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Perceived Determinants of Willingness to Implement Task Shifting of Nursing Procedures in Selected Healthcare Institutions, Ilorin

Umar N. Jibril, PhD [1]; Uswat Olubori, B.N.Sc [1]; Aluko O. Joel, PhD [1]; Mulikat A. Ibrheem, PhD [2];

Onasoga O. Olayinka, PhD [1]; Josephine O. David, MSc [3]; Adenike K. Kadri, PhD [4];

Habu Haruna, PhD [5]; Halimah I.B, Shitu [1]

1 *Department of Nursing Sciences, University of Ilorin, Ilorin, Nigeria. * Corresponding Author.*
Emails: umaribna@gmail.com, umar.nj@unilorin.edu.ng
2 *Department of Nursing Sciences, Al-Hikma University Ilorin, Ilorin, Nigeria.*
3 *Department of Ophthalmic Nursing, College of Nursing Sciences, University of Ilorin Teaching Hospital.*
4 *Department of Nursing Sciences, Lead City University Ibadan, Oyo State, Nigeria.*
5 *Department of Nursing Sciences, University of Maiduguri, Borno, Nigeria.*

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ABSTRACT

Background: Task shifting allows for re-organization of workforce along with expanded training which encourages the healthcare system. The implementation of nursing task shifting allows nurses to efficiently use the existing workforce and ease bottle necks in healthcare service delivery among limited workforce capacity. ***Purpose*:** This study assesses the determinants of willingness of nurses to implement task shifting of nursing procedures in selected health care institutions in Ilorin, Nigeria. ***Methods*:** A descriptive cross-sectional research design was adopted using multi-stage sampling technique to select 250 nurses for this study. Ethical approval was obtained from the studied institutions and informed consent was given by nurses prior to data collection. The reliability of the instrument was ascertained by test-retest of the instrument, and the study results were analyzed using SPSS version 25, and the study was carried out at 0.05 level of significance. ***Results*:** The findings revealed that 94% of nurses have knowledge about task shifting, 64% of nurses observed that task shifting brings about effective nursing care, and 49% of them are willing to implement task shifting for some nursing procedures to lower cadres. ***Conclusion*:** This study concluded that hospital policy, work overload on junior nurses, poor supervision, and shortage of nursing staff are determinants of task shifting of nursing procedures in the institutions studied. ***Implications for Nursing***: The study shows a statistical association between nurses' knowledge about determinants, willingness to implement task shifting and effective nursing care outcomes. The authors recommend policy reforms, training programs, and workload management strategies to facilitate task shifting in health institutions for effective nursing care outputs.

Keywords: Determinants, Nursing procedures, Task shifting, Task shifting of nursing procedures, Willingness to Implement task shifting.

What does this paper add?

1. Nurses have base-line knowledge about task shifting of nursing procedures.
2. This study identified hospital policy, and work overload on junior nurses as factors hindering the implementation of task shifting.
3. This study showed an association between nurses' knowledge level about the determinants of implementing

task shifting of nursing procedures and the actual implementation of task shifting among nurses.

4. There is a need for policy reforms, training programs, and workload management strategies to facilitate task shifting in the health institutions for effective nursing care outputs.
5. Health institutions are requested to legitimize the implementation of task shifting of some less technical nursing procedures in order to lower cadres of health personnel for efficient patient care outcomes.

Introduction

Task shifting is a rational re-distribution of tasks among health team workforce, a situation where specific tasks are moved from highly qualified health workers to less qualified personnel for efficient use of the available health and human resources. (WHO, 2007) This re-distribution of tasks, includes responsibilities and competencies among healthcare professionals (De Maeseneer et al., 2019; van Tuyl et al., 2021) Task shifting and sharing have been successfully used to improve health in various settings and times, including the COVID-19 pandemic, to address global health workforce shortages and inadequate access to care for critical health issues (Amani et al., 2023; Ayuk et al., 2022). Some studies have shown that task sharing and shifting are efficient and effective methods for assisting healthcare workers in completing duties and increasing human resource for health (HRH) and quality outcomes (Ayuk et al., 2022). For instance, Amani et al. (2023) implemented task shifting in Central Africa Republic to increase COVID-19 vaccination uptake and observed that the administration of injectable COVID-19 vaccines by CHWs was highly effective and widely accepted, as vaccination coverage of COVID-19 tripled from 9% in January 2022 to 29% by August 2022.

