

ORIGINAL ARTICLE
ORIGINAL ARTICLE**Impact of Nurse Roster Management on Nurses' Job Satisfaction in a Tertiary Care Hospital Lahore, Pakistan**FAUZIA BATOOL¹, MARIA ALI², TAHIRA ASLAM³, RAZIA KOUSAR⁴, AYESHA TALIB⁵, HINA ASLAM⁶^{1,2}Charge Nurse at Services Hospital Lahore³Charge Nurse at Multan Institute of Cardiology, Multan⁴Charge Nurse at Sadiq Khan Abbasi Hospital Bahawalpur⁵Charge Nurse at Punjab Institute of Mental Health Lahore⁶Senior Lecturer at Lahore school of Nursing, The University of Lahore, LahoreCorresponding author: Hina Aslam, Email: Hina.aslam5620@gmail.com**ABSTRACT**

Roster management is seen to be an essential component of Health care settings. Rostering for hospital staff in general and nurses in particular is challenging because of variety of issues and demands in many shifts and days. Job satisfaction of nurses is an indicator of the services provided in a specific healthcare facility. Roster management and job satisfaction are very much dependent on each other although roster management is a complex task.

Objectives: The study objective was to identify the impact of nurse roster management on nurses' job satisfaction in a Tertiary Care Hospital Lahore, Pakistan.

Methods: A cross-sectional study was conducted at The University of Lahore teaching Hospital, Lahore Pakistan. A non-probability convenient sampling technique was used with a sample size of 133 nurses working in the hospital were included. In this study, Mines Job Satisfaction Scale (MJSS) was used for nurses' job satisfaction level and implementation of nurse roster management questionnaire was used for data collection. The following methods were used to analyze the data: double linear regression, one-way analysis of variance (ANOVA), Pearson correlation, and independent t test.

Results: The findings showed that there was a significant association between the nurse roster management with all management functions on nurses job satisfaction level ($p=.0002-.012$). The two functions of management which affect the nurse job satisfaction level was organizing and controlling.

Conclusions: Researchers determined that the roster management of nurses statistically correlated with the job satisfaction level of nurses. Nursing supervisors should have the competence to improve the job satisfaction level of nurses by optimizing the roster management especially on organizing and controlling aspect.

Keywords: Nurses; Roaster management; Job Satisfaction; Health Care Settings; Nursing Supervisors; Turnover; Absenteeism

INTRODUCTION

Nurses are the core of each health facility and provide their services at the bedside of each patient whereas irregular shifting may affect their well-being which directly distress job satisfaction (1). Making rosters of hospital staff in general and nurses in particular is challenging because of variety of issues and demands in various days and shifts. Many organizations have single shifts or having a working schedule of 12 hours a day provide overtime opportunity to workers after completion but healthcare system has to work around the clock (2).

Job satisfaction of nurses is an indicator of the services provided in a specific healthcare facility. On the other hand job satisfaction is sensitivity and focus of person towards work environment (3). Satisfied nurses on the other hand are thought to be beneficial for health organizations thus show more commitment and higher level of loyalty. Hospital may suffer great losses due to poor enactments due to dissatisfaction of nurses and face problems like high turnover, absenteeism and sick leaves etc (4). Duty roster and job satisfaction are very much dependent on each other while formation of earlier is a complex task indeed. Allocation of nurses while making a duty roster suffers optimization issues regarding allocation of nurses in various healthcare facilities (5).

Roster management and level of job satisfaction has been perceived to be very low among nurses globally. It was reported that health management system of Netherland is at the top comparing rest of the countries which increase the level of satisfaction among nurses (6). While it was also found that lower performance of nurses lead to dissatisfaction among patients in Netherland and United Kingdom (7). A lower job satisfaction from nurses has also been reported in various regions of Indonesia as 51.6% in Solok and 57% in other regions is very high and contrary to expectations (8, 9).

Duty roster has always been a key factor in job satisfaction of healthcare staff particularly nurses whereas other factors include education, age, gender, and experience, working atmosphere, salary, reward support and upcoming career opportunities (10). An ideal group of nurses in a hospital must comprise of one head

nurse, fifteen regular nurses, three caretakers and two trainee nurses which looks hard to maintain (11). Head nurse have to make roster after every four weeks in general. In order to find possible elucidation, head nurse has to cover various time related constraints keeping in view minimizing the frequency of violations. Further it is also suggested that a nurse must work for 38-45 hours a week, with two weekends per month and a maximum of 6 assignments on a night shift (12).

