

A STUDY ON IMPACT OF NURSING STAFF TURNOVER ON HOSPITAL EFFICIENCY AT A TRUST-BASED HOSPITAL, VADODARA

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ABSTRACT

Very limited studies of nurse turnover have been conducted in spite of rising rates of turnover, especially in private and trust-based hospitals. The object of this the study is to conduct an empirical study of the causes and consequences of nursing turnover in a trust-based hospital. In this study, essential information (Primary data) was gathered to search the exact reasons behind turnover and its subsequent outcome; notwithstanding that the researcher also accumulated secondary data to ascertain the precise causes of turnover. To investigate the causes and its subsequent results of nurse turnover, all hypotheses are tested by the statistical (kruskal Wallis test) process. Nurse, Turnover, Workload, Job-Satisfaction, Conflict, Workflow, Increased-Cost, Stress and Patient- Flow:

INTRODUCTIONS

Productivity is basic for the business and manager. There are numerous infinitive factors on which productiveness is the noteworthy element of the organization. Worker turnover is one extremely essential factor out of them. Workers turnover is the procedure where the representative leaves an organization or transferred inside a similar organization. It's far one of the maximum critical troubles for the corporations. Impolite behavior, work existence imbalance, feeling undervalued, alternate in the generation, multiplied call for, and plenty of others are numerous reasons for worker turnover. There are many reasons for a turnover that has been observed such as turnover itself is one of the important reasons for turnover. Many a time it is very difficult for the management to fill the vacant post in a short spell of time.

So, when any nurse leaves the organization then other nurses have to take the workload of the outgoing nurses, which may be one of the significant reasons of nurses for leaving the organization. Sometimes deficiencies of role clarity and stumpy sense of control over job performance may be another reason for turnover, in that situation; it is necessary to ensure proper exchanging of the work expectation between management and nurse. Proper recognition and rewarding workers from management's side have established a vital process in any workplace nowadays. Therefore, it is necessary to recognize and reward the workers for increasing intrinsic motivation as well as better-quality performance. But nurses are not properly recognized and rewarded in spite of their hard work in the workplace; it may also be the cause of high turnover. There are many kinds of turnover such as functional and dysfunctional turnover (Many a time good performer leaves the organization named dysfunctional turnover but on other hand leaving the organization by the poor performer is called functional turnover). Voluntary and involuntary turnover (if the choice of turnover happens because of a nurse's own intention is called voluntary turnover but without any choice or intention is called involuntary turnover is one in which employees have no option in their termination (sickness, death). External and internal turnover: (Here transfer of an employee within the organization but in a different department is called internal turnover but on the other hand if an employee leaves the organization and goes to another organization is called an external turnover). Skilled and unskilled turnover (In many organizations unskilled and untrained workers leave due to

frustration but in many times skilled workers also leave the organization due to better opportunity, in that situation, it is considered to be the loss of organization.¹ Demand for nurses is growing nowadays and collages for nursing are less as compared to the demand of nurses. Turnover of nurses is a gigantic issue for all the hospitals. There are many reasons that have been identified after different research conducted by various experts in a different part of the world Excessive nurse turnover is a major global crisis that persisting in unfavorable impacts on the healthcare system in many countries. Turnover rates of nurses vary in different countries such as 15% in Australia, 20% in Canada, and 27% in the United States. The cost of the replacement cost of each 'lost' nurse has been calculated at US\$48,790 in Australia, \$26,652 in Canada, and \$20,561 in the United States. It has been observed that the turnover rates are maximum of new graduates and newly hired nurses.²

OBJECTIVE OF THE STUDY

- 1) To analyze the impact of nursing staff turnover on hospital efficiency.
- 2) To give suggestions to reduce turnover of nurses.

