

EFFECT OF NURSING AUDIT FEEDBACK ON NURSES' JOB SATISFACTION: PERSPECTIVE OF NURSES IN SELECTED TERTIARY HOSPITALS IN THE SOUTHEAST NIGERIA

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Introduction

Global economic challenges and increasing hospital bills have laid great burden on the healthcare consumers. This has led to their desire to be involved in their healthcare decisions and contentment with both services and spending on health matters (Kernick, 2012). Kernick opined that limited healthcare resources, knowledge empowerment of consumers of healthcare and increasing array of intervention options have made it necessary for decision on healthcare to be taken openly and fairly. In other words, the need for assured quality care/services from the providers in the healthcare arena remains indispensable in the present era of economic downturn. One of such quality assurance measures is nursing audit and feedback.

Nursing audit is a quality improvement measure that aims at evaluating services rendered by nurses against standard of practice in order to improve future services to the consumers. Nursing audit is part of clinical audit designed to review patient's record to identify, examine or verify the performance of certain specified aspects of nursing care by using established criteria (Das, 2012).

Nursing audit feedback is more effective if delivered in a timely fashion, if it is individualized, non-punitive and actionable; so that the nurse receiving the feedback understands how it improves his/her practice (Flottorp, Jamtvedt, Gobis & Mckee, 2010). Audit feedback is intended to enhance professional performance thereby improving the quality of healthcare and patients' safety.

Effect of audit feedback is more likely to be greater when at the baseline, the health professionals adhere to recommended practice (Mykkanen, Saranto & Miettinei, 2012). It may be linked to economic improvement of the patients' family as improved practice due to the process may bring about improvement in future services. Improvement in services indicates improved efficiency and quality. Devlin and Dong, cited in Soheail, (2003) stated that provision of high-quality services has direct relationship to increase in profits, market share, and cost savings. Previous studies have concluded that unsatisfied healthcare employees negatively affect the quality of care, which adversely affects patients' satisfaction (Al-Mailam, 2005). Aron (2015), reported a relationship between job satisfaction and quality of care in Minnesota Health institutions. He further stated that the viability of a healthcare facility is dependent upon client outcome and care providers' satisfaction. Care providers job-satisfaction engineers better care and better care gives

room for better patients' outcome (Aron, 2015). Better patients' outcome is evidenced in quick recovery, short time stay on admission, reduced economic burden to the family and increased level of satisfaction among the patients and the care providers.

In event of successful nursing audit feedback mechanism, health professionals are likely to modify their practice especially where there is evidence of clinical practice inconsistent (Vandev, 2010). At any time that care providers (including nurses) become satisfied with their inputs on the job and outputs, the desire to put in more efforts is likely to happen.

Nursing audit could be concurrent, retrospective or peer review audit (Okoronkwo, 2005). Concurrent nursing audit evaluates patient's care while the patient is still receiving treatment. It compares the care rendered as shown in the patients' treatment record with the expected standard of care. It is more time consuming and expensive but has the advantage of correcting certain practices that are identified as sub-standard and improvements made to the benefits of the patient who is still receiving treatment (Gillies, 2009). Retrospective nursing audit is an audit in which patient's care is evaluated only after the patient has been discharged from the health facility (Okoronkwo, 2005). The patient's health record is the only source of information concerning the care rendered to him. Accuracy of retrospective audit is dependent on the accuracy and completeness of recording by all care providers. Identified substandard care actions are corrected on subsequent patients' care. Nurses' peer review is an audit where the nurses, functioning in the same capacity, appraise the care actions performed by other nurses. This is based on already established standard. Peer review could be individual in nature where the performance of an individual nurse is the focus or set of nurses through review of patients' treatment records.

Houghes (2008), asserted that irrespective of the type of audit, the essential is that the feedback will help to reduce liability risks for the nurses, advance the goal of nursing practice, improve clinical practice, increase nurses' and patients' contentment and satisfaction, identify deficiencies among nurses and possible necessary correction, reduce patient suffering, plan future course of action in line with the baseline information from evaluated care and ensure full and effective utilization of staff and available facilities.

