

Nurses' perceived work environment in the public sector tertiary care hospitals of Khyber Pakhtunkhwa in Pakistan

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Abstract

Aim: Aim of the study is to evaluate nurses' perceptions regarding their work environment in the public sector tertiary care hospitals of Khyber Pakhtunkhwa in Pakistan.

Materials and Methods: A cross-sectional study design was conducted from March-July 2019. Multi stage sampling method was selected. First we obtained four strata of the total 13 hospitals and then randomly selected four hospitals from the four strata. Three hundred and thirty-nine registered nurses were proportionately recruited from the each hospital through simple random sampling into the study from four major tertiary care teaching hospitals of Khyber Pakhtunkhwa in Pakistan. A self-reported scale Perceived work environment and nurses work index (PWES&NWI) was distributed among the study participants. Grand mean score < 2.5 of each component were taken for a favorable work environment and grand mean > 2.5 for taken for unfavorable work condition.

Results: In a sample of 339(80%) of the nurses were female while the mean age of the participants was 30.8 years. Grand mean scores of the four components namely: nurse participation in hospital affairs, nurse foundation for quality of care, nurse manager ability and, availability of adequate resources were >2.5 except collegial nurse-physician relationship grand mean was 2.3. These results indicate that nurse's work environment was unfavorable for practice. There was a statistically significant association between gender, current work units, and education with the five subscales of the nurse's work environment ($p < 0.05$).

Conclusion: Nurse's perceived their work environment in public tertiary care hospitals of Khyber Pakhtunkhwa is unfavorable for nursing practice. The findings of the current study may provide empirical support for developing a framework of nurses' work environment in the future.

Keywords: Favorable; nurses; perception; tertiary care hospital; unfavorable; work environment

INTRODUCTION

The work environment is the surrounding where individual lives and commits to perform their daily activities (1,2). Researchers refer to a nurse's work environment as a complex system and the characteristics of the workplace that facilitates or hampers nursing practices (3). A positive work environment facilitates nursing care to admitted patients (4). Conversely, if the work environment is being neglected by organization management, and nurse leaders, it can negatively affect nurses' performance and productivity (5). The health care environment is the 6th highest unhealthy and fourth challenging workplace that directly or indirectly influences nurse's performance (6,7). Literature reported that 52% of hospital-acquired morbidities and 98000 admitted patients' deaths occurred annually in the world due to the poor quality of nursing care (7). Moreover, failure to address potential work environmental factors can decrease nurse's satisfaction and hinder their performance (8,9). Therefore the

focus on the quality of care is intensively related to the characteristics of a nurse's work environment (10-12). A large body of knowledge from European countries, the USA, Australia, and Canada stressed empowering nurses to participate in hospital affairs, work autonomy, support, resource adequacy, and collegial nurse-physician relationship to improve nursing care (13,14). Globally, the majority (two-thirds) of the nurses work in public sector hospitals (15), therefore patient safety and outcome merely depend on the quality of nursing care (16). Similarly, nurses often perceived several work-related problems including stressful work, work burden, role ambiguity, poor managerial support, low professional status, workplace violence, unclear communication, poor relationship with doctors, and inadequate resources that ultimately lead to poor performance and de-motivation of nurses (12). The above-mentioned factors create psychological and physical exhaustion that may lead to incomplete nursing care or low quality of care (17,18). Conversely, a favorable

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work environment that is collaborative teamwork, work autonomy, professional empowerment, opportunities for skill development and education, and participation in the policymaking process can motivate nurses to feel autonomous and empower for the provision of effective care (19,20). It is evident from the literature that a positive nurse's work environment can support nurses to practice efficiently in a health care team and to take the right decision to utilize resources effectively (20). At present, changes are required within the nurse's workplace and across the system to improve nursing care (21) and boost up nurse's professional attitude and to empower them for independent practice (22). In developing countries nurses are deprived of their professional rights, and mostly they remain unclear about their roles and responsibilities. These phenomena are not being focused by nursing leadership and policy makers in most of the developing countries. The tertiary care hospitals are the last hope of the public to treat patients condition so critically ill patients are brought to tertiary care hospitals for better management but the outcome of the admitted patients are not satisfactory. Patients are not satisfied from nursing care. Moreover, nurses are overburden and unable to provide quality of nursing care. Therefore, this study can pave light on the actual status of nurse's work environment in public sector tertiary care hospitals of KPK.