REVIEW OF THE LITERATURE

A study was conducted by J. Bowalis (2016) to assess the cause and effect of nurse turnover in two areas, first is mortality and 2nd is the quality of nursing services. Finally, at the conclusion, it is found that the effect of turnover not only reduces the quality of service but also possibilities of rising mortality rate³. In the year 2016, K. Rondeau, T. Wagar (2016) conduct a study

with an objective to explore the relationship between human resource management practices and voluntary turnover of registered nurses and created three valuable HRM systems to reduce turnover⁴. The significant descriptive research study of D. Rajan (2013) with the object of examining the impact of turnover of nurses on organization performance where he proposed suitable submission to control and prevent turnover of nurses⁵. D. Thompson, B. Chang, J. Marsteller (2013) in their research work carried out a longitudinal study, in which he had sampled 45 ICU's from 35 hospitals with an object to measure the consequences of nursing care hours per patient day, nursing skill mix, and nurse turnover on centerline-associated bloodstream infection (CLABSI) rates⁶. In 2011 J. Khaliq, M. Rashid, Muhammad Zia-ur-Rehman (2011) conducted a study with an object to research the HR procedures in nursing sector Pakistan's. The outcome of the study says there are many phases that led to dissatisfaction, which could be reduced by identifying turnover and frustrations, enhancing internal empowerment and decreasing external stress⁷. Jeffrey A., Joan R., Beverly A. (1991) conducted research in 407 hospitals to test challenging arguments that the turnover of hospitals are positively linked with organizational inefficiency turnover rates are positively associated with organizational inefficiency but finally, it is found that the turnover of nurses are positively associated with operating and employees' costs per adjusted admission⁸. Shamsuzzoha and Shumon H. (2008) in their study found that there are reasons for turnover such as job security, job dissatisfaction, better job option, less increment, and working time⁹. Halter M., Boiko O., Pelone F., et al (2017) in their systematic review research

that there are multiple determinants of turnover such as nurse's stress and dissatisfaction at the individual level and in the organizational level, managerial style, and supervisory support factors are also significant factors for turnover¹⁰. In 2018 Kaddourah B., Amani K. and Mohamad Al-Tannir (2018) did research in a tertiary hospital of Riyadh on Quality of nursing work life and turnover intention. After sampling 364 nurses it is found that good quality of nursing work life decreases turnover¹¹. life decreases turnover¹¹.

HYPOTHESIS OF THE STUDY

Ho1: There is no significant relationship between nursing staff turnover and extra workload on remaining nurse.

Ho2: There is no significant relationship between nursing staff turnover and poor job satisfaction on remaining staff.

Ho3: There is no significant relationship between nursing staff turnover and high stress amongst remaining nurses.

Ho4: There is no significant relationship between nursing staff turnover and more leaves amongst remaining nurses.

Ho5: There is no significant relationship between nursing staff turnover and sickness amongst remaining nurses.

Ho6: There is no significant relationship between nursing staff turnover and more complaints from patients.

Ho7: There is no significant relationship between nursing staff turnover and more complaints from doctors about nurses.

Ho8: There is no significant relationship between nursing staff turnover and more complaints from housekeeping staff about improper waste segregation.

Ho9: There is no significant relationship between nursing staff turnover and increased cost (recruitment cost, training cost).

Ho10: There is no significant relationship between nursing staff turnover and difficult to manage patient flow at the time of festival.

Ho11: There is no significant relationship between nursing staff turnover and delay in routine procedures.

Ho12: There is no significant relationship between nursing staff turnover and damage of equipments because of lack of knowledge of new nurses.

Ho13: There is no significant relationship between nursing staff turnover and disturbed workflow.

Ho14: There is no significant relationship between nursing staff turnover and high conflict between remaining nursing staff and administrative staff.

Ho15: There is no significant relationship between nursing staff turnover and high increased level of minor injuries.

Ho16: There is no significant relationship between nursing staff turnover and high affects reputation of hospital.

RESEARCH METHODOLOGY

Research design: Type of research design: a descriptive and cross-sectional study

Data collection: Primary Sources- through the structured closed-ended questionnaire.

Statistical Tools: Data tables

Sampling: Sample will include – HR administrative staff, Floor managers, Nursing superintendent, Nursing in-charge, department in charge and OPD staff nurse in-charge (Total sample will be of 45). In all category HR

administrative staff, floor manger and nursing-in charge (nurse administrator) the researcher used proportional stratified random sample

Pilot study: The pilot study was conducted on 15 staff, HR and nurse administrative staff. The questionnaire was content validated using expert opinion and reliability was checked using Cronbach's alpha, whose value was 0.921 (very strong) and hence no changes were required in data collection tools.