This re-organization of workforce along with expanded training allows the health system to be more efficient in the use of existing workforce to address acute shortage of health workforce in service delivery (Sunny et al., 2020) Task shifting is used as a strategy in the management of HIV/AIDS and other pandemic diseases across African Countries to address the acute shortage of health workforce challenges. This strategy enables the health manager to manage universal pandemics and reinforce the opportunity to access essential health services; thus, the idea of task sharing was conceived to expand the existing health personnel and add new cadre of workers all over the world (Aifah et al., 2020). However, nursing roles vary across different settings, and therefore, task shifting varies between setting (Maier et al., 2022) The beneficial effect of task shifting is dependent on which unit or setting such task is carried out. For example, a study on the effectiveness of task sharing and task shifting on the uptake of family planning in Kenya observed that task sharing and task shifting can expand and increase access to services across larger populations, as there will be more health personnel to carry out less technical procedures as stated by 95% of the respondents.

The current nurse-population ratio in Nigeria is more than 60% below the WHO's recommendation. This means that most Nigerian hospitals are understaffed, and health workers end up with overwork. In addition to the shortage of nurses, Nigeria is also experiencing a brain drain, as more Nigerian trained nurses are leaving the country. In the 12 months ending March 2024, the UK registered 13,656 Nigerian trained nurses, which represents a 28% increase from the same period in 2023. This is the highest number of Nigerian trained nurses registered in the UK in almost a decade. (Statista Market Forecast; 2024) The numbers of nurses and midwives in Nigeria are not keeping pace with the population growth, due to mass exodus of skilled health workers to developed countries. The global deficit of nurses, midwives and doctors is at least 2.4 millions, making task shifting a necessary approach for addressing the ongoing human resources for health shortages (Orkin et al., 2021).

There are several factors responsible for the shortage of higher-skilled health workers globally, which represents a challenge to health care delivery all over the world, but the worst situation is in developing countries, Nigeria. Poor work conditions, poor benefit packages, and job dissatisfaction cause migration of health workers in search of better packages from other countries (Baine et a., 2018). Therefore, adopting task shifting strategies has become necessary to fill the staff shortage gap to remedy a chronic shortage of well-trained health workers in our health institutions.

Task shifting particularly regarding nursing procedures, has faced numerous implementation challenges due to various factors at several health institutions. For example, a study on factors perceived to influence the implementation of task shifting in

highly specialized healthcare institutions identified three factors related to capability, knowledge and acceptability of task shifting rationale, dynamic role boundaries, and technical skills to perform biopsies and aspirations (Baine et al., 2018).

Another study in Ibadan on the willingness of nurses to task shift nursing procedures reported that the majority (91.5%) of registered nurses/midwives were aware of the concept of task shifting, but only 52.2% were willing to task shift family planning services to lower cadre staff. The study further identified age, educational status and awareness about task shifting as predictors of willingness to task shift family planning services. (Lawal et al., 2022).

During our clinical nursing surveys at various health settings in Ilorin metropolis health centers, there was evidence that nurses work under stress and burnouts due to shortage of manpower. The shortage of manpower in these health institutions across the state has constituted a serious challenge on nurses' burnouts and health problems and consequently led to poor patient care outcomes. For example, in a surgical ward of 30 patients in a teaching hospital, only two nurses were on the morning shift that requires regular attention to patients' self-care, bed bath, wound dressing, medication administration, vital signs, pre-surgery preparation, pain management and other physiological needs, among others, thereby making holistic nursing care nearly impossible. Based on these conditions, we attempted to investigate the perceived determinants of willingness to implement task shifting of nursing procedures in selected health care institutions in Ilorin, Nigeria.