MATERIALS and METHODS

A cross-sectional framework was used to collect data from 339-bed side nurses. Raosoft software is used to calculate the sample size. This study was carried out in the four largest tertiary care hospitals of KPK. The study duration was from March-July, 2019. Multi stage sampling method was selected. First we obtained four strata of the total 13 hospitals and then randomly selected four hospitals from the four strata. Three hundred and thirty-nine registered nurses were proportionately recruited from the each hospital through simple random sampling into the study from four major tertiary care teaching hospitals of Khyber Pakhtunkhwa in Pakistan. Total 67 nurses were taken out of 280 nurses in Saidu Sharif hospital, 38 nurses out of 160 nurses were taken from Mardan hospital, 158 nurses out of 670 nurses from lady reading hospital, and 77 nurses out of 325 nurses from Ayub medical center who were registered with Pakistan Nursing Council (PNC), involved in direct patient care, and having at least one year of work experience were inclusion criteria. Nurses who were absent from their duty and not willing to participate were excluded. Written approval was obtained from concerned departments and informed consent was obtained from every participant. Ethical approval from Ethical Review Board of the University was also taken. A reliable (Cronbach's Alfa (0.94) (1)"practice work environment and nursing work index" (PES&NWI) was used. The tool is comprised of two parts: The first part was tailored to collect demographic data and the second part comprises of 31 statements of Practice Environmental-Scale and Nursing Work Index (PES-NWI); consist of 5 sub-categories which are; Nurses participation in hospital affairs, Nurse

foundation for quality of care, Nurse manager ability and leadership quality, Resource adequacy and staffing, collegial nurse physician relationship. Questionnaires were distributed among study participants. We decided to measure the nurses' perceived characteristics of their work environment by keeping the cutoff point of the grant means scores <2.50 or ≤ 2.50 considered favorable work environment, mean >2.50 for unfavorable to analyses data as other researcher also measured by the same cut off points.(SPSS) window 22 versions were used. Independent sample t-test and one-way ANOVA were applied by keeping a level of significant $p < 0.05$ (7,23).

RESULTS

The return rate of the questionnaires was 100% as the researcher collected all duly filled forms from the participants. The majority of the participants' ages were between 22-30 years of age.

Table 1. Demographic characteristics of the participants

Demographic variables	Frequencies	Percentages
Religion		
Islam	315	92.90%
Christian	23	6.80%
Others	1	0.30%
Age		
22-30 years	214	63%
31-39years	99	29%
40 or >40years	26	8%
Ethnicity		
Pathan	274	80.8%
Chitrali	45	13.3%
Others	20	5.9%
Marital status		
Married	221	65.20%
Un married	116	34.20%
Widow	2	0.60%
Monthly income in P/Rupees		
<50000	104	30.70%
50000-69000	156	46%
70000 or more	79	23.20%
Permanent Residency		
Urban	81	23%
Rural	258	76.90%
Year of Experience		
<5 yrs.	167	40%
6-10 yrs.	90	27%
11 and >11 yrs.	82	24%
Education level		
Diploma	193	57%
BSCN	114	33%
MSCN	2	1%
Other education	30	9%

Institution of last education		
KTH	31	11%
LRH	58	19%
HMC	23	7%
AKUH	7	2%
KMU	42	16%
Rufaida N.C	16	8%
Others	72	21%
Assigned work units		
Critical care	41	12.1%
Medical care	103	30.4%
Surgical care	112	33%
Orthopedic	26	7.7%
Others	162	47%

Majority of the 80% were female and more than half 65% of the nurses were married. Total 56% were diploma holders, 34% were bachelor degree holders in nursing, 1% were Master in nursing. 40% of the total nurses were having 1-5 years of experience, 27% were having 5-10 years of job experience and 24% were having >10 years of job experience. All essential demographic data has been shown in Table 1. Grand mean score of nurses' perception regarding the five component of work environment shown in Table 2. Firstly, the grand mean score of 2.65 was recorded for the nurses' participation in hospital affairs. Secondly, the grand mean score of 2.54 was recorded for the nurses' foundation for the quality of care. Thirdly, a grand mean score of 2.51 was recorded for the nurses' manager ability and support. Fourthly, the grand mean of 2.75 was recorded for the staffing and resource adequacy and lastly, the grand mean of 2.35 was recorded collegial nurse-physician relationship.

Table 2. Association between demographic variables and the components of nurses' work environment

Nurse work environment	Gender		P value	Permanent Residency		P value
	Female 272	Male 67		Urban=81	Rural=258	
Nurse participation in hospital affairs	mean:2.62+0.767	2.7+0.63	0.12	mean:2.5+0.8	2.6+0.72	0.13
Nurse foundation for quality of care	mean: 2.4+0.66	mean:2.7+0.55	0.001	mean: 2.4+0.6	mean:2.5+0.6	0.16
Nurse manager ability and leadership support	mean: 2.48+0.66	mean:2.6+0.61	0.08	mean: 2.4+0.71	mean:2.5+0.63	0.54
Resources and staff adequacy	mean: 2.7+0.55	mean: 2.9+0.77	0.08	mean: 2.5+0.88	2.8+82	0.01
Collegial nurse physician relationship	mean: 2.3+82	mean:2.3+64	0.96	mean: 2.2+0.83	2.3+76	0.12

