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Exploring Productivity of Nurses in Pakistan's Health Sector

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Abstract

The purpose of the research was to explore the factors that affect the productivity of nurses in public and private hospitals. The research design was quantitative descriptive. The population consisted of all categories of nurses working in private hospitals in Lahore. A convenient sampling technique was used and a sample of 120 was taken from hospitals. A questionnaire was developed by the researchers, consisting of the factors related to the job which may affect the productivity of the nurses. These factors included the supervisor's relationship with employees, salary and benefits, job involvement, job stress and the physical and cultural environment of the nurses. Results showed that job stress was the best negative predictor of job productivity of the nurses. Implications for the hospitals were discussed.

Keywords: job stress, job involvement, physical and cultural environment

Introduction

Nurses' assistance is required in hospitals all over the world, to take care of patients. They are the backbone of the healthcare sector (Warner & Marilyn, 2021). Due to the growing population and need for healthcare in Pakistan, the profession of nursing has become an even more-sought after facet in the healthcare sector. To get maximum performance from nurses, a stress-free environment is necessary. Stress is one of the causes that could hamper or affect productivity; however, despite the measures which are to be taken, there are still a lot of other factors which can contribute to nurses' productivity at their workplace. Therefore, this research study focused on the factors affecting nurse's productivity in Lahore.

Although every profession is affected by some factors, the health profession is more susceptible, especially in the nursing profession. Nurses make up the largest single group of healthcare workers in acute

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hospitals and absorb a high proportion of the total budget. Research has identified several factors that may influence the nurses' performance and productivity (Terzioglu et al., 2016). The present research is primarily based on how nurses' productivity is affected. Looking at generic factors, it can be concluded that the conditions they work in are not optimal for them to be efficient enough, potentially the relationship with their supervising doctor. However, there are underlying causes present which we aim to explore with the help of this study.

This research paper builds upon a body of research that investigates factors affecting nurses' productivity. It also uses previous conceptual frameworks that correlate nurses' productivity with patient outcomes. Evidence reveals that competent, motivated and skilled health care providers are cornerstones for better performance of healthcare organizations. Additionally, nurses constitute the largest human resource element in healthcare organizations and their performances have a direct effect on health care productivity (Samuel, 2007; Terzioğlu et al., 2016). Furthermore, providing a fair, democratic and peaceful workplace environment for healthcare workers has a direct positive impact on patient-care and patient satisfaction (Michie & West, 2004). Research contributes a variety of factors, including work-related stress, knowledge, skills, benefits and remuneration, physician-nurse relationship and work environment to the job productivity and efficiency of nurses (Gurses & Carayon, 2009; Reddy et al., 2022; Tesfaye et al., 2015). Some of this work is analyzed below.

According to Reddy et al. (2022) factors such as inadequate clinical skills, poor feedback and supervision, workplace, and workplace violence are some potential factors that influence the performance of healthcare providers. A study by Gurses and Carayon (2009) found physical environment and family relations to be obstacles to performance. Tesfaye et al. (2015) argue that feedback on performance appraisal, remuneration, benefits and recognition, staffing and scheduling, staff development and workplace environment affect nurses' productivity the most. They also conclude that the poor performance of nurses can be attributed to the scope of their work; they may experience frustration due to a lack of opportunities for career progression and feel insecure in their jobs. Other research also identifies limited opportunities for career development and higher education and inadequate or nonexistent human resource

management systems as major factors behind compromised productivity among nurses (Bradley & McAuliffe, 2009).

Terzioglu et al. (2016) found a negative association between mobbing and organizational justice as well as organizational culture and professional attitudes. According to research, over 85% of nurses report experiencing mobbing in the past year at their job (Efe & Ayaz, 2010; Köse, 2010) and it has an adverse impact on their productivity (Fisher-Blando 2008). In addition, nurses report a more negative impact in hospitals where environmental conditions are not favorable (Demir et al., 2014). Daneshkohan et al. (2014) explored the relationship between individual characteristics, workplace characteristics, job stress and health to work productivity in direct patient care in a hospital setting. Another study found that most nurses (87.1%) worked full-time (12.41 hours per day) while caring for an average of 4.5 patients per day with 12 being the highest. The results also showed that, in terms of health, 22.4% of the nurses reported health issues while 24% reported a job-related injury in the past two years. Frequent health problems included headaches, backache, joint pain, anxiety, stomach problems, and hypertension. Another factor worth noticing was job stress which showed that higher job stress was related to sex (females), being worried about an injury, working extra hours and being unable to meet patient needs. The research also revealed that 60% of the participants wanted to stay in nursing, 25% were unsure and 15% planned on leaving.

Evidence (Ella et al., 2016) suggests that nurses who experience job satisfaction are more likely to be productive and efficacious. In addition, promoting job satisfaction among them improves quality of their work performance. Baker and Alshehri (2020) investigated the relationship between stress and job satisfaction among nurses. The findings from the study showed significant association between work stress and job satisfaction. It was suggested that job related stress is a potential factor that may have an impact on the performance of the nurses and patient-care.