In reality employees are more satisfied when they enjoy the environment in which they work (ANA, 2010). Nursing work environment is likely to be satisfying when output is very high. For nursing output to be very high nursing audit and feedback will be of value. High output may in no small measure lead to nurses' job satisfaction. Locke (1976) cited in Notte (2013), posited that job satisfaction is a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences. Job satisfaction has emotional cognitive and behavioural components (Bernsterin & Nash, 2008 in Uzonwanne, 2015). Job satisfaction has been linked to variables performance and turnover. The turnover here is likened to outcome and in the context of this study, patients' outcome which brings about satisfaction on the patient.

Saari and Judge (2014), concluded that there is connection between job satisfaction and job performance especially for higher difficult jobs than for less difficult jobs. Bright (2008) in Kazi, & Zadeh, (2011), remain of the opinion that dissatisfaction in work leads to dissatisfaction in personal life of staff which affects job turnover. They further argued that job satisfaction is multifaceted implying that one can be satisfied in one area but does not necessarily mean satisfaction in the areas.

Employees' satisfaction is an essential factor to employees' happiness on the job potentiates their desire to deliver their best in the organization and also remain loyal towards their organization and stick to it even in the worst scenario (Nelson, 2013). When employee is satisfied he/she gives in the best to the organization. Giving the best to the organization denotes quality improvement which is the pursuit of nursing audit feedback. In a hospital situation when standard of practice is in place, patients' and nurses' satisfaction can easily be achieved.

The researchers observed, in their clinical follow-up of students, that nursing audit and feedback seems to have not taken its course in the tertiary hospitals in the Southeast Nigeria. This is evidenced by recurrence of issues such as development of pressure sores among bedridden and unconscious patients, open complaints of insufficient care among hospitalized patients, increase in the number of days spent on admission among hospitalized patients, complaints of dissatisfaction with care received and hospital bills among patients and their relations. Interaction with some nurses also revealed dissatisfaction on-the-job in relation to their care delivery outcomes.

Hypotheses

H₀₁: Significant difference does not exist in the job-satisfaction expressed among nurses before and after nursing audit feedback.

H₀₂: There is no association between the Job satisfaction expressed by the nurses following audit feedback and the demographic characteristics of the nurses such as age, gender and years of practice experience.

Method and Materials

Descriptive design was applied for this study. The study was conducted in the Southeast Nigeria. The population for the study comprised of purposefully selected patients in three randomly selected tertiary hospitals. Nurses' population comprised of nurses in the three randomly selected tertiary hospitals working estimated population of one thousand, seven hundred and seventy two (1,772). The sample size of 316 nurses was drawn through Epi info-7 statistical method. Sample size per hospital was determined proportionately in line with the nurses' population. Sample size of 50 patients was drawn purposively from medical, surgical and paediatric wards of each hospital, making a total of 150 male and female patients. Selection of nurse-respondents was through simple random sampling technique. The patients were purposely selected from each ward for the study in line with the study inclusion criteria (Conscious patients on admission for five days or more who were able to give valid information and mothers of children who cannot express themselves). Nurses must have worked in hospital for two years or more. Inclusion in the first audit for the nurses is criterion for inclusion in the re-audit.

The instruments for data collection were validated investigators'-developed nursing audit checklist with 26 items with response options of YES (2 points), NO (1 point) and NOT APPLICABLE (0 point) and 29-item nurses' job-satisfaction questionnaire structured in five-point scale of Strongly Dissatisfied (1point), Dissatisfied (2 points), Neutral (3 points), Satisfied (4 points) and Strongly Satisfied (5 points), The instruments were pilot tested for reliability at a Federal Medical Centre, which was not among the selected hospitals. Crombach's Alpha analysis yielded reliability indices of, 0.744, for nursing audit checklist and 0.863) for nurses' job

satisfaction instrument. Ethical approval from the Research and Ethics Committees of the selected hospitals were obtained for the study.

Generated data from Nursing audit checklist determined care actions rendered in terms of actions carried out or missed in the course of care. Nursing care actions that happened with lapses or missed were identified. The nurses' job satisfaction questionnaire was also administered to the nurses. Data from the nursing audit checklist were harmonized and a meeting with the Nursing Audit Committee of each hospital was organized for discussion of observations made in terms of either missed or care actions with lapses. Ways of improvement was discussed looking the opportunities and strength and managing the weaknesses and threat to meet expected standard. At the end of the meeting the entire nurses were summoned for interaction which centered on the observations and expectations to improve standard. Measures of improvement through teachings, counselling and mentoring were also discussed. A time lag of four (4) months was allowed after the meeting for the nurses to practice in line with the expected standard of care at the end of which a re-audit was conducted alongside the administration of the job-satisfaction instrument to the nurses. The researchers were careful to observe the inclusion and exclusion criteria for the study. The process for audit and re-audit with data collection lasted for eight months.