Objective of the Study: The study objective was to identify the impact of nurse roster management on nurses' job satisfaction in a Tertiary Care Hospital Lahore, Pakistan.

Hypothesis 1: There was a relationship between demographic characteristics of nurses (age, working experience, educational level, career ranking and salary) with job satisfaction.

Hypothesis 2: There was an association between implementation of roster management for nurses according to planning, organizing, staffing, controlling and directing with job satisfaction.

Hypothesis 3: There was an association between types of shift for nurses with their job satisfaction.

METHODOLOGY

The present study was conducted at The University of Lahore teaching hospital Lahore, Pakistan during January 2023 to April 2023. The sample size was 133 nurses. The sampling technique was convenient sampling. Informed consent was obtained from each participant. In this study, Mines Job Satisfaction Scale (MJSS) was used for nurses' job satisfaction level developed by Weiss et al. and implementation of nurse roster management questionnaire was used for data collection. The implementation of roster management for nurses (Planning, Organizing, Staffing, Controlling and Directing) and job satisfaction of nurses were compared by using Pearson correlation. To determine the relationship between a nurse's age, gender and job satisfaction, an independent-t test was used. One-way ANOVA was used to examine the salary, educational level, career level and type of rostering with job satisfaction level of nurses. The most important

factor influencing nurses' satisfaction was found using a double linear regression analysis.

RESULTS

Table 1: Demographic characteristics of participants

Variables	N	%	M	SD
Gender				
Male	39	29.3	69.25	13.60
Female	94	92.2	66.93	13.33
Education level				
Diploma	81	79.4	66.28	13.02
Post RN BSN	40	30	77.00	35.95
BSN	12	11.8	72.42	13.29
Career level				
Junior Nurse	50	68.5	66.05	13.20
Staff Nurse	14	10.5	71.14	10.73
Specialized Nurse	28	21.05	62.79	14.743
Team Leader	41	30.8	69.53	12.38
Type of salary				
<Rs. 30,000	34	33.3	63.62	12.19
Rs.30,000-Rs. 39,999	32	31.4	68.63	12.10
Rs. 40,000-Rs. 49,999	31	30.4	68.94	15.79
Rs. 50,000-Rp. 69,999	4	3.9	68.75	9.57
≥Rs. 70,000	32	24.0	76.00	13.29

Table 1 showed that majority of participants were female 94 participants, 92.2% and diploma nursing 81 Participants, 79.4%. Majority of participants was junior nurses (50 participants, 68.5%) whereas 34 participants 33.3% have <30,000 salary.

Table 2: Correlation of Age and Work Experience with Job Satisfaction

Variables	M	SD	Minimum to maximum	95% CI	r	p
Age	38.4	10.1	22-56	[35.49, 40.46]	.182	.067
Work experience	15.7	10.3	1-36.3	[13.68, 17.88]	.218	.028*

Table 2 revealed that average age of nurse was 38.4 years, youngest being 22 years old and the oldest being 56 years of age. The median of working experience was 15.7 years, with the shortest being 1 year and the longest being 36.3 years. Table 2 showed that statistically significant and weak correlation between working experience and nurse job satisfaction level.

Table 3: Correlation of Nurse Scheduling Management with Job Satisfaction

Variables	M	SD	Minimum maximum	95% CI	r	P
Implementation of nurse roster management	95.5	9.65	67-133	[92.69, 97.48]	.436	.001*
Planning	20.9	2.20	12-25	[20.56, 21.42]	.248	.015*
Organizing	7.64	0.57	6-8	[7.52, 7.75]	.457	.000*
Staffing	30.7	2.86	23-37	[30.20, 31.33]	.398	.003*
Controlling	18.0	3.36	11-24	[17.42, 18.74]	.371	.002*
Directing	18.1	3.74	8-24	[17.40, 18.87]	.329	.001*

Table 4 showed that nurse perception of implementation of nurse roster management had a better average score that was 95.5 (84% out of 133 participants). The result shown that there was significant moderate correlation between the implementation of nurse roster management and nurse satisfaction (p = .001, r = .435). Correlation between management function on roster management and nurse satisfaction also significant, (planning (r = .248; p = .015), organizing (r = .457; p = .000), staffing (r = .398; p = .003), controlling (r = .371; p = .002) and directing (r = .329; p = .001).