Job performance is associated with employee's attitudes, job satisfaction and organizational commitment. A study by Kanefuji and Nakatani (2017) aimed at examining workplace environment factors that affect job satisfaction of public health nurses (PHNs). The results showed that a positive correlation did exist between higher scores on workplace

environment and workplace satisfaction which was related to "human relationship", "labor load", and "contribution to society". Workplace satisfaction of PHNs was found to be affected by the relationship with staff, work content that enables them to feel connected with the society, and workload.

There is a link between nurses' productivity and patient outcomes. Keller (2009) identified that work shifts have negative effects on handling the patient. Nurses make more errors and injuries to the patients. Lockley et al. (2007) gave similar results that nurses working in shifts for more than eight hours report higher errors in giving medicine to patients. They reported deficiency in logical and critical thinking regarding decision making. The risk of an error almost doubles when nurses work 12.5 or more consecutive hours. Vahey et al. (2004) examined the effect of the nurse work environment on nurse burnout, and on patients' satisfaction with their nursing care. They found that nurses' low perception about their abilities is positively correlated with patients' less satisfaction with their care.

Rationale

A rapid shortage of nurses combined with the increasing average age of registered nurses urges that immediate efforts should be made to increase nurse retention while optimizing the work productivity of those currently working. Leaders within the nursing department must take affirmative action to significantly improve the nursing environment within a hospital setting by decreasing job stress, assuring the health of nurses and improving their ability to provide quality care. The aim of the present study is to explore different factors which affect the productivity of the nurses in the health care sector. This will all lead to better job satisfaction which will result in improved productivity.

Objective

To study the factors which affect nurses' productivity at workplace

Hypotheses

H1. Psychosocial factors of nurses at workplace are related with their productivity.

H2. Relationship with supervisors, salary and benefits, environment and culture will predict the nurses' productivity.

H3. Job involvement is a positive predictor while job stress is a negative predictor of nurses' productivity

Method

Descriptive cross sectional study design was employed to conduct the present research. A quantitative method to gain insights into the working conditions and motivations of the nurses was adopted. Professional nurses who were over 21 years old and working in private hospitals in Lahore were the study population. A sample of 120 nurses was taken from four different hospitals in Lahore.

A questionnaire was designed in English, for ease of understanding and accessibility to the survey, researchers translated it into Urdu. The questionnaire was structured as follows: It started off by asking them about their gender, age, a bit about their domestic life and their experience in the field. Next, items were developed related to the variables namely, supervisor relationship, salary and benefits, Job involvement, Job Stress and physical environment and culture, and a model against the Performance of nurses was proposed and calculated using the questions targeting productivity such as "I feel I can take better care of my patients" and "Sometimes my work issues affect my patients too". The questionnaire consisted of 36 items. Reverse coding was done for negative items. Participants were asked to fill out questions based on a scale of 1 to 5, which had a range of *strongly disagree* to *strongly agree* with intermediate options in the middle. For the other section, the scale remained the same, but it had a range from *never* to *always*, also with intermediate options. A high score indicated an increased level of all variables and high performance.

The participants were assured that their information would remain highly confidential and the research conducted was only for the purpose of this study, hence, their full consent was taken before the filling of the questions. The questionnaires for the survey were filled out by the nurses themselves. After the collection of data, it was analyzed using SPSS.

Results

Table 1

Demographic Characteristics of the Participants (N=120)

Variables	f	%
Gender		
Women	106	88.3
Men	12	10.0
Prefer not to say	02	1.7
Hospital		
Adil	40	33.3
Doctor	26	21.86
Hameed	24	20.0
National	30	25

There were a total of 120 respondents having including women ($n = 106$), men ($n = 12$) and others who did not prefer to disclose their gender ($n = 2$).

Table 2

Descriptive Statistics of the Study Variables (N=120)

Variables	M	SD
Total Performance	18.66	2.72
Supervisor's Relation	15.05	3.02
Salary and Benefit	13.60	2.87
Job Involvement	12.03	2.85
Stress	14.39	3.08
Physical Environment and Culture	14.57	3.64

Table 3

Correlation among the Study Variable (N=120)

Variables	1	2	3	4	5	6
1.Total Performance	-	.54**	.37**	.53**	-.25*	.40**
2.Supervisor's Relation		-	.43**	.67**	.03	.52**
3.Salary and Benefit			-	.34**	-.06	.21**
4.Job Involvement				-	-.11	.49**
5.Stress					-	-.14*
6.Physical Environment and Culture						-

Note. *$p <.05$. **$p <.01$.

After running Pearson's correlation, all the variables in Table 3 are correlated positively with each other and total performance except stress which is negatively correlated with total performance and other variables related nurses' productivity.