A total of 315 copies of questionnaire were retrieved and analyzed. Data were expressed as mean \pm SD for continuous variables, while percentages were used to express categorical data. Comparative analysis was done using Man-Whitney U test for two non parametric variables, while Kruskal Wallis test was used to compare multiple non parametric groups. Correlation analysis involving non parametric variables was done using Spearman's Rank Order Correlation test. Comparison of categorical groups involving percentages was done using Chi-square test (goodness of fit). SPSS/IBM Statistical Software (version 20.0) was used to carry out all statistical analyses. Cut off for nursing job satisfaction: Score < 3.0 = Poor satisfaction; Score \geq 3.0 = High satisfaction.

Results

Socio-demographic characteristics of the respondents

Table 1: Demographic characteristics of the respondents population (n = 316)

Characteristics		Frequency	Percent
Health Institutions	NAUTH Nnewi	67	21.2
	FETHA Abakaliki	187	59.2
	FMC Umuahia	62	19.6
Wards	Medical	118	37.3
	Surgical	122	38.6
	Pediatrics	75	23.7
Age Groups	\leq 30 YRS	36	11.4
	31 - 40 YRS	140	44.3
	41 - 50 YRS	117	37.0
	> 50 YRS	23	7.3
Gender	Males	32	10.1
	Females	283	89.6
Years of Experience	< 10 YRS	156	49.4
	10 - 20 YRS	134	42.4
	21 - 30 YRS	25	7.9
	> 30 YRS	1	.3

Level of Nursing Education	RN	21	6.6
	RN/RM	140	44.3
	BSc/BNSc	138	43.7
	MSc	16	5.1
	PhD	1	.3

Result

The respondents aged below or equal to 30 years were 36(11.4%), majority were between 31-40years, 140(44.3%), 117(37.0%) were aged 41-50years, while 23(7.3%) were above 50 years of age. The mean age (\pm SD) was 40.1 \pm 7.6year.

Male respondents were 32(10.1%) while the female respondents were 283(89.6%). Out of the 316 respondents 156(49.4%) had below ten years working experience, 134(42.4%) had 10-20years of working experience 25(7.9%) had 21-30years while only 1(0.3%) respondents has working experience above 30years. On respondents level of nursing education, 21(6.6%) had only Registered Nurse (RN), 140(44.3%) had both Registered Nurse and Registered Midwife (RM), 138(43.7%) had BSc/BNSc, 16(5.1%) had MSc in Nursing while only one respondent (0.3%) had Ph.D.).

Hypothesis 1

Significant difference does not exist in the job-satisfaction expressed among nurses before and after nursing audit and feedback process.

Man-Whitney U test for non-parametric data was used to determine this hypothesis at significant level of 0.01.

Table 2: Comparison between the levels of job-satisfaction expressed among nurses before and after nursing audit feedback