Research Questions

The research questions to be answered are:

1. What are the socio-demographic characteristics of nurses in selected health care institutions in Ilorin Metropolis?
2. What is the knowledge level of nurses about the task shifting of nursing procedures in selected health care institutions in Ilorin Metropolis?
3. What are the determinants of willingness of nurses to implement task shifting in health care institutions of Ilorin Metropolis?
4. Will there be an association between the factors influencing the implementation of task shifting of nursing procedures among nurses in selected health care institutions of Ilorin Metropolis?

Hypotheses

Ho_1: There is no significant association between knowledge of nurses on task shifting of nursing procedures and the determinants of implementation of task shifting of nursing procedures in selected health care institutions of Ilorin Metropolis.

Ho_2: There is no significant association between the willingness of nurses to implement task shifting of nursing procedures and effective nursing care outcomes in selected health care institutions of Ilorin Metropolis.

Methodology

Design: This study adopted a cross-sectional descriptive research design, aimed to investigate perceived determinants and willingness to implement task shifting of nursing procedures in selected health care institutions in Ilorin Metropolis; (Oke-ose Primary Health Center, General Hospital Ilorin (GHI), and University of Ilorin Teaching Hospital). The researchers designed a questionnaire administered to nurses and midwives at various study health units; namely, emergency wards, antenatal clinics, operating theatres, pediatric wards, and surgical wards at different tiers of health care settings in Ilorin Metropolis.

Instrument

The instrument for data collection consisted of sections A-D; section A was on the socio-demographic data, B on the Knowledge level of nurses, C on their willingness and D on the factors that determine the implementation of task shifting. The content validity of the instrument was ascertained by ensuring that all study objectives were covered and face validity of the instrument was based on the variables in the study (task shifting, willingness and factor responsible for the implementation of task shifting of nursing procedurse). The multi-stage sampling procedure was used to sample 250 Nurses across the studied institutions. The first stage was purposive sampling of various tiers of health care institutions; namely, Oke-ose Primary Health Center, General Hospital Ilorin (secondary health care) and University of Ilorin Teaching Hospital (Tertiary health care) in Ilorin, and the second stage used a cluster sampling technique; namely, Primary Health Center, General Hospital Ilorin, and University of Ilorin Teaching Hospital in Ilorin, respectively. These health

care institutions are comprised of departments and units considered as cluster, the third stage was proportionate sampling technique; that is, Oke-ose Primary Health Center 30(12%), General Hospital Ilorin 140(56%) and University of Ilorin Teaching Hospital 80(32%) in Ilorin, and 250 respondents were recruited. The study sample of 250 nurses was obtained using Taro Yamane formula with 95% confidence level.

Data Collection

This process commenced with the submission of the study proposal to the Ethical Committees of the studied health care institutions for approval. Approval was obtained from the University of Ilorin Teaching Hospital with protocol identification code: UERC/CS/38, UERC Approval Number: /ASN/2024/297, and a letter of introduction was obtained from the State Health Management Board, which was submitted to the managements of the three tiers of health care delivery centers for permission before administering the research instrument to the respondents. The sampled respondents were met and the purpose of the study was explained to them. They were assured of confidentiality and that all information provided by them shall be used strictly for the purpose of this study. The respondents gave their consent to participate in the study and the administration of the questionnaire was carried out physically at different wards and units assisted by three trained research assistants. The data collection process took a period of two weeks across the studied health care institutions in Ilorin, and the completed questionnaire forms were immediately retrieved to avoid loss of data.

Data Analyses

The collected questionnaire forms were edited and coded, and data entry and analysis were carried out using the Statistical Package for Social Sciences, version 25, for both descriptive and inferential statistics. The research questions were analyzed using descriptive frequencies and percentages to describe the demographic characteristics, while the research hypothesis were tested using the Pearson chi-square tool at 0.05 level of significance.