Table 4

Multiple Regression: Factors Predicting Job Productivity of Nurses (N=120)

	B	SE	β	t	p
Model 1					
Constant	11.58	1.77		6.52	.00
Supervisor Relation	.27	.10	.30	2.71	.01
Salary and Benefits	.17	.10	.14	1.69	.09
Job Involvement	.21	.10	.22	2.18	.03
Job Stress	-.19	.07	-.21	-2.82	.01
Physical Environment and Culture	.06	.07	.07	.828	.41
R	.64				
R²	.42				

Note. Adjusted R^2= .388, R^2 change=.415, F (5, 109) =15.47, *p*=.000

Multiple regression was employed to see the ANOVA statistics of the model which came out to be very significant as we found the model had an *F* value of 15.475 and a significance of less than 0.05 which meant that all of our variables had an almost equal amount of impact on nurse's productivity. The beta value for Supervisor Relation (β = .300, *p*<.05) and job involvement (β = .224, *p*<.05) is significant, while for salary and benefits it is not significant. Stress is the negative predictor of work performance (β = -.213, *p*<.05). We also observed that our Cook's distance was <1 meaning that the model was valid.

After obtaining these results, we came to know that job stress is not the primary factor that affects nurses' productivity, but we rather came up with the theory that all the variables measured had an almost equal impact on nurse's productivity, except environment and culture; these variables should be considered when a nurse's productivity is questioned.

Discussion

As seen from the results, it was found that all the variables in this study had a significant effect on nurses' productivity. Regarding the job stress,

items were, "I suffer from consistent headaches because of my job" and "My sleep routine is disturbed due to my job". We can gauge from the negative value of stress (β = -.213, $p<.05$) that our hypothesis was supported that stress is a negative predictor of nurses' productivity. Why Job stress affects productivity because the nurse will not be available to perform to her full potential if she is not in the right headspace and there is constantly something bringing her down about her job so it is safe to assume that stress has a big role to play. Similar results were given by Vahey et al. ([2004](#)) that nurse burnout negatively affects patients' satisfaction with their nursing care.

Moving on to the next variable which was the Supervisor Relationship, the items were like " I have consistent fights with my doctor" and 'I have a healthy relationship with my doctors". The beta value (β = .30, $p<.05$) shows that the relationship with the supervisor is a positive predictor of nurses' productivity. This is a variable which tackles the doctor-nurse conflict that has plagued hospitals for years which is that doctors do not give their nurses the recognition they deserve and nurses feel maligned and overshadowed in front of their supervisors. Most supervisors can also be very rude to their nurses which can indirectly cause the nurse to not give her best as the nurse would see no point in it. These facts can be used to say that the supervisor relationship will also create a major impact on the productivity of nurses

Then came the variable of 'job involvement' and the items were, "how often do you complete your task on time?", and "how often do you think you could have done your task in a better way?" The result showed that this variable has a positive impact (β = .224, $p<.05$) on productivity. Job Involvement meant to question how important were nurses in the larger setup, it was to check if the nurses had a say in major decisions that affected them or their patients and did, they felt valued around their superiors. The reason this creates an impact on productivity is that if the nurse is undervalued and underappreciated to the extent that she almost feels invisible in the workspace, the nurse will have little to no motivation to work in that environment which will directly explain her lack of dedication to the hospital and her work.

The interesting part about our model comes later as we see that salary and its benefits also have an impact, although not significant, on the results and this can be discerned by the fact that obviously if a nurse is

being paid less than she thinks she deserves to be paid so it is apt to say that she will not want to work to her full capabilities. Through this, we can safely say that salaries and benefits also have a major impact and make sense as they directly affect a nurse's work potential.

Lastly, we observed that the physical environment and culture also played a role when we questioned the nurse's productivity. The items were like "I feel the hospital is understaffed" and "I feel valued by my employer". This was given rise by when nurses said they felt that the workspace was unfit or unsafe for them to work in and there were constant injuries that were caused as a result. Also, this variable questioned exactly how the culture of the workspace was. Did the nurse have fun at her job and did she feel the urge to get up and work or was it a mundane routine that the nurse had to force herself to do? When we addressed these factors and measured them across the productivity barrier, we saw that they also had an impact on nurses' productivity.

Conclusion

The purpose of the study was to eventually provide a framework for improving the performance of professional nurses. The study followed a quantitative approach and exploratory design to analyze and describe the identified variables. The findings of the study contributed to a further understanding of the factors affecting the performance of nurses; however, further work needs to be done in this area. Clearly, supervisor's relation and job involvement are two of the leading factors in enhancing the productivity of the nurses. However, there are other components that impact their productivity level. Those include elements such as adequate resources or having the equipment, devices and supplies available that nurses need to care for. Regards to this, there needs to be more motivation from supervising doctors and hospital management towards nurses to decrease the feeling of neglect which can adversely affect their work.

Moreover, there needs to be an emphasis on an approach that is more focused on conflict management in collaboration with the human resource department. Promoting this collaborative approach is important as it can also lead to better patient outcomes if a nurse's productivity is better, and can perhaps lead to outcomes such as decreased length of stay in a hospital and reduction in the treatment costs without any tradeoffs.

Based on the practical implications of this study, the hospitals should improve the culture of the organization, its justice and minimize the mobbing of nurses. Workshops should be arranged to train the nurses to avoid mobbing.

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