

PREDICTORS OF WILLINGNESS TO TASK SHIFT AMONG FAMILY PLANNING PROVIDERS IN A SOUTH-WESTERN NIGERIAN STATE

O.O Akinyemi¹, A. Somoye², and V.O Oladoyin³

1. Department of Health Policy and Management, College of Medicine, University of Ibadan and University College Hospital, Ibadan, Nigeria
2. Association for Reproductive and Family Health, Port-Harcourt, Nigeria
3. Department of Community Medicine, University of Medical Sciences, Ondo, Nigeria

Correspondence:

Dr. O.O. Akinyemi

Dept. of Health Policy and Mgt.,
College of Medicine,
University of Ibadan,
Ibadan, Nigeria
Email: ooakinyemi@com.ui.edu.ng;
seunakinyemi@hotmail.com

ABSTRACT

Background: Task shifting, the balanced reallocation of tasks usually from a higher cadre to a lower cadre among the health workforce team, has been proposed as a possible solution to the serious shortage of human resource in the health sector is being experienced in many developing countries. This study aimed to assess the views and experiences of nurses on task shifting in family planning services in Ibadan, Southwest Nigeria.

Methods: A descriptive cross-sectional study of 400 nurses with at least a year experience in providing family planning services at purposively selected tertiary, secondary and primary facilities in Ibadan was carried out using an interviewer-administered questionnaire. Chi-square test was used to determine association between categorical variables at 5% level of significance.

Results: Mean age of the respondents was 41.1±8.7 years and 62% of the respondents were registered nurses/registered midwives. Although majority (91.5%) of the respondents were aware of the concept of task shifting, only 52.2% 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. Age, educational status and awareness about task shifting were predictors of willingness to task shift family planning services.

Conclusion: Older registered nurses or registered midwives who were aware of the concept of task shifting were more willing to task shift family planning services. Also, a combination of both awareness and willingness to task shift among married women enhances the practice of task shifting of family planning services.

Keywords: Task shifting, Task sharing, Policy implementation, Family planning

BACKGROUND

Despite the outcry that the health care workforce is a very useful agent to achieving the Sustainable Development Goals (SDGs),¹ massive shortage of health workers needed to deliver health interventions still exists globally.² The worst hit region in this global health workforce shortfalls is the sub-Saharan African region, which includes Nigeria.^{2,3} Health care worker shortage in the worst hit region has its attendant impacts and a major one is the slow progress towards universal health coverage.⁴ To mitigate the impacts of health care workers shortfalls, task shifting, defined as the rational redistribution of tasks among health workforce teams, with specific tasks moved from highly qualified health workers to health workers with shorter training and fewer qualifications in order to make efficient use of the available human resources, is recommended.⁵ Task-shifting, formerly referred to as substitution or task-sharing, is not a new concept. It has been in use in many countries as a solution to the human resource

crisis in understaffed facilities and this has contributed to increased productivity and efficiency.⁶ With the HIV/AIDS scourge, task shifting has been increasingly promoted at the clinic levels to ensure continued provision of services. In such instances, lower cadre health care workers officially take on additional administrative and clinical responsibilities legally reserved for higher cadre health care workers.^{7,8} Another sector where task shifting is increasingly gaining popularity due to shortage of health professionals is maternal and reproductive health, including family planning services.⁹

Family planning services include provision of contraception; offering of pregnancy testing and counselling; helping clients who want to conceive, provision of basic infertility services; provision of preconception health services; provision of sexually transmitted diseases screening and treatment; and

provision of or referral for other related preventive services such as cervical cancer screening.^{10,11} Although literature has shown that task shifting some of these family planning services may increase access to and availability of maternal and reproductive health services without compromising performance or patient outcomes and may be cost effective,^{9,12,13} maintenance of quality service is still a primary challenge in task shifting.^{14,15} Often times, supportive supervision for the lower cadre staff assuming these new roles is absent,¹⁴⁻¹⁶ and this may affect the quality of the services that were task shifted.