Results

Table 1 on socio-demographic data reveal that 47% of the respondents are within the mean age of 35.5 years, with females constituting 76% of the participants under study. The highest qualification of nurses in this study was bachelor of nursing sciences (B.N.Sc) (48%), dominated by registered nurses and midwives (RNs & RMs), among others, while nurses with 6 to 10 years of working experience constitute the highest rate of respondents in this study, 56% of them were from general hospitals.

Table 1. Socio-demographic characteristics of respondents (n = 250)

Variables	Responses	Frequency	Percent (%)
Age	20 – 30 years	39	15.6
	31 – 40 years	117	47.0
	41 – 50 years	71	28.0
	50 years and above	23	9.0
Gender	Male	65	26.0
	Female	185	74.0
Level of qualification	RN/RM	31	74.0
	BNSc	120	48.0
	Postgraduates	53	21.0
Rank	Nursing Officer I (NO I)	56	22.0
	Nursing Officer I (NO II)	50	20.0
	Principal Nursing Officer (PNO)	63	25.0
	Senior Nursing Officer (SNO)	32	13.0
	Assistant Chief Nursing Officer (ACNO)	18	7.0
	Chief Nursing Officer (CNO)	31	12.0
	Assistant Director of Nursing (ADN)	5	2.0
Years of working experience	1 – 5 years	49	19.0
	6 – 10 years	93	37.0
	11 – 15 years	42	17.0
	>15 years	68	27.0

Department	No Response	63	25.0
	Surgical	28	11.0
	Medical	28	11.0
	O&G	29	12.0
	Stroke	3	1.0
	Nursing Services	60	24.0
	Emergency	28	11.0
	GOPD	15	6.0
Hospital	UITH	80	32.0
	GHI	140	56.0
	PHC, Oke-ose	30	12.0

Table 2 shows nurses' knowledge about task shifting. This study revealed that the majority of respondents (94%) have heard about task shifting before, 92% were able to define task shifting as a process of delegating tasks from higher to lower cadres. 84% agreed that task shifting reduces workload and increases nursing care efficiency (82%), respectively.

Table 2. Knowledge of nurses about task shifting of nursing procedures (n =250)

Variables	Yes	No
Have you heard about task shifting?	235 (94%)	15 (6%)
Task shifting is a process of delegating duties or tasks from the appropriate cadre to lower cadres.	230 (92%)	20 (8%)
Task shift curbs the issue of shortage of nurses on duty.	120 (48%)	139 (52%)
Task shift reduces the workload and burden on nurses.	210 (84%)	40 (16%)
Task shift increases the level of effectiveness of nursing care outcomes.	205 (82%)	45 (18%)
Task shifting has more disadvantages than advantages.	116 (46%)	134 (54%)

Table 3 illustrates the willingness of nurses to implement task shifting. This study revealed that more than a half (60%) of the respondents acknowledged the practice of task shifting in their wards/units, but 49% are willing to shift some nursing tasks to lower cadres. Nonetheless, a higher number (64%) of nurses are willing to accept that task shifting brings about effective nursing care, while 6% did not agree probably due to their lower workloads in their units. Meanwhile, 57% of nurses opined that taking up new nursing roles from task shifting would not affect their willingness to perform the new roles on tasks shifted to them.

Table 3. Willingness of nurses to implement task shifting (n = 250)

Variables	Yes	No
Is task shifting practiced in your unit/ward/hospital?	150 (60%)	100 (40%)
Are you willing to shift some nursing tasks to lower cadres?	123 (49%)	127 (51%)
Are you willing to accept task shifting to help make your care comprehensive and better?	160 (64%)	90 (36%)
Will the tasks shifted affect your willingness to perform the new roles shifted to you?	141 (57%)	109 (43%)
Will you be willing to involve patients in task shifting?	30 (12.0%)	220 (88.0%)

Testing of Hypotheses

Ho$_1$: There is no significant association between knowledge and determinants of implementation of task shifting of nursing procedures in selected health care institutions in Ilorin.

Table 4 shows the association between knowledge of nurses and factors determining the implementation of task shifting among nurses. This association was statistically significant at chi-sq = 38.762[a], df = 6, P-value = 0.000. Therefore, hypothesis I was rejected.