SN	Item	Mean score \pm SD		Mean Rank		Statistics (Man Whitney U test)	
		Before Audit	After Audit	Before Audit	After Audit	Z	P-value
1	Patients outcome/satisfaction at present	2.91 \pm 1.08	3.53 \pm 1.06	265.14	367.8	-7.39	<0.001
2	Your mental state while caring for patients	2.49 \pm 0.89	3.90 \pm 1.11	211.88	421.13	-14.81	<0.001
3	Contentment with nursing modalities in client care applied on your ward	2.64 \pm 0.96	3.57 \pm 1.08	242.22	390.78	-10.56	<0.001
4	Existing nurse/patient relationship	2.61 \pm 0.96	3.69 \pm 1.06	232.72	400.28	-11.93	<0.001
5	Existing relationship between nurses and other health professionals like medical doctors	2.96 \pm 1.13	3.34 \pm 1.13	287.78	345.22	-4.07	<0.001
6	Sense of autonomy at while caring for patient	2.78 \pm 0.94	3.56 \pm 1.15	253.11	379.89	-9.04	<0.001
7	Initiating idea for client/patient management	2.73 \pm 0.85	3.62 \pm 1.09	241.41	391.59	-10.71	<0.001
8	Involvement in decision making about your patient's care plan	2.56 \pm 0.98	3.57 \pm 1.25	241.78	391.22	-10.55	<0.001
9	Trust relationship between you and your patient	3.01 \pm 1.02	3.77 \pm 1.03	251.05	381.95	-9.41	<0.001
10	Motivation you achieve as you care for your patients	2.68 \pm 1.03	3.06 \pm 1.25	289.24	343.76	-3.88	<0.001
11	On the job supervision staff	2.78 \pm 1.12	3.41 \pm 1.15	269.44	363.56	-6.69	<0.001
12	Recognition accorded to you for by the senior staff for your nursing actions	2.92 \pm 1.17	3.59 \pm 1.04	266.23	366.77	-7.21	<0.001
13	Level of performance you achieve at your duty post	2.93 \pm 0.95	4.03 \pm 0.93	225.12	407.88	-13.13	<0.001
14	Patients view of your overall input in their care	2.92 \pm 1.02	3.90 \pm 0.99	236.18	396.82	-11.48	<0.001
15	Support from other nurses	3.08 \pm 1.09	3.51 \pm 1.09	281.03	351.97	-5.13	<0.001
16	Nurses' job security	2.56 \pm 1.22	3.20 \pm 1.29	272.01	360.99	-6.27	<0.001
17	Non-nursing tasks you do such as monitoring patient's bills	2.73 \pm 1.08	2.87 \pm 1.14	305.86	327.14	-1.51	0.130

18	Level of patients education carried out by the nurses	3.14±1.09	3.70±0.93	270.60	362.40	-6.74	<0.001
19	Involvement in patient discharge and rendering advice before the discharge	2.93±0.98	3.64±1.15	257.58	375.42	-8.42	<0.001
20	Timely attention to patient needs	3.08±1.00	3.71±1.14	264.28	368.72	-7.44	<0.001
21	Response to patients questions and demands by the nurses	3.06±1.08	3.79±1.08	258.66	374.34	-8.25	<0.001
22	Your interest in general wellbeing of patients	3.19±1.16	3.97±1.13	256.27	376.73	-8.59	<0.001
23	Nurses' adherence to management policies on client care	3.06±1.03	3.71±1.05	262.43	370.57	-7.74	<0.001
24	Demonstration of empathy towards the patients especially patients that are seriously ill	2.83±1.04	3.84±1.16	239.27	393.73	-10.93	<0.001
25	Nurses' input in the overall patient care	3.04±1.05	3.80±1.01	254.96	378.04	-8.88	<0.001
26	Manner by which patients are served their medications	3.00±1.07	3.67±1.05	262.10	370.90	-7.78	<0.001
27	Overall cleanliness of the client environment and the entire care environment.	3.34±1.25	3.45±1.23	309.13	328.88	-1.04	0.296
28	Response to patients demand for assistance at night	3.25±1.11	3.58±1.09	289.48	343.52	-3.87	<0.001
29	Listening to patients' complaints and response to the same.	3.44±1.07	3.88±1.01	277.78	354.34	-5.52	<0.001
Overall Score		2.92±0.51	3.62±0.65	217.40	414.92	-13.61	<0.001

Result

The 29 job satisfaction items were compared for before and after audit. Their mean scores \pm SD and Man-Whitney U test for non-parametric data analysis was used to analyze the data in table 2. Table shows that mean score \pm SD for patients outcome satisfaction at present was 2.91 ± 1.08 before the audit and 3.53 ± 1.06 after the audit. Mean rank score before and after the audit are 265.14 and 367.8 respectively, $Z = -7.29$, $P < 0.001$. Mental state of the respondents while caring for patients showed 2.49 ± 0.89 before the audit with mean rank of 211.88 before and 242.13 after the audit $Z = -14.81$ $P = 0.001$

Mean score \pm SD for contentment with nursing modalities applied in client on the respondents wards showed 2.64 ± 0.96 before and 3.90 ± 1.11 after the audit and feedback with mean rank of 342.22 before and 390.78 after the audit and feedback. $Z = -10.56$, $P < 0.001$ respectively.

