



Journal Homepage: -www.journalijar.com
**INTERNATIONAL JOURNAL OF
 ADVANCED RESEARCH (IJAR)**

Article DOI:10.21474/IJAR01/6828
 DOI URL: <http://dx.doi.org/10.21474/IJAR01/6828>



RESEARCH ARTICLE

PERCEPTION OF NURSE WORK ENVIRONMENT IN MATERNITY HOSPITAL.

Shoaa A. Alenezi¹ and Olfat A. Salem².

1. BSN, RN, MSN, Nursing Director, Nursing Services of Administration Affairs Al-yamama Hospital, Riyadh, KSA.
2. BSN, RN, MSN, PhD Nursing Administration and Education Department, College of Nursing - King Saud University, KSA and Nursing Administration Department, Faculty of Nursing, Menoufia University, Egypt.

Manuscript Info

Manuscript History

Received: 02 February 2018
 Final Accepted: 04 March 2018
 Published: April 2018

Keywords:-

Nurse management, Nursing Work Index, Nurse organization support, Nurse-physician relationship.

Abstract

Work environment has been recognized as an important factor to facilitate or constrain nurses organizational and quality care practice. The Revised Nursing Work Index was internationally used to describe professional nursing work environment and morale. Aim: was to study the relationship between nurse work environment, job outcomes and to assess nurse care quality. of care. Method: 57 based Likert Scale Items of Nursing Work Index were surveyed on 290 nurses from 11 different Hospital wards/Units. Three reliable subscales related to physician-nurse relationship, nurse management, and hospital organizational support were individually assessed. Statistical analysis of the obtained data was performed using SPSS 23 program in terms of Chi-square test for the 4 points Likert Scale and the three subscales of the 57 Items to detect any significant differences between them. Results: Demographic characteristics showed that all respondent were females aged 26-40 years and either hold a diploma (74.83%) or B.Sc. degree in nursing. Positive responses were demonstrated in the favor of the absolutely agree and agree on points for 20 NWI-R, while 28 items were negatively checked for the partially disagree and very strongly disagree, in the meantime, 9 items were identified as neutral ($p > 0.05$). Statistically, a significant difference was found in the favor of the negative responses when compared with the positive responses ($p = 0.000$), indicating the need to improve the attitude of the nurses towards these negative responses. Regarding the responses toward the three subscales, the response on the first subscale, was found insignificant and considered neutral between the agreed and disagreed scales ($p > 0.05$). The second and third subscale showed a highly significant response in the favor of the disagreed points of the scale ($p = 0.000$). Conclusion: It is evidenced that there are low-morality and increased dissatisfaction among the nursing staff as reflected by the negative responses for the majority of the NWI-R items, nurse management at the unit level and hospital organizational support. There is considerable need to improve nurse's morality by boosting activities through refreshment courses, job recognition, salary motivation and sharing in decision-making activities.

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Corresponding Author:- Shoaa Ashwi Alenezi.

Address:- Nursing Services of Administration Affairs Al-yamama Hospital, Riyadh, KSA.

Introduction:-

The progressive advancement of health care systems has given new roles and responsibilities to professional nurses to positively participate with the physicians to attaining better healthcare outcomes. Shortage or leakage of professional nurses from hospitals have been widely discussed and their implication on quality health care has gained much attention in recent decades [1-3]. An important issue in attracting and preventing professional nurse's leakage from hospitals was attributed to the quality of their work environment. In the United States, several studies showed the relationship between nurse's work environment, their job and patient outcome [1-4]. Research on magnet hospitals advocated the need for some planned organizational factors that could influence professional nurse's recruitment and retention in hospitals and consequently affect the safety and quality of the healthcare procedure [5,6].

Reviewing previous studies of nurse job satisfaction indicated different factors affecting nurses attitude and satisfaction regarding their professional work. Among these factors, was the nurse work-life balance [7-9]. Previous studies among nurse's satisfaction in the United States [7,8], Persia [9-10] and Taiwan [11] showed that their duty schedules were among the negative factors that affect the quality of their personal lives. Numerous studies showed nurses dissatisfaction mainly due to extensive workload, inadequate quality staffing, lack of studies on the Quality Work Life (QWL) of nurses indicated dissatisfaction of nurses in terms of heavy workload, poor staffing, lack of autonomy to provide patient care decisions in addition to their involvement in nonrelated nursing tasks [7-9]. Other factors affecting nurse's job satisfaction include management practice, nurse relationship with co-staff, promotion opportunities and work environment [7-9, 12]

Among the potential sources of management practice dissatisfaction were the lack of recognition of their achievements, the absence of opportunities to share in nurse manager decisions, and lack of respect by chief managers [7, 9]. Some studies showed that nurses were dissatisfied with their co-staff including physicians, others reported the opposite [7]. A study about nurse's satisfaction in Saudi Arabia showed they were dissatisfied in their relationship with their co-staff including physicians [13], as they experienced low of appreciation, support, and even respect. They also showed to considerably poor interaction and communication with physicians.