Ho$_2$: There is no significant association between willingness to implement task shifting of nursing procedures and effective nursing care outcomes.

The results from Table 4 further show the association between willingness to implement task shifting and effective nursing care outcomes. The results revealed a statistically significant association between willingness of nurses to implement task shifting and effective nursing care outcomes, (chi-sq = 33.449[a], df =1, P-v = 0.000), thereby rejecting null hypothesis 2.

Table 4. Statistical summary of association between nurses' knowledge level about determinants and willingness to implement task shifting of nursing procedures

Relationship between nurses' knowledge and factors affecting implementation of task shifting in your setting	**Good**	**Bad**	**Total**	**X^2**	**Df**	**P-value**	**Remark**
Not applicable	60	7	67				Significant
Supervision	0	2	2				
Work overload on junior nurses	0	3	3				Ho rejected
Shortage of staff	1	0	1	38.762[a]	6	0.000	
Nature of staff	0	1	1				Hi accepted
Pride	0	1	1				
Hospital policy	2	5	7				
Total	63	19	82				

Statistical illustration of the association between willingness to implementation of task shifting and effective nursing care outcomes

Has task shifting helped make your quality of care comprehensive and better?		**Yes**	**No**	**Total**	**X^2**	**Df**	**P-value**	**Remark**
Are you willing to task shift nursing procedures?	Yes	52	8	60	33.449a	1	0.000	Significant
	No	12	28	40				Ho rejected
Total		64	36	100				Hi accepted

Discussion

Socio-demographic Characteristics

Findings from the current study revealed that 47% of the nurses were in the mean age of 35.5 years, constituting the majority who were in their late adolescence age in this study. contrary to a study which indicated that the mean age of the respondents was higher (41.1±8.7 years), and that 62% of them were registered nurses and midwives. (Eli Feiring, Astrid & Eidesvik Lie, 2018) In the current study, 37% had from 6 to 10 years of working experience, which is an indication that nurses are experienced enough to task-shift various nursing procedures to lower cadres. The current-study findings supported the study which indicated that 49.3% of the respondents had more than 11 years of working experience, from whom 52.2% are willing to task-shift various nursing procedures to lower cadres (Eli Feiring, Astrid & Eidesvik Lie, 2018).

Knowledge Level of Nurses on Task Shifting of Nursing Procedures

Findings from this study revealed that the majority

of nurses (94%) have heard about task shifting before, and a large proportion (92%) of the respondents defined task shifting correctly. This is against 6% who claimed not to have heard of task shifting, probably due to their few years of working experience and lack of adequate information about the concept of task shifting of nursing procedures. This implied that the majority of nurses have knowledge about task shifting based on their ability to define correctly task shifting. Almost a half of nurses agreed that task shifting will curb issues of shortage of nurses, and 84% opined that task shifting reduces workload and burden, thereby increasing the nurses' work effectiveness and the quality of patient care outcomes in the studied institutions. The current-study findings agreed with those of a study conducted in Kano where three factors were identified to be related to capability, including knowledge and acceptability of task-shifting rationale (Lawal et al., 2022). Furthermore, the current-study findings corroborate WHO recommendations on task shifting and the findings of other studies which reported that task shifting was used as the strategy in the management of HIV/AIDS and other pandemics across African countries to address the acute shortage of health workforce challenges (Sunny et al., 2020) The hypothesis on the knowledge level of nurses about task shifting also shows an association between nurses' knowledge level about the determinants of and the willingness to implement task shifting of nursing procedures with chi-sq=38.762[a]. This means that the nurses' knowledge about factors influences their willingness to implement task shifting of nursing procedures at various levels of health care institutions in Ilorin Metropolis.