On the existing nurse/patient relationship mean score \pm SD before the audit was 2.61 ± 0.96 while after the audit was 3.69 ± 1.06 with mean rank of 232.72 and 400.28 before and after audit respectively $Z = -11.93$ and $P < 0.001$. Responses to the item on existing relationship between nurses and existing relationship between nurses and other health professionals had mean score \pm SD of 2.96 ± 1.13 and 3.34 ± 1.3 for before and after audit respectively. Mean rank of 287.78 and 345.22 for before and after audit respectively were reached and $Z = -4.07$, $P < 0.001$ sense of autonomy while caring for patients had mean score \pm SD of 2.78 ± 0.94 and 3.56 ± 1.15 before and after audit respectively man Whitney u test analysis showed $Z = -9.04$, $P = 0.001$ was obtained from the data

Responses on the item in initiating idea for client/patient management had mean score \pm SD of 2.73 ± 0.85 before audit and mean rank of 241.41 and 391.59 before and after audit respectively. Z cal of -10.71 , $P < 0.001$ mean score \pm SD of 2.56 ± 0.98 and 3.57 ± 1.25 were derived before and after audit about patient and feedback respectively on the involvement of nurses in decision can with mean rank of 241.78 and 391.22 for before and after audit respectively.

Man Whitney U test analysis showed $Z=-10.55$, $P < 0.001$. The responses to trust relationship existing between the respondents and their patients showed mean score \pm SD of 3.01 ± 1.03 for before audit and 3.77 ± 1.02 after nursing audit mean rank of 251.05 and 381.95 for before and after audit respectively and $Z = -9.41$, $P < 0.001$

A mean score \pm SD of 2.68 ± 1.03 and 3.06 ± 1.25 before and after audit respectively were generated from the item on motivation achieved by the respondents as they care for the patients. Mean rank of 289.24 and 343.76 for before and after audit respectively reached and $Z=-3.88$ $P < 0.001$. On satisfaction with the job supervision of staff, mean score \pm SD of 2.78 ± 1.12 and 3.41 ± 1.5 respectively were the responses outcome and mean rank of 269.44 and 363.56 for before and after audit and feedback man Whitney in test analysis showed, $Z=-6.69$, $p < 0.001$.

Table 2 also reveals that responses to the recognition accorded to the respondents by the senior staff for nursing actions carried out on the wards had 2.92 ± 1.17 and 3.59 ± 1.04 mean score \pm SD for before and after audit respectively mean rank of 266.33 and 366.77 for before and after audit feedback respectively. Man Whitney U test analysis showed for the item shows $Z=-7.21$, $P < 0.001$. Level of performance achieved by the respondents at their duty post shows that 2.93 ± 0.95 and 4.03 ± 0.93 as mean score \pm SD for before and after audit respectively were reported with mean rank of 225.12 and 407.88 respectively. $Z = -11.13$, $P < 0.001$ resulted from the analysis with Man Whitney U test. Responses to the patients view of the respondents overall input in their care showed that 2.92 ± 1.02 and 3.90 ± 0.99 were obtained mean score \pm SD for before and after audit and $Z=-11.48$, $P < 0.001$ for Man Whitney U test. Support from other nurses during patients care yielded mean score \pm SD of 3.08 ± 1.09 before audit and 3.51 ± 1.09 after audit. Mean rank of 281.03 and 351.97 for before and after nursing audit and feedback respectively. MWU test analysis shows that $Z=-5.13$, $P < 0.001$. Regarding the nurses job security the satisfaction before and after audit shows \pm SD mean score of 2.56 ± 1.22 and 3.20 ± 1.29 , Mean score \pm SD of 2.56 ± 1.22 and 3.20 ± 1.29 , mean rank of 372.01 and 360.99 respectively will $Z=-6.27$, $P < 0.001$.