Previous studies revealed the impact of professional development opportunities including promotion system, access to continuing education on nursing satisfaction [9,11,14]. Various studies found that nurses were dissatisfied with their work regarding issues related to safety in the workplace [7,9,13,15]. Like other health professionals, nurses were dissatisfied with Inadequacy of patient care supplies and equipment. Studies conducted in Saudi Arabia reported insufficient patient supplies, especially in primary health care settings [16-19]. Other revealed factors affecting nurse satisfaction was their salary and nursing [9,11,20-25].

Magnet hospitals are well identified specifically for their reputation for attracting and retaining professional nurses due to the availability of better work environments [26]. These magnet hospitals are currently designated as having the best administrative practices in establishing the desired nurse's work environment [26]. The study outcome from the magnet hospitals was found consistent with these from a number of European reports on elements of hospitals that favor high-quality nursing care and nurse retention. A multinational European study on early nursing departure found a significant hospital to hospital differences in their structure, working conditions, health care and behavior outcome [27]. Study results confirmed that organization environment is substantially connected with adverse nurse practice outcomes including unfavorable workability and the intention to leave nursing.

Therefore, the present study aimed to assess nurse environmental work quality, attitudes, and satisfaction in Riyadh maternal and child Hospital, Saudi Arabia

Materials and Methods:-**Study setting:-**

Maternity and child hospital in Riyadh, Saudi Arabia with bed capacity 305 bed affiliated to Ministry of Health. In Riyadh region, Saudi Arabia

Sampling:-

The targeted participants in this study were female registered nurses working in different wards/units within the hospital.

Inclusion criteria:-

Registered nurses who worked for not less than 2 years in the hospital were eligible as participants in the present study. A convenience sample of total 185 nurses was the minimum needed sample size as determined using a software (Sample Size Calculator," Retrieved from <http://www.surveysystem.com/sscalc.htm>). to determine the minimum required sample size at 95% of confidence level and 5.8 ($1/\sqrt{N} = 1/17.029 = 0.058$) confidence interval, however, the study was conducted on 290 of the available nurses who were in regular duties and agreed to voluntarily participate in this study.

Study design:-

The study was cross-sectional design

Data collection:-

Data were collected from the participants after being completed. The 57 items NWI-R data and 3 common subscales extracted from the 57 items [28,29]. combined with the nurses' socio-demographic characteristic were used. The NWI-R was used to assess the professional nurse working environment as presented by the original magnet hospitals. The NWI-R has been considered as a valid and reliable tool for the assessment of nurse working environment in hospitals. NWI-R comprises 3 common subscales termed as "nurse-physician relation", "nurse management at the unit level" and "Hospital management and organizational support" of from 3, 13 and 15 items respectively. The nurse rates each item on the bases of 4 items Likert Scale identified as absolutely agree, partially agree, partially disagree and very strongly disagree. The 57 NWI-R items indicate whether or not the feature is present in the nurses' current job. The subscales are descriptive for the nature of nursing professional practice in the magnet hospitals including nurse participation in their hospital affairs, nurse-physician relation, staffing and resource adequacy, nurse manager ability, nursing foundations for quality, leadership and nursing support. The 4 items Likert scale for each of the 57 NWI-R items and these items of the 3 subscales. consistency for the total of the items ($\alpha = 0.95$). [29, 30].

Ethical considerations:-

Prior the start of the study, approval was taken from the concerned hospital ethics committee to conduct the study. The participants were given a full explanation about the purpose of the study and signed a consent of declaration. All patient's data were considered restricted and only used for the study purpose.

Statistical analysis:-

The Likert Scale responses for the 57 NWI-R and the three extracted subscales were assessed for positively significant (Absolutely agree and partially agree) and negatively significant (partially disagree and very strongly disagree) responses using SPSS version 22 and excel statistics programs. Chi-square p values for significance to identify the quality of nursing work environment in the designated hospital.