Willingness to Task Shift Certain Procedures among Nurses

The current study observed that more than a half of nurses (60%) declared their willingness to practice task shifting, as 49% are willing to task shift nursing procedures, because it allows effective management of limited facilities, reduces nurses' burnout, and remedies the acute shortage of manpower in the wards and units of health care institutions. Task shifting of nursing procedures, such as serving bed pan/urinals, draining of urine bags and reporting the amount of urine emptied to the nurse in charge, as well as serving meals, bed bath, bed making and setting up heavy medical instruments to the lower cadres of staff, enables efficient use of resources for the quality of nursing-care outcomes. This finding is similar to that of a study in south-western Nigerian, which reported that 52.2% of nurses were willing to task shift family-planning services to lower cadre staff and only 38.5% have actually task shifted family planning services to lower cadre staff (Akinyemi et al., 2020). This finding shows that nurses are willing to task shift some lesser complex nursing procedures if formerly institutionalized in their health institutions across the country to reduce work overload among nurses for efficient patient-care outcomes. This study further confirmed that a significant association exists between the willingness of nurses to implement task shifting and effective nursing care outcomes with an χ^2 value of 33.449[a], and a p-value of less than 0.05. This implies that nurses' willingness to the implementation of task shifting has a significant effect on nursing care outcomes.

Determining Factors Influencing the Implementation of Task Shifting among Nurses

This study identified factors, such as hospital policy, work overload on junior nurses, poor supervision, shortage of nursing staff, and pride among nurses in their institutions, that influence the implementation of task shifting at various health institutions. This finding supported a study conducted by Akinyemi et al. (2020), which reported that educational status and awareness about task shifting were predictors of willingness to task shift family-planning services.

Conclusion

This study concluded that there is a significant association between nurses' knowledge level about the determinants of and the willingness to implement task shifting of nursing procedures with 38.762[a] at a p-value of less than 0.05, as well as a significant association between willingness to implement task shifting and effectiveness of nursing care outcomes with an χ^2 value of 33.449[a] at a p-value of less than 0.05.5 respectively.

This implies that nurses' knowledge on task shifting and willingness to task shift nursing procedures are determinant factors that influence the implementation of task shifting of nursing procedures for effective nursing care outcomes in the investigated institutions.

Implications for Nursing

Findings from this study have demonstrated the need

for various health institutions to legitimize the implementation of task shifting of some less technical nursing procedures to lower cadres of health personnel for efficient patient-care outcomes.

Institutionalizing task shifting of some nursing procedures will definitely improve nurses' work efficiency, reduce burnout out and remedy the acute shortage of nurses in various health institutions in the state in particular and in the country in general.

Based on the findings of the current study, the management of health care delivery in the studied settings and in the entire country will be able to provide solutions to many of the factors identified to have been responsible for implementation of task shifting of some less technical nursing procedures to lower cadres of health personnel at various health care institution in the country.

Recommendations

Based on the findings of this study, it is recommended that:

1. National Association of Nigeria Nurses and Midwives should organize periodic seminars with emphasis on the various nursing procedures, like serving bed pan/urinals, draining of urine bags, and reporting the amount of urine emptied to the nurse in charge, as well as serving meals, bed bath, and bed making, that need to be task shifted.
2. Nurses should be encouraged to willingly implement task shifting of nursing procedures.
3. Training and re-training of health care professionals on the need for task shifting of some less technical nursing procedures are essential to improve health care delivery in various settings.
4. Nurses should be familiar with factors responsible for non-implementation of task shifting in order to reduce work overload and burnout among nurses.
5. National Association of Nigeria Nurses and Midwives should advocate for government policy formulation and implementation of task shifting of some nursing procedures at various health institutions.

Impact Statement

This study revealed that more than a half (60%) of respondents appreciated the practice of task shifting in their wards/units.

This study identifies various factors, such as institutional policy, work overload on junior nurses, poor supervision, and shortage of nursing staff, that influence the implementation of task shifting of nursing procedures for effective nursing care outcomes in the studied institutions.

This study shows a significant association between willingness to implement task shifting and effective nursing care outcomes.

This study revealed that there is an association between nurses' knowledge about and their willingness to implement task shifting of nursing procedures for effective nursing care outcomes in the studied institutions.

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Conflict of Interests

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