers and authors.

### IISTE Knowledge Sharing Partners

EBSCO, Index Copernicus, Ulrich's Periodicals Directory, JournalTOCS, PKP Open Archives Harvester, Bielefeld Academic Search Engine, Elektronische Zeitschriftenbibliothek EZB, Open J-Gate, OCLC WorldCat, Universe Digital Library, NewJour, Google Scholar