Table 3. Nurse perception of their work environment residency distributed by nurses' gender and permanent address

Nurse work environment	Gender		P value	Permanent Residency		P value
	Female 272	Male 67		Urban=81	Rural=258	
Nurse participation in hospital affairs	mean:2.62+0.767	2.7+0.63	0.12	mean:2.5+0.8	2.6+0.72	0.13
Nurse foundation for quality of care	mean: 2.4+0.66	mean:2.7+0.55	0.001	mean: 2.4+0.6	mean:2.5+0.6	0.16
Nurse manager ability and leadership support	mean: 2.48+0.66	mean:2.6+0.61	0.08	mean:2.4+0.71	mean:2.5+0.63	0.54
Resources and staff adequacy	mean: 2.7+0.55	mean: 2.9+0.77	0.08	2.5+0.88	2.8+82	0.01
Collegial nurse physician relationship	mean: 2.3+82	mean:2.3+64	0.96	mean: 2.2+0.83	2.3+76	0.12

Table 4. Nurse perception regarding their work experience

Five components of the nurse's work environment	Experiences			P value
	1-5yrs	6-10 years	>10 years	
Nurse participation in hospital affairs N: 339	2.5±0.75	2.46±0.7	2.5±0.81	0.68
Nurse foundation quality of care: 339	2.55±0.66	2.6±0.69	2.4±0.59	0.25
Nurse manager ability	2.56±0.67	2.45±0.66	2.5±0.63	0.38
Resource Adequacy	2.7±0.85	2.9±0.77	2.6±0.87	0.13
Collegial nurse physician relationship	2.356286±0.77	2.46±0.77	2.36±0.80	0.74

Results indicated that nurses perceived their current work environment of government tertiary care hospitals in KPK was unfavorable for nursing practice. Furthermore, the association was determined with independent variables such as demographic variables. It showed that the experience did not have any significant association with participant's perception level concerning the five

components ($p > 0.05$) showed in Table 3. However, Table 3-6 showed that gender, residency, level of education, and current working unit were statistically significant with resource adequacy nurse foundation for quality of care, nurses' manager ability and collegial nurse-physician relationship in this study was significant ($p < 0.05$).

Table 5. Nurse perception regarding work environment as distributed by environment as by the level of level of nurses' experiences nurses' education

Characteristics of nurse's work environment	Diploma T: 193 Mean +SD	BSCN/Post RN T: 114 Mean+SD	Others T: 32 Mean+SD	P value
Nurse participation in hospital affairs	2.6±0.81	2.653±0.65	2.9±0.49	0.04
Nurse foundation for quality of care	2.4±0.67	2.5±0.62	2.7±0.56	0.06
Nurse manager ability and support	2.4±0.66	2.65± 0.64	2.5± 0.62	0.189
Resource and staff adequacy	2.6±0.6	2.9±0.88	3.0±0.79	0.003
Collegial work relationship				

Table 6. Nurse perception of their work environment distributed by their working units

Nurses work environment	Critical care Units	Surgical care units	Medical care unit	Orthopedic	Others units	P Value
Nurses participation in hospital affairs	2.4	2.60	2.6	2.77	2.9	0.28
Nurses foundation of quality care	2.2	2.55	2.4	2.7	2.7	0.5
Managerial support	2.5	2.4	2.5	2.5	2.6	0.04
Adequate resources	2.5	2.69	2.7	3.1	2.8	0.7
Nurse and physician work relationship	2.2	2.31	2.3	2.5	2.3	0.003

DISCUSSION

Nurses work environment has been focused by health care policy around the world and patient care can be improved when nurses will be satisfied from their work environment. Results obtain regarding the demographic characteristics of the participants are mostly similar to other studies. Majority of the participants' were bachelor's degree and spent 1-5 years in the profession. Our results of education prevalence are similar to the Nigerian study in which most of the nurses were diploma holders (24). It is evident from the literature that getting higher education in nursing helps to empower the nursing profession in return to improve patient care outcomes (25). The number of working years being 1-5 years suggested that the majority of the nurses working at the bedside were almost new graduates in our study. This result suggested that more recruitment might have taken by the KPK government during few years. Moreover, our findings are congruent with a study conducted in pot said hospital in which most of the nurse's experience was <5 years (26). Conversely, our findings are not similar to other studies, in which the majority of the nurse's experience was 5-10 years. In our study, the experience did not affect participants' perception level because of the $p > 0.05$. In a