DISCUSSION

Knowledge attitude and practices of the nurses revealed that 47.1% nurses (47.1%) had fixed duties similarly frequency of fixed duty system was found to be more prevalent in private sector as compared to public sector. Fixed duties are more frequently fall under self-scheduling class as most of the fixed duties are assigned to sister in-charges who design roster themselves while others categories may be few needy nurses involving in homecare or doing double jobs and request to fix their duties. Fixed scheduling of rosters is an old concept when self-scheduling was

perceived to be enhancing autonomy of staff nurses, eliminates requests burden for re-adjustment, saves time of Incharge and found to be effective in retaining of competent or removal of non-competent staff (13). Another study yielded the benefits of self-scheduling as satisfaction and commitment of staff, better team work and minimizing staff turnover (14).

Double job has been already described in various studies proposed in development of dual practice regulatory mechanism among healthcare workers in 2011(15). Dual practice of healthcare staff has been reported from lower middle income countries, which comprehends healthcare professionals doing jobs at different aspects of medical care. A recent report on the other hand revealed that nurses, long distance truck drivers, bar staff and policemen are at higher risk of acquiring certain diseases. It has been concluded that shiftwork has impact on psychological, physiological and sleeping health effects (16).

All categories of skilled nurses were not present according to the 30.4% respondents in present study. A total of 31.2% respondents were of the view that nurses are not adhering to their jobs properly. Great contribution of nurses in transformation of healthcare could not be denied as they are fully participating as a member of professional health team in each specialty (17). Thus their role as an improved skill, knowledge and attitudes has proven to shift the quality of patient centered care on higher side and must be present in each duty shift. Around 31.2% respondents were reported the coverage constraints of which 41.7% mentioned time constraints, 19.7% reported hard constraints and 38.9% argued about soft constraints. A study reported that any constraints in healthcare besides budget constraints are more relevant to the insufficient or inappropriate resources (18). Subsequently such constraints can be resolved by an efficient resource allocation however ignorance of such constraints may seriously obstruct the utilization and reliability of decision making. Shortly various constraints including supply side, demand side and system induced need to be handle in short run.

A satisfaction level of 84.8% among nurses in present study remained high as compared to other studies of various countries. A recent study reported a satisfaction level of 67.2% among nurses working in an army hospital (19). Another study has reported further low levels of satisfaction in many countries and reported lowest of 11% in Netherland, 25% in United States, 39% in United Kingdom and 56% in Greece (20). All of the above mentioned countries on the other hand are considered to be developed countries as far as Pakistan is concerned. Factors related to job dissatisfaction are merely dependent on salaries mostly and therefore present study also noted the range of salaries of nurses and only a matching figure of 10.9% nurses with a salary of <30 thousand Pakistani rupees were noticed in this study.

In present study highest mean score of 4.09±0.79 was obtained by "good ability to do a team work" while 3.14±1.09 was obtained by getting promotions with a great variation as is shown by the value of standard deviation. Although mean score of each variables remained > 3 so Variables scoring a mean of <3.5 were as considered fair, 3.5-4.0 as good and >4.0 were considered as excellent outcomes. Appraisals for implementation of nurse scheduling management were also considered regarding planning, organization, staffing, actuating and controlling showed excellent response with a mean of more than 91.94±4.34. All the results are comparable with the study which denoted the positive association of schedule organization with nurse satisfaction and spotted a well positive direction of actuating followed by other variables as planning, organization, staffing, and controlling.

CONCLUSION

Roster management is a crucial aspect of ensuring that nurses have a balanced workload and enough time for personal development. By focusing on planning, organizing, staffing, controlling and directing we can create a better work environment that fosters job satisfaction. The implementation of roster management has had a positive impact on nurses' satisfaction

levels, especially in the organizing and controlling aspects of their schedules.

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Conflict of Interest: Nil

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