Process: A cross-sectional observational study design through structured questionnaire and checklist will be used to measure the impact of nursing staff turnover.

Ultimately the observation is designed with an aim to measure the impact of nursing staff turnover on efficiency during the course of one month. With the intake of administrative staff feedback and suggestion, it helps to know whether turnover impacts the reputation of the hospital or not.

Appropriate tools for data analysis: Frequency distribution made to analyze opinion samples on 5 point likert scale Kruskal Wallis test is done to see the mean value and to test the hypothesis that there is difference in opinion of staff according to age.

ANALYSES AND DISCUSSIONS

Frequency Table

Questions Impact of nursing staff turnover resulting.....	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Total	Median
Extra workload on remaining nurse staff	17 (37.8%)	26 (57.8%)	-	02 (4.4%)	-	45 (100%)	2
Poor job satisfaction of remaining nurse staff	7 (15.6%)	28 (62.2%)	3 (6.7%)	5 (11.1%)	2 (4.4%)	45 (100%)	2
High stress amongst remaining nurses	8 (17.8%)	24 (53.3%)	6 (13.3%)	5 (11.1%)	2 (4.4%)	45 (100%)	2
More leaves of remaining nurse staff	1 (2.2%)	21 (46.7%)	12 (26.7%)	8 (17.8%)	3 (6.7%)	45 (100%)	2
Sickness amongst remaining nurses	1 (2.2%)	29 (64.4%)	4 (8.9%)	8 (17.8%)	3 (6.7%)	45 (100%)	2
More complaints from patients	20 (44.4%)	20 (44.4%)	2 (4.4%)	2 (4.4%)	1 (2.2%)	45 (100%)	2
More complaints from doctors about nurses	20 (44.4%)	20 (44.4%)	2 (4.4%)	2 (4.4%)	1 (2.2%)	45 (100%)	2
More complaints from housekeeping staff about improper waste segregation	-	14 (31.1%)	14 (31.1%)	15 (33.3%)	2 (4.4%)	45 (100%)	3
Increased cost	26 (57.8%)	15 (33.3%)	4 (8.9%)	-	-	45 (100%)	1
Difficult to manage patient flow at the time of festival	1 (2.2%)	12 (26.7%)	8 (17.8%)	22 (48.9%)	2 (4.4%)	45 (100%)	4
Delay in routine procedures	15 (33.3%)	21 (46.7%)	3 (6.7%)	5 (11.1%)	1 (2.2%)	45 (100%)	2

Damage of equipments because of lack of knowledge of new nurses	3 (6.7%)	20 (44.4%)	6 (13.3%)	15 (33.3%)	1 (2.2%)	45 (100%)	2
Disturbed workflow	12 (26.7%)	25 (55.6%)	4 (8.9%)	3 (6.7%)	1 (2.2%)	45 (100%)	2
High conflict between remaining staff	5 (11.1%)	21 (46.7%)	9 (20%)	9 (20%)	1 (2.2%)	45 (100%)	2
Increased level of minor injuries	2 (4.4%)	24 (53.3%)	6 (13.3%)	12 (26.7%)	1 (2.2%)	45 (100%)	2
Affects reputation of hospital	23 (51.1%)	18 (40%)	2 (4.4%)	1 (2.2%)	1 (2.2%)	45 (100%)	1

In this criterion, 37.8% of respondents are strongly agreed, 57.8% are agreed on the extra workload on remaining staff. Median is 2 indicating that 50% of the respondents have agreed for the extra workload on remaining staff due to turnover.