grand mean scores of nurse's perception regarding their work setting in KPK is unfavorable for nursing practice as evidence by the grand mean score of four subscales were > 2.5 (Table 2). Our findings are incongruent with a study carried out by Brown in which most of the prevalence trait was found in the three subscales i.e. nurse foundation for quality of care, collegial nurse-physician relationship, and nurse manager ability and support. Only one subscale nurse participation in hospital affairs was perceived as less favorable in that study work which is similar to our study (27). Moreover, our study results are consistent with a mixed study conducted in Western Kenya (28) in which the majority of the participants didn't agree to participate in hospital affairs, nurse foundation for quality of care, resources, and staff adequacy. Our study results indicated no statistical significance of nurse's experience concerning nurse involvement in the decision-making process ($p > 0.05$). This could be due to less emphasis on the administration for empowering the nursing profession and lack of opportunities for nurses to participate in the decision-making process. Conversely, our findings are not similar to a study conducted in Saud Arabia in which more experienced nurses were agreed with their involvement in the hospital decision making process (1).

It is evident from the literature that lack of nurse's involvement in the policymaking process leads to low morale, burn out, and stress among nurses which has a strong association with nursing care and patient safety. (6) A significant association has been identified between education groups about nurse participation in hospital affairs ($p=0.04$). This could be due to the expectation of higher educated nurses to share their knowledge with decision-makers and plan for nursing care with different approaches. The findings do not concord with the Saudia study in which diploma holders perceived disagreement with hospital affairs and nurse foundation for quality of care as compared to other education groups, higher education improves nurses' perception to provide quality of patient care (29). Participants in this study perceived disagreement regarding the nurse foundation for quality of care with a mean score >2.5 . A significant difference has been found between gender about this category as males were disagreed with the opportunities for higher education and less work autonomy as compared to female participants ($p<0.05$).

A similar study was conducted in Saud Arabia (1) in which male nurses have disagreed with the availability of the nurse foundation of quality care which is consistent with our study. Besides, Aiken's study findings contradict our findings in which nurses scored high irrespective of their characteristics in this category (10). In our study, nurses disagreed with nurse manager support and their leadership quality. A significant difference between both genders' perception levels was identified a p value of <0.05 . A similar study conducted in Kenya identified that nurses were agreed with nurse manager support in their work setting (30). Moreover, another study (26) nurse's overall perception was high concerning nurse manager support. Poor managerial support in the work area generates high stress among nurses which links to sever burnout. Literature showed a lack of opportunities for managerial preparedness and interfering approaches of other professions, influence nurse managers' abilities. Participants in our study have disagreed with the availability of adequate resources (Grand mean score >2.5) and a significant difference between gender and education groups concerning this category was found ($p<0.05$). The literature revealed that an increase number of nurses with a Bachler degree can prevent nursing care left incomplete and increases the leadership skills among nurses (12). Our study results are inconsistent with a study, in which 55 % of nurses agreed that adequate support service, staffing, and resource availability. According to Aiken (10), hospital-acquired morbidities can be reduced with the provision of adequate resources and staff for nursing care. A systematic study (15), reported the strong causal relationship between less staffing with high mortalities in general ward admitted patients. A magnifying look to our study results show that, majority of the nurses were happy with collegial nurse physician relationship in their current work setting the grand mean score was 2.30.

Our study results are not congruent with another study carried out in Port Said hospital in which nurses perceived less collaboration and poor team work (29) that was link to poor nursing care and high ratio of burn out among nurses.

CONCLUSION

Nurses' perception regarding their work environment was scored unfavorably for nursing practice. Nurses and physician collaborative work relationship was perceived as a favorable aspect for nursing care, while nurse participation in hospital affairs, nurse foundation for quality of care, resource and staff adequacy, and nurse manager ability and their leadership skill for support was perceived highly unfavorable. Nurses' education level, gender, and unit sets were significantly different from their perception of nurse manager ability, nurse foundation of care, and resource adequacy in this study. Nurses' experience did not affect their perceptions as indicated in previous studies where experience level also influences nurses' perception. The findings of the current study may provide empirical support for developing a framework of nurses' work environment in the future.

The highlighted findings may be implied to nursing leaders and researches. Nursing leaders need to restructure their existing model of executing activities in accordance to the need perceived by nurses in this study. The study suggests that there is a need to plan for refreshment training, recognition for good performance, and facilitation of nurses for advanced education. The study also provides areas for future research in which there is a need to assessthe relationship between patient satisfaction from nurse-sensitive care and nurse's perception level.

Competing Interests: The authors declare that they have no competing interest.

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Ethical Approval: Approval was obtained from Khyber Medical University on 02/04/2019, Lady Reading Hospital 15/04/2019, Mardan teaching hospital, 15/04/2019, Ayyub Teaching Hospital 18/04/2019 and Saidu Sharif teaching Hospital on the same date respectively.

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