Results:-**Demographic general characteristics of the respondents:-**

All respondents were female nurses 290 (100%). The age of the participants ranged between 26-40 years. Regarding participants' educations, the majority of them were of diploma degree in nursing ($n = 217$, 74.83%) whereas $n = 73$ (25.17%) were B.Sc. nursing degree holder. Referring to their work ward and units in the hospital, 54 (18.62%) appointed in the pregnant ward followed by 89 (30.69%) in the newly delivered intensive care ward, 22 (7.59%) in paediatric intensive care, 9 (3.10%) in paediatric sleeping ward, 11 (3.79%) in paediatric surgery, 38 (13.10%) in postpartum, 20 (6.90%) in Caesarean delivery, 36 (12.41%) in paediatric emergency, 26 (8.97%) in women emergency, 11 (3.10%) in women intensive care and 36 (12.41%) working in the delivery theatre. Table 1 is a presentation of the mean \pm SD of the nurse characteristics and distribution in the different wards/Units of the hospital.

Table 1:- Mean \pm SD of Nurse Demographic Characteristics (n=290)

Nurse Characteristics	Mean	\pm SD
Age in Years	29.55	5.33
Years in Duty	6.73	2.45
Education		
B.Sc. Nursing	36.5	101.82

Diploma Nursing	108.5	101.82
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Turning next to the results of the Likert Scale responses on the 57 NWI-R in **Table 2**, a total of 20 NWI-R items showed significantly different positive responses (Chi-square p-value = 0.000) in the favour of the absolutely agree/ partially agree (AA/PA) scales, whereas, 29 NWI-R items were significantly different in negative responses (Chi-square p = 0.000) in the favour of partially disagree/ very strongly disagree (PD/Vs.D) scales. On the other hand, only 8 NWI-R items showed insignificant neutral responses (Chi-square p = > 0.05)

Table 2:- Likert Scale responses on the 57 NWI-R Items with their Chi-square analysis p values

Likert Scale	Items of Significantly positive Response	Items of significantly negative response	Chi-Square p-Value	Items of insignificantly neutral response	Chi-Square p-Value
Absolutely agree and Partially agree	20 Items		P < 0.05*	8 Items	P > 0.05
Partially disagree and Very strongly disagree		29 Items	P < 0.05*		

Table 3 is representative of the participant's responses toward the 4 item Likert Scale for the sum of Absolutely agree-partially agree (AA+PA) scales and the sum of partially disagree and very strongly disagree (PD+Vs. D) scales of the collective 57 NWI-R items. It can be seen that, a total of 55.71% of responses were belonging to the partially disagree and very strongly disagree (PD+Vs. D) which was higher than that for the absolutely agree and partially agree (AA+PA) group (Chi square p = 0.000) and was highly significant in the favor of the PD+Vs. D group.

Table 3:- Chi-square p-value of the sum Absolutely agree/partially agree and the sum of partially disagree/very strongly disagree regarding the 57 NWI-R Items

Sequence	Scales	Total Observed	Total Expected	Chi-square p-value
1	Absolutely agree (AA)	3043	4133	0.000*
2	Partially agree (PA)	4281	4133	
3	Partially disagree (PD)	6615	4133	
4	Very strongly disagree (Vs.D)	2599	4133	
	Sum of AA+PA	7324	8269	0.000**
	Sum of PD+Vs.D	9214	8269	Highly Sig** For PD+VsD

Table 4, illustrates the adaptation of the three NWI-R Subscales derived from the principal component analysis with Chi-square p values for each subscale. For the first 3 items common subscale A (items 2, 27 and 39) “**Nurse-physician relationship**” there was no statistically significant differences between the agreed (AA=PA) and disagreed (PD+Vs. D) responses (chi-square p= 0.1188).

The second 13 item common subscale B (items 4,13,20,24,31,33,35,44,45,47,51,52, and 56) “Nurse management at the unit level” showed highly significant negative response in the favor of the partially disagree and very strongly disagree (PD+Vs. D) for the total responses of items, 4, 13, 20, 24, 31, 33, 35, 44, 45,47, 51,52 and 56 with a Chi square p value = 0.000.