Table also shows that non-nursing tasks the respondents do such as monitoring patients bills had mean score \pm SD of 2.73 ± 1.08 before the audit and 2.87 ± 1.4 after the audit with mean rank of 305.8% before and 327.14 after the audit. MWU test shows $Z=-1.51$, $P = 0.130$ level of patients education carried out by the nurses had 3.14 ± 1.09 as mean score \pm SD before audit and 3.70 ± 1.4 after the audit and feedback 270.60 and 362.40 were the mean ranks for before and after audit respectively with $Z=-6.76$ and $P < 0.001$ Mean score \pm SD of 2.93 ± 0.98 and 3.64 ± 1.15 were obtained before and after audit respectively for the item that determined the involvement of respondents in the patients discharge and rendering of advice before the discharge. Mean rank of 257.58 and 375.42 were obtained for both before and after audit respectively and Man Whitney U test analysis shows, $Z=-8.42$, $P < 0.001$. On timely attention to patient's needs, a mean score \pm SD of 3.08 ± 1.00 and 3.71 ± 1.4 were reached before and after audit respectively and mean rank of 264.28 and 368.72 either way for before and after audit respectively and mean rank of 264.28 and 368.72 either way of 264.28 and 368.72 either way for before and after audit resulting to $Z=-7.44$, $P < 0.001$. Regarding how the nurses respond to patient's questions and demands. Mean score \pm SD of 3.06 ± 1.18 and 3.79 ± 1.08 for before and after audit respectively with 258.66 and 371.34 as mean rank which yielded $Z=-8.25$ $P < 0.001$. The item on the respondents interest in the general well being of the patients had mean score \pm SD of 3.19 ± 1.16 before the audit and feedback and 3.19 ± 1.16 before the audit and feedback and 3.97 ± 1.16 before the audit and feedback and 3.97 ± 1.13 after the audit with mean rank of 256.27 before and 376.73 after the audit.

Analysis shows that $Z=-8.59$, $P<0.001$. On nurses adherence to management policies on client care, mean score \pm SD of 3.06 ± 1.03 before audit and 3.71 ± 1.05 after the audit were obtained with mean rank of 262.43 and 370/57 before and after respectively. MWU test shows $Z=-7.74$, $P<0.001$.

Data shows that demonstration of empathy towards the patients, especially patients that are critically ill, had mean score \pm SD of 2.83 ± 1.04 before the audit and 3.84 ± 1.16 after the audit with mean rank of 239.27 and 393.73 respectively before and after the audit. MWU test of $Z=-10.93$, $P<0.001$ was derived from the data analyzed. Nurses input in the overall patient care had 3.04 ± 1.05 and 3.80 ± 1.01 before and after audit for the same item were 254.96 and 378.04 respectively and MWU test score of $Z=-8.88$, $P < 0.001$.

The manner by which patients are served their medication had mean score \pm SD of 3.00 ± 1.07 before the audit and 3.67 ± 1.05 after the audit. Mean rank of 262.109 and 370.90 resulted from the data and $Z=-7.78$, $P< 0.001$ for the Man Whitney U test analysis.

The item on the overall cleanliness of the clients environment and the entire care environment had mean score \pm SD of 3.34 ± 1.25 before the audit and 3.45 ± 1.23 after the audit with respective mean rank of 309.13 and 328.88. Yielding $Z=-1.04$, $P=0.296$. Responses on how the nurses respond to patients demand for assistance at night had mean score \pm SD of 3.25 ± 1.11 before the audit and 3.58 ± 1.09 after the audit. Mean rank of 289.48 and 342.52 before and after the audit resulted from the data and MWU test shows $Z=-3.87$, $P<0.001$. Mean score \pm SD of 3.41 ± 1.07 and 3.88 ± 1.01 were obtained before and after audit on the item listening to patients complaints. Mean rank of 277.78 and 354.34 were obtained before and after audit respectively and MWU test shows $Z=-5.52$, $P<0.001$. The overall score for the analysis shows that average mean score \pm SD were 2.92 ± 0.51 before audit and 3.62 ± 0.65 after audit with respective mean rank of 217.40 and 414.92. Man Whitney U test yielded $Z=-13.61$, $P < 0.001$

Hypothesis 2

There is no association between the job satisfaction of expressed by the nurses following audit feedback and the demographic characteristics of the nurses such as age, gender and years of practice experience.

Comparative analysis was done using Man-Whitney U test for two non parametric variables (gender), while Kruskal Wallis test was used to compare multiple non parametric groups.