1. Here 15.6% are strongly agreed, 62.2% are agreed on poor job satisfaction of remaining staff. Median is 2, which is also signifying that 50% of the respondents have agreed on poor job satisfaction of remaining staff due to turnover.
2. In the category, 17.8% are strongly agreed and 53.3% are agreed for high stress amongst remaining nurses. Median is 2, indicating that 50% of respondents are agreed.
3. Here only 17.8 % are strongly agreed, 46.7% are agreed for more leaves amongst remaining staff. Median is 3, proving that more than 50% of respondents have disagreed for more leaves of remaining staff due to turnover of their staffs
4. At this point, 64.4% are strongly agreed and 24.5 are agreed for sickness amongst remaining nurses. Median is 2, indicating that 50% of the respondents have agreed for the sickness of remaining nurses
5. In this category, 88.8% are strongly agreed and

agreed on more complaints from patients. Median is 2, indicating that 50% of the respondents have agreed for more complaints from patients.
6. Here 93.3% are strongly agreed and agreed on more complaints from doctors about nurses. Median is 2, representing that 50% of the respondents has agreed for more complaints from doctors about nurses.
7. In this category, 37.7% strongly agreed and agreed 31.1% neutral, 62.2 % are disagreed and strongly disagreed for more complaints from housekeeping staff about improper waste segregation. Median is 3 proving that more than 50% of the respondents have disagreed on more complaints from housekeeping staff about improper waste segregation.
8. Here, 91.1% of respondents are strongly agreed for the increased cost. Median is 1, so it is confirming that more than 50% of the respondents agreed for the increased cost.

9. In this study, only 28.9% are strongly agreed and agree, 53.3 % are disagreed and strongly disagreed to it difficult to manage patient flow at the time of the festival. Median is 4, signifying that more than 50% of the respondents have disagreed for difficult to manage patient flow at the time of the festival.

10. Here, 74 % are strongly agreed and agreed; only 13.3 % have disagreed for the delay in routine procedures. Median is 2, but representing that 50% of the respondents has agreed for the delay in routine procedures.

11. In this criterion, 51% are strongly agreed and agreed; only 35.7% are disagreed for damage of equipment because of a lack of knowledge of new nurses. Here also median is 2, representing that 50% of the respondents has agreed for damage of equipment because of a lack of knowledge of new nurses.

12. Here, 26.7% are strongly agreed, 55.6% are agreed, 8.9% neutral, 6.7%

disagreed and 2.2% strongly disagreed with disturbing workflow. Median is 2, indicating that 50% of the respondents have agreed for disturbing workflow.

13. In this criterion, 57.8% are strongly agreed and agreed as well and 22.2persons are disagreed and strongly disagreed for high conflict between remaining staff. Median is 2, signifying that 50% of the respondents have agreed for high conflict between remaining staff.

14. Here 58.1% are strongly agreed and agreed, 28.9 disagreed and strongly disagreed for the increased level of minor injuries. Median is 2, indicating that 50% of the respondents have agreed increased level of minor injuries.

15. Out of the total 45 administrative staff in the study, 91.1% are strongly agreed and agreed; only 4.4% disagreed and strongly disagreed. Median is 1, proving that more than 50% of the respondents have strongly agreed to effects the reputation of the hospital.

KRUSKAL WALLIS TEST (Hypothesis Testing)

Ho1: There is no significant relationship between nursing staff turnover and extra workload on remaining staff.

	Yrs of exp.	Mean rank	P value
Extra workload on remaining staff	Less than 1 year	18.09	0.378
	1-3 years	23.33	
	3-5 years	26.20	
	More than 5 years	24.89	

P value, in this case, is 0.378 which is more than 0.05 hence there is no difference in opinion for the extra workload on remaining staff according to the experience of administrative staff.

Ho 2: There is no significant relationship between nursing staff turnover and poor job satisfaction on remaining staff.

	Yrs of exp.	Mean rank	P value
Poor job satisfaction of remaining staff	Less than 1 year	22.36	0.930
	1-3 years	23.83	
	3-5 years	21.30	
	More than 5 years	24.28	

P value, in this case, is 0.930 which is more than 0.05 hence there is no difference in opinion for poor job satisfaction of remaining staff according to experience of administrative staff.

Ho 3: There is no significant relationship between nursing staff turnover and high stress amongst remaining nurses on remaining staff.

	Yrs of exp.	Mean rank	P value
High stress amongst remaining staff	Less than 1 year	22.05	0.550
	1-3 years	24.87	
	3-5 years	18.80	
	More than 5 years	25.72	

P value, in this case, is 0.550 which is more than 0.05 hence there is no the difference in opinion for High stress among remaining staff according to experience of administrative staff.

Ho 4: There is no significant relationship between nursing staff turnover and more leaves amongst remaining nurses on remaining staff.