Similarly, the third 15 item common subscale C, (1,5,9,10,14,18,23,26,29,32,36, 37,38,42 and 43) "Hospital management and organization support" also showed highly significant negative responses in the favor of the partially disagree and very strongly disagree (PD+Vs. D) for the total responses of items 1, 5, 9, 10, 14, 18, 23, 26, 29, 32, 36, 37, 38, 42, and 43. The third 15 item common subscale showed a significant negative response in the favor of disagreeing and strongly disagree groups with chi-square p = 0.000

Table 4:- Adaptation of the three NWI-R Subscale derived from the principal component analysis with Chi-square p-value for each Subscale.

Subscale/Item	Chi-Square p-value
A. Nurse-Physician relationship	0.118867*
B. Nurse management at the unit level	0.000**
C. Hospital management and organizational support	0.000**

Discussion:-

The aim of the present investigation was to evaluate the quality and satisfaction of nursing work environment in a tertiary Riyadh hospital, Kingdom of Saudi Arabia.

The results of the study showed various factors of positive or negative impact on the quality and satisfaction of nursing work environment. The participant nurses were asked to give their own responses for each of the NWI-R items that reflect their satisfaction or dissatisfaction regarding their work environment. On the contrary of the findings of Brooks and Anderson [7] who showed that nurses were happy and pleased with the quality of their professional life. On the other hand, the finding in the present study showed that nurses were dissatisfied with their work environment in many aspects. The present findings are in agreement with a variety of other studies where nurses were dissatisfied with their work environment [8,10,20]. Good quality of work environment can defiantly improve the morality of nurses and their corresponding organization effectiveness [32], in addition to improving nursing care and retention for not leaving their jobs [33,34]. Improving nursing work environment would also lead to attract and retain the nurse working team [35].

In the present study, the majority of nurses expressed their dissatisfaction with up to 29 out of the 57 NWI-R items compared with 20 satisfied items, while 8 items represent neutral insignificantly responded items. The responses were statistically different in the favor of the dissatisfied items including those belonging to nursing management at the unit level and the hospital management and organizational support subscales items.

Nurses were dissatisfied with the lack of supportive supervisory, good manager and leader and placing them in position to do things against their professional judgment which found consistent with findings from previous studies [9,36].

Almost all the Items in the nurse management at the unit level subscale were important in nurse organization at the unit level as it comprised items related to unit nursing manager, items on work environment, items on nurse judgment and items on up to date nurse care and experience [37,38]. All items in the hospital management and organizational support subscale were related to higher organizational issues. It includes 2 items on chief nurse plus items dealing with the extent of support and good relationship with different departments, nurses involved in different hospital communities, nurse advancement, and salaries. The responses of the nurses towards the 57 NWI-R items and the three extracted subscales in the present study were found comparable with the obtained scores from nonmagnet hospitals [1,14]. This has been reflected by the negative significant responses in the favor of the absolutely and partially agree of the 4-point Likert scales for each item. Moderate responses (denoted as neutral) were noticed in the nurse-physician relationship subscale (c Scales for the partially and very strongly disagree with the 57 items with negatively significant Chi-square $p = 0.000$).

Turning next to the responses on the Nurse management at the unit level and Hospital management and organizational support subscales, the variation was highly significant in the favor of the negative of the partially disagree and very strongly disagree (Chi-square $p = 0.000$) for the two subscales. The above-mentioned results based on the 57-NWI-R and their extracted three subscales showed that nurses perceptions were quite moderate regarding nurse-physician relationship subscale so that, more efforts are needed to find ways to improve this issue. Poor responses were also documented regarding negative nurse care delivery, nurse management at the unit level, hospital management and organizational support.

The current study revealed that the nurses' dissatisfaction in the Referral hospital is high as evidenced of the negatively significant disagree responses of the majority of the 57 NWI-R items and the significant negative responses of the Nurse management at the unit level and the Hospital management and organization support

subscales, a finding which is consistent with other studies in South Africa, Kenya and other parts of the world like Australia and United States of America[39, 40].

The lack of organizational and managerial support for nursing showed to have pronounced effects on nursing dissatisfaction and burnout, and both organizational support of nursing and nursing staffing were directly, and independently, related to the nurse-assessed quality of care [41]

It has been well documented that the good work environment affects nurse satisfaction and turnover, which in turn influences the organizational cost of replacing leaked nurses. Moreover, several studies have established a link between satisfied nurses, satisfied patients, and better quality of care [1,2,41]. Nurse managers may need to implement well designed structured systems and plan for effective policy to improve their work environment, however, unless the nurse is desired to consider and acquire these implemented systems as essential structure in their professional job, their health care delivery outcomes to patients in the hospital will not be fulfilled.