Table 3 (A-D): Effect of Demographic variables on the job satisfaction of nurses after audit feedback

(A). Effect of age on the level of job satisfaction of nurses following audit and feedback

AGE GROUPS	N	Overall Mean Score \pm SD	Mean Rank of Job Satisfaction
≤ 30 YRS	36	3.65 ± 0.54	153.17
31 - 40 YRS	140	3.59 ± 0.65	152.72
41 - 50 YRS	117	3.60 ± 0.70	159.79
> 50 YRS	22	3.88 ± 0.47	190.00
Total	315		

Statistics (Kruskal Wallis test): $\chi^2 = 3.33$; DF = 3; P = 0.343

(B). Effect of gender on the level of job satisfaction of nurses following audit and feedback

SEX	N	Overall Mean Satisfaction Score \pm SD	Mean Rank	Sum of Ranks
Males	33	3.49 \pm 0.64	134.56	4306.00
Females	282	3.64 \pm 0.65	160.10	45149.00
Total	315			

Statistics (Man Whitney U test): Coefficient = 3778.0; Z = -1.51; p = 0.131

(C). Effect of years of job experience on the level of job satisfaction of nurses following audit and feedback

YEARS OF EXPERIENCE	N	Overall Mean Satisfaction Score \pm SD	Mean Rank
< 10 YRS	156	3.41 \pm 0.73	131.59
10 - 20 YRS	119	3.82 \pm 0.50	185.32
21 - 30 YRS	39	3.83 \pm 0.42	182.28
> 30 YRS	1	3.34 \pm 0	81.00
Total	315		

Statistics (Kruskal Wallis test): $\chi^2 = 27.33$; DF = 3; P < 0.001

(D). Effect of level of nursing education on job satisfaction of nurses following audit and feedback

LEVEL OF NURSING EDUCATION	N	Overall Satisfaction Score \pm SD	Mean Rank
RN	21	3.43 \pm 0.54	121.43
RN/RM	140	3.59 \pm 0.71	156.66
BSc	137	3.65 \pm 0.62	162.09
MSc	16	3.80 \pm 0.47	178.78
PhD	1	4.03 \pm 0	219.50
Total	315		

Statistics (Kruskal Wallis test): $\chi^2 = 4.98$; DF = 4; P = 0.289

Results

Table 3A shows that respondents below or equal 30 years were 36, with overall mean score \pm SD of 3.65 \pm 0.54 and mean rank job satisfaction of 153.17. Those within 31-40 years were 140 with overall mean score \pm SD of 3.59 \pm 0.65 and mean rank job satisfaction of 152.72. The respondents within 41-50 years were 117 with overall mean score \pm SD of 3.60 \pm 0.79 and mean rank job satisfaction of 159.79. Those above 50 years were 23 with overall mean score \pm SD of 3.88 \pm 0.47 and mean rank job satisfaction of 190.00. Kruskal Wallis test result shows $X^2=3.33$; DF=3; P=0.343 indicating that age does not significantly influence job satisfaction of the nurses.

Table 3B also shows that the males responsible were 36 with overall mean job satisfaction score \pm SD of 3.49 \pm 0.64 with mean rank of 134.56 and sum rank of 4306.00. The females were 283 with overall mean score SD of 3.64 \pm 0.65, mean rank=160.10 and sum rank of 45149. Man Whitney U test shows coefficient =3778.0 Z=-1.51; P=0.131. This shows that the hypothesis was accepted indicating that job satisfaction of nurses following audit and feedback is not significantly influenced by gender.

Table 3C equally shows that 156 respondents had year of working experience below 10 years with overall mean jobs satisfaction score \pm SD of 3.41 \pm 0.73 and mean rank of 131.59. 119 respondents have worked for 10-20 years with overall mean job satisfaction score \pm SD of 3.82 \pm 0.50 and mean rank of 185.32. 39 respondents had years of working experience of between 21-30 years with overall mean job satisfaction scoring \pm SD of 3.34 \pm 0.0 and mean rank of 81.00. Kruskal Wallis test statistics shows $X^2=27.33$; DF=3; P<0.001 indicating rejection of the

hypothesis that job satisfaction of nurses following audit and feedback process is not significantly influenced by years of working experience.