	Yrs of exp.	Mean rank	P value
More leaves of remaining staff	Less than 1 year	24.05	0.513
	1-3 years	22.80	
	3-5 years	18.60	
	More than 5 years	26.94	

P value, in this case, is 0.550 which is more than 0.05 hence there is no the difference in opinion for High stress among remaining staff according to experience of administrative staff.

WHo 5: There is no significant relationship between nursing staff turnover and sickness amongst remaining nurses on remaining staff.

	Yrs of exp.	Mean rank	P value
More sickness amongst remaining staff	Less than 1 year	24.68	0.226
	1-3 years	23.80	
	3-5 years	16.75	
	More than 5 years	26.56	

P value, in this case, is 0.226 which is more than 0.05 hence there is no difference in opinion for more sickness amongst remaining staff.

Ho 6: There is no significant relationship between nursing staff turnover and more complaints from patients.

	Yrs of exp.	Mean rank	P value
More complaints from patients	Less than 1 year	20.77	0.754
	1-3 years	21.90	
	3-5 years	24.50	
	More than 5 years	25.89	

P value in this case is 0.754 which is more than 0.05 hence there is no difference in opinion for more complaints of patient according to experience of administrative staff.

Ho 7: There is no significant relationship between nursing staff turnover and more complaints from doctors about nurses.

	Yrs of exp.	Mean rank	P value
More complaints from doctors	Less than 1 year	19.36	0.482
	1-3 years	23.30	
	3-5 years	27.30	
	More than 5 years	22.17	

P value, in this case, is 0.482 which is more than 0.05 hence there is no difference in opinion for more complaints from doctors according to experience of administrative staff.

Ho 8: There is no significant relationship between nursing staff turnover and more complaints from housekeeping staff about improper waste segregation

	Yrs of exp.	Mean rank	P value
Complains from housekeeping staff for improper waste segregation	Less than 1 year	32.86	0.008
	1-3 years	17.90	
	3-5 years	17.30	
	More than 5 years	25.78	

P value, in this case, is 0.008 which is less than 0.05 hence there is difference in opinion for Complains from housekeeping staff for improper waste segregation according to experience of administrative staff.

Ho 9: There is no significant relationship between nursing staff turnover and increased cost (recruitment cost, training cost).

	Yrs of exp.	Mean rank	P value
Increased cost	Less than 1 year	15.36	0.023
	1-3 years	22.97	
	3-5 years	30.85	
	More than 5 years	23.67	

P value, in this case, is 0.023 which is less than 0.05 hence there is difference in opinion for increased cost according to experience of administrative staff.

Ho 10: There is no significant relationship between nursing staff turnover and difficult to manage patient flow at the time of festival.

	Yrs of exp.	Mean rank	P value
Difficult to manage patient flow at time of festival	Less than 1 year	31.14	0.011
	1-3 years	24.63	
	3-5 years	13.85	
	More than 5 years	20.50	

P value, in this case, is 0.011 which is less than 0.05 hence there is difference in opinion for difficult to manage patient flow at time of festival according to experience of administrative staff.

Ho 11: There is no significant relationship between nursing staff turnover and delay in routine procedures.

	Yrs of exp.	Mean rank	P value
Delay in routine procedure	Less than 1 year	16.00	0.047
	1-3 years	21.87	
	3-5 years	25.20	
	More than 5 years	31.00	

P value, in this case, is 0.047 which is less than 0.05 hence there is difference in opinion for delay in routine procedure according to experience of administrative staff.

Ho 12: There is no significant relationship between nursing staff turnover and damage of equipments because of lack of knowledge of new nurses.

	Yrs of exp.	Mean rank	P value
Damage of equipments because of lack of knowledge of new nurses	Less than 1 year	21.00	0.524
	1-3 years	23.93	
	3-5 years	19.80	
	More than 5 years	27.44	

P value, in this case, is 0.524 which is more than 0.05 hence there is no difference in opinion for damage of equipments because of lack of knowledge of new nurses according to experience of administrative staff.

Ho 13: There is no significant relationship between nursing staff turnover and disturbed workflow.