Conclusion:-

The results of the present study showed that the first subscale “nurse-physician relationship” was average and could be dependent on the ward or units in the hospital. The study evidenced low morale among the participant nurses as reflected by the high statistically significant difference of the negative responses in the favour of the partially disagreed and very strongly disagreed for each of the 57 Items of the NWI-R, and also by the negative responses for the second and third subscales related to “Nurse management at the unit level” and “Hospital management and organizational support” (Chi-square $p = 0.000$).

Recommendation:-

The outcome of the study revealed the need to improve nurse working environment and to initiate their morals by boosting refreshment courses, recognizing their jobs are well done, and engaging them in hospital decision activities.

References:-

1. Aiken L, Havens D, Sloane D. The magnet nursing services recognition program. (2000) A comparison of two groups of magnet hospitals. *American Journal of Nursing*.100 (3):26–35.
2. Cho S, Ketefian S, Barkauskas V, Smith D. (2003) The effects of nurse staffing on adverse events, morbidity, mortality, and medical costs. *Nursing Research*. 52 (2):71–79.
3. Cummings G, Hayduk L, Estabrooks C. Is the nursing work index measuring up? *Nursing Research*. 2006;55 (2):82–93.
4. Needleman J, Buerhaus P, Mattke S, Stewart M, Zelevinsky K. Nurse-staffing levels and the quality of care hospitals. *New England Journal of Medicine*. 2002;346 (22):1715–1722.
5. Needleman J, Buerhaus P, Mattke S, Stewart M, Zelevinsky K. Nurse-staffing levels and the quality of care hospitals. *New England Journal of Medicine*. 2002;346 (22):1715–1722.
6. Van Bogaert P, Clarke S, Vermeyen K, et al, (2009) Practice environments and their associations with nurse-reported outcomes in Belgian hospitals: Development and preliminary validation of a Dutch adaptation of the Revised Nursing Work Index, *Int J Nurs Stud*; 46(1): 54-64
7. Brooks BA, Anderson MA. (2004) Nursing work life in acute care. *J Nurs Care Qual*. 19(3):269–275.
8. Brooks BA, Storfjell J, Omoike O, Ohlson S, Stemler I, Shaver J, Brown A. (2007) Assessing the quality of nursing work life. *Nurs Adm Q*. 31(2):152–157
9. Khani A, Jaafarpour M, Dyrekvandmogadam A. (2008) Quality of nursing work life. *J Clin Diagn Res*. 2(6):1169–1174.
10. Nasl Saraji G, Dargahi H. (2006) Study of quality of work life (QWL) *Iranian J Public Health*. 35(4):8–14.
11. Hsu MY, Kernohan G. (2006) Dimensions of hospital nurses’ quality of working life. *J Adv Nurs*. 54(1):120–131
12. Brooks BA, Anderson MA. (2005) Defining quality of nursing work life. *Nurs Econ*. 2005;23(6):319–326.
13. Alhusaini HA. (2006) Obstacles to the efficiency and performance of Saudi nurses at the Ministry of Health, study field Analytical: Region Riyadh. Riyadh: Ministry of Health.
14. Webster J, Flint A, Courtney M. (2009) A new practice environment measure based on the reality and experiences of nurses working lives. *J Nurs Manag*. 17(1):38–48.