Table 3D shows that 21 respondents had RN as their highest nursing education with overall mean job satisfaction score \pm SD of 3.43 ± 0.54 and mean rank of 121.43. 140 respondents had RN/RM as highest nursing education with overall mean job satisfaction score \pm SD of 3.59 ± 0.71 and mean rank of 156.66. 137 respondents had BSc/BNSc as their highest nursing education with overall mean job satisfaction score \pm SD of 3.65 ± 0.62 and mean rank of 162.09 respondents had MSc in Nursing as their highest nursing education with overall mean score job satisfaction score \pm SD of 3.80 ± 0.47 and mean rank of 178.78. 1 respondent had Ph.D. as highest nursing education with overall mean job satisfaction score \pm SD of 4.03 ± 0 and mean rank of 219.50. Statistical analysis with Kruskal Wallis test shows $X^2=4.98$; $DF=4$; $P=0.289$. The hypothesis that job satisfaction of nurses following audit and feedback process is not influenced by level of nursing education was accepted.

Discussion

Findings from the study showed that the job-satisfaction in the perspective of the nurses after the audit and feedback is higher as mean rank of 277.78 and 354.34 were obtained before and after audit and feedback respectively. The Man Whitney U test shows ≥ -5.52 , $p < 0.001$. The overall score for the analysis shows that average mean score \pm SD were 2.92 ± 0.51 before audit and 3.63 ± 0.65 after the audit with mean rank of 217.40 and 414.92 respectively; the Man Whitney test yielded ≥ 13.61 , $p < 0.001$. The hypothesis was therefore rejected as satisfaction expressed by the nurses after the audit feedback was higher than they expressed before the audit.

This may be linked to the improved outcome experienced after the audit and feedback process as job satisfaction has been found to have positive relationship with job performance (Soberman, 2006). Hamid, *et al* (2014) found out in their study that positive feedback from patients leads to job satisfaction. In event of positive patient outcome due to job performance, there is satisfaction on the job. Nursing audit brings about improvement in care activities and improvement in professional performance builds a professional image and may possibly lead to job satisfaction.

Findings from the study showed that age influences the job satisfaction of the nurses following audit and feedback ($X^2=3.33$; $DF=3$; $p=0.345$), gender and level of nursing education also influence the job satisfaction level of the nurses MWU test = 3.778.0; ≥ -1.51 ; $p=0.13$ and $X^2=4.98$; $DF=4$; $p=0.289$) respectively while years of practice experience does not influence the job satisfaction of nurses ($X^2=27.33$, $DF=3$; $p < 0.001$). The findings may be connected to the female majority in the profession with more of younger population and the highly educated who seem not to be easily satisfied over little improvement while years of practice experience tend to spread across the study population. These findings differed with the findings of Mehrdad, Izadi and Pouryaghoub (2013), where they reported no significant association between job satisfaction and demographic variables except for years of practice experience. Andresen, Hamsen and Grov (2016), also had somewhat contrary report from the findings of this study where they reported that only older workers have higher job satisfaction, and nurses with higher degree also had higher satisfaction.

Implication to Nursing Profession

Nurses' job satisfaction improved after Nursing audit and feedback. By implication, nursing audit and feedback as quality improvement measure that makes for nurses' job satisfaction is expected to assist in yielding quality care from nurses as satisfied workers tend to put in their best.

Limitations of the Study

Nurses' care actions were not properly documented in some patients' treatment charts which made retrieval of some information during the audit very difficult thereby constituting delay in the study.

Job satisfaction is sometimes said to happen or not happen considering remuneration of staff, working environment and on-the-job promotions but these components were excluded from the study.

Conclusion

Nursing audit and feedback process generally leads to small but potentially important improvements in professional practice. Despite the fact that conclusion cannot be drawn that audit alone can lead to improved patients outcome and nurses job satisfaction, yet the role it plays cannot be over emphasized.

Generally nursing audit and feedback is essential in the pursuit of expected quality care, job satisfaction of the nurses, cost contentment and satisfaction among the patients. Improving the standard of care in nursing therefore requires at least bi-annual nursing audit and feedback.

Recommendations

In view of the findings, the researchers recommended as follows;

- Functional nursing audit committee should be established in all health institutions where it does not exist.
- Constant supervision of nurses for proper documentation should be instituted to ease audit process.
- More seminars and workshops should be organized for nurses on audit and feedback process for better understanding and co-operation of the nursing any time audit is planned.

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