	Yrs of exp.	Mean rank	P value
Disturbed workflow	Less than 1 year	16.55	0.065
	1-3 years	24.43	
	3-5 years	21.30	
	More than 5 years	30.39	

P value, in this case, is 0.065 which is more than 0.05 hence there is no difference in opinion for disturbed workflow according to experience of administrative staff.

Ho 14: There is no significant relationship between nursing staff turnover and high conflict between remaining staff.

	Yrs of exp.	Mean rank	P value
High conflict between remaining staff	Less than 1 year	23.55	0.211
	1-3 years	23.93	
	3-5 years	16.40	
	More than 5 years	28.11	

P value, in this case, is 0.211 which is more than 0.05 hence there is no difference in opinion for high conflict between remaining nurses according to experience of administrative staff.

Ho 15: There is no significant relationship between nursing staff turnover and high increased level of minor injuries.

	Yrs of exp.	Mean rank	P value
Increased minor injuries	Less than 1 year	24.23	0.580
	1-3 years	23.90	
	3-5 years	18.40	
	More than 5 years	25.11	

P value, in this case, is 0.580 which is more than 0.05 hence there is no difference in opinion for increased minor injuries according to experience of administrative staff.

Ho 16: There is no significant relationship between nursing staff turnover and high affects reputation of hospital.

	Yrs of exp.	Mean rank	P value
Affects reputation of hospital	Less than 1 year	20.50	0.567
	1-3 years	24.97	
	3-5 years	20.20	
	More than 5 years	25.89	

P value, in this case, is 0.567 which is more than 0.05 hence there is no difference in opinion for affects reputation of hospital according to experience of administrative staff.

FINDINGS AND CONCLUSION

Finding 1:

1. Nursing staff turnover causes extra workload on remaining staff.
2. Nursing staff turnover causes poor job satisfaction of remaining staff.
3. Nursing staff turnover causes high stress amongst remaining nurses.
4. Nursing staff turnover does affect to leaves of remaining staff but to less extent.
5. Nursing staff turnover causes sickness amongst remaining nurses.
6. Nursing staff turnover causes more complaints from patients.
7. Nursing staff turnover causes more complaints from doctors about nurses.
8. Nursing staff turnover causes more complaints from housekeeping staff about improper waste segregation.
9. Nursing staff turnover causes increased cost.
10. Nursing staff turnover causes difficulty in managing patient flow at the time of festival.
11. Nursing staff turnover causes delay in routine procedures.
12. Nursing staff turnover causes damage of equipments because of lack of knowledge of new nurses.
13. Nursing staff turnover causes disturbed workflow.
14. Nursing staff turnover causes high conflict between remaining staff.
15. Nursing staff turnover causes increased level of minor injuries.
16. Nursing staff turnover affects reputation of hospital.

Finding 2:

Opinion of administrative staff differ according to-

1. Complains from housekeeping staff for improper waste segregation (p value-0.008).
2. Increased cost (p value-0.023).
3. Difficult to manage patient flow at time of festival (p value-0.011).
4. Delay in routine procedure (p value-0.047).

It is crystal clear in our study that nurses' turnover in trust-based hospital is ensuing in a negative impact, which is required to be reduced. There are many negative impacts due to nurses turnover such as extra workload, poor job satisfaction, high stress, affect to leave status, sickness on remaining staffs and in addition to that, there are possibilities of disturbances in the workflow increases the cost of the organization, complain from patients and doctors, the effect on routine procedure due to lack of knowledge of newly recruit nurses about the work process of hospitals. In the end, it indirectly affects the reputation of hospitals. On the course of the conversation, few eminent members of top management expressed a very significant point concerning the causes and consequences of nurse turnover, which provides us an opportunity for further exploration of underlying reasons and those causes will not only expose the loopholes of the work process but will also; provide us a chance to rectify the system.

RECOMMENDATIONS

It is needed by all health care providers to outline the strategies which will assist to retain nursing staff. It is required to be cautious from the procedure of recruitment & selection and to train as well as the development of nursing staff. It is advisable that nursing staff should be provided flexible working hours, systematic performance appraisal system, job security, promotions, proper recognition and reward for achievements too, which won't just decrease turnover rates and yet additionally improve the reputation of the hospital.

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