15. El-Gilany A, El-Wehady A, Amr M. (2010) Violence against primary health care workers in Al-Hassa, Saudi Arabia. *J Interpers Violence*. 25(4):716–734
16. Al-Khalidi Y, Al-Sharif A. (2002) Availability of resources of diabetic care in primary health care settings in Aseer region, Saudi Arabia. *Saudi Med J*. 23(12):1509–1513.
17. Al-Khalidi YM, Al-Sharif AI. (2005) Health education resources available for diabetes and hypertension at primary care settings, Asser Region, Saudi Arabia. *J Family Community Med*. 12(2):75–77.
18. Al-Khalidi YM, Al-Sharif AI, Al-Jamal MN, Kisha AH. (2002) Difficulties faced when conducting primary health care programs in rural areas. *Saudi Med J*. 23(4):384–387.
19. Al-Sharif A, Al-Khalidi YM. Resource availability for the care of hypertensives at primary health settings in Southwestern Saudi Arabia. *Saudi Med J*. 2003;24(5):466–471.
20. Dargahi H, Gharib M, Goodarzi M. (2007) Quality of work life in nursing employees of Tehran University of Medical Sciences hospitals. *HAYAT: The J Tehran Fac Nurs & Midwifery*. 13(2):78–87 (in Farsi).
21. Zaghoul AA, Al-Hussaini MF, Al-Bassam NK. (2008) Intention to stay and nurses' satisfaction dimensions. *J Multidisciplinary Healthcare*. 1:51–58.
22. Cabigao E. (2009) Predictors of intention to quit and satisfaction among nurses who work in nursing homes. TUI University, CA USA: College of Health Sciences; Ph.D. Thesis.
23. Shurique M, While A, Fitzpatrick J. (2008) Nursing work in Jordan: An example of nursing work in the Middle East. *J Clin Nurs*. 17(8):999–1010
24. Alotaibi M. (2008) Voluntary turnover among nurses working in Kuwaiti hospitals. *J Nurs Manag*. 16(3):237–245.
25. Almalki M, Fitzgerald G, Clark M. (2011) The nursing profession in Saudi Arabia: An overview. *Int Nurs Rev*. 58(3):304–311.
26. McClure M, Hinshaw A. (2002) *Attraction and Retention of Professional Nurses*. American Nurses Publishing; Washington, D.C: Magnet Hospitals Revised.
27. McClure, M. L., Poulin, M. D., Sovie, M. D., & Wandelt, M. A. (1983). *Magnet hospitals: Attraction and retention of the professional nurse*. Kansas City, MO: American Academy of Nursing.
28. Gasparino RC, Guirardello Ede B, Aiken LH. Validation of the Brazilian version of the Nursing Work Index-Revised (B-NWI-R). *J Clin Nurs* [Internet]. 2011;20(23-24):3494-501. Available from: <http://dx.doi.org/10.1111/j.1365-2702.2011.03776.x>2.5.
29. Hasselhorn HM, Tackenberg P, Müller BH. (2005) Nurses Early Exit (NEXT) scientific report. University of Wuppertal NEXT-Study Coordination; www.next-study.net.
30. Milisen K, Abraham I, Siebens K, Darras E, Dierckx de Casterlé B. (2006) Work environment and workforce problems: a cross-sectional questionnaire survey of hospital nurses in Belgium. *International Journal of Nursing Studies*.43:745–754.
31. Aiken, L. H., & Patrician, P. A. (2000). Measuring organizational traits of hospitals: the revised nursing work index. *Nursing Research*, 49(3), 146e153.
32. Hanlon M, Gladstein D. Improving the quality of work life in hospitals: A case study. *Hosp Health Serv Adm*. 1984;29(5):94–107.
33. Clarke P, Brooks B. Quality of nursing work life: Conceptual clarity for the future. *Nurs Sci Q*. 2010;23(4):301–305.
34. Schalk D, Bijl M, Halfens R, Hollands L, Cummings G. Interventions aimed at improving the nursing work environment: A systematic review. *Implementation Sci*. 2010;5(34)
35. Gifford BD, Zammuto RF, Goodman EA. The relationship between hospital unit culture and nurses' quality of work life. *J Healthc Manag*. 2002;47(1):13–25.
36. Brooks BA, Anderson MA. Nursing work life in acute care. *J Nurs Care Qual*. 2004;19(3):269–275.
37. Lake E. (2002) Development of practice environment scale of the nursing work index. *Research in Nursing & Health*. 25:176–188.
38. McCusker J, Dendukuri N, Cardinal L, Laplante J, Bambonye L. (2004) Nursing work environment and quality of care: differences between units at the same hospital. *International Journal of Health Care Quality Assurance*. 17 (6):313–322.
39. Penn-Kekana, Loveday, Duane Blaauw, Khin San Tint, Desiree Monareng, and Jane Chege. 2005. *Nursing Staff Dynamics and Implications for Maternal Health Provision in Public Health Facilities in the Context of HIV/AIDS*. Washington, DC: population council. http://www.popcouncil.org/pdfs/factsheets/RH_LowMoraleSANurses_A4.pdf

40. Chebor A, Simiyu K, Tarus T, Mangeni J and Obel M. (2014) Nurses Perception of their Work Environment at a Referral Hospital in Western Kenya. Journal of Nursing and Health Science Volume 3, Issue 6, PP 01-06.
41. Aiken L, Clarke S, Sloane D. Hospital staffing, organization, and quality of care: cross-national findings. Nursing Outlook. 2002;50 (5):187–194.