In Nigeria, the task shifting and task sharing policy document for essential health care services has recommended that some of these family planning services be shifted to or shared with lower cadre health workers such as the Community Health Extension Workers.¹⁷ It is however important to assess the willingness of more specialised health workers to share their tasks with other cadres of health personnel as this may influence their supportive supervision of the lower cadre staff which may in turn influence the quality of services offered by these lower cadre staff. This study was therefore conducted to determine the willingness of family planning providers in a South-western Nigerian State to task shift family planning services to lower cadre staff. In this study, we also assessed the practice of task shifting family planning services among family planning providers. Lastly, we assessed the predictors of the willingness and practice of task shifting among the study respondents.

METHODS

This study was conducted in Ibadan metropolis, a city located in South-western Nigeria using a cross-sectional study design. Ibadan is the largest metropolitan geographical area in Nigeria and it has a population size of 5,580,894 according to the 2006 census in Nigeria.¹⁸ The city has several primary health care facilities and a few secondary and tertiary health care facilities. Family planning services are provided in quite a number of these health facilities. This study was conducted in purposively selected health care facilities providing family planning services in Ibadan metropolis. These facilities included a tertiary hospital (University College Hospital); three General hospitals (Adeoyo Maternity Hospital, Oni Memorial Hospital and Jericho Specialist Hospital); and two primary health care centres (Alegongo Primary Health Care Centre and Basorun Primary Health Care Centre).

Four hundred nurses with at least one-year experience in providing family planning services, selected by simple random sampling, were interviewed using an interviewer-administered questionnaire. Information

on the socio-demographic characteristics, willingness to task shift family planning services and the practice of task shifting family planning services were obtained from the respondents. Summary statistics were generated and these were used to describe the data. Bivariate analysis using Chi-Square test was used to determine associations between variables while multivariate analysis using binary logistic regression was done to determine predictors of willingness to task shift family planning services and the practice of task shifting family planning services. Level of statistical significance was set at 5% for both the bivariate and multivariate analyses.

Ethical approval for the study was obtained from the University of Ibadan/University College Hospital Ethical Review Committee. In addition, written informed consent was obtained from all research participants before administration of the questionnaires.

RESULTS

Socio-demographic Characteristics of Respondents

The mean age of the respondents was 41.1±8.7 years and approximately 79% of the respondents were in a marital union. The highest educational qualification attained by about 62% of the respondents was the registered nurse/registered midwife degree (RN/RM),

Table 1: Socio-demographic characteristics of respondents

Variables	Frequency (N=400)	Percent
Age		
< 40 years	164	41.0
≥ 40 years	236	59.0
Mean age (in years) ± SD*	41.1 ± 8.7	
Marital status		
In union	315	78.8
Not in union	85	21.3
Highest educational qualification		
RN/RM	246	61.5
BNSc	119	29.8
Postgraduate	35	8.8
Years of experience as a nurse		
1-5	86	21.5
6-10	76	19.0
11-15	76	19.0
> 15	162	40.5
Years of working in the study site		
1-5	152	38.0
6-10	111	27.8
11-15	82	20.5
> 15	55	13.8

*Standard deviation

Table 2: Awareness, willingness and practice of task shifting among respondents

Variable	Frequency (N=400)	Percent
Awareness about task shifting		
No	34	8.5
Yes	366	91.5
Willingness to task shift family planning services		
No	191	47.8
Yes	209	52.2
Practice of task shifting family planning services		
No	246	61.5
Yes	154	38.5

Table 3: Reported family planning services that have been task shifted and consequences of task shifting.

Variables	Yes (%)
Family planning services that have been task shifted*	
Patient assessment	135 (33.8)
Record and data maintenance	129 (32.3)
Preventive health education	37 (9.3)
Treatment adherence education	23 (5.8)
Contraceptive counselling	14 (3.5)
Fertility services and awareness	12 (3.0)
Administration of injectable contraceptives	11 (2.8)
Insertion of contraceptive implant	10 (2.5)
Referral services	10 (2.5)
Cervical smear test	0 (0)
Positive consequences of task shifting*	
Prompt and timely service delivery	203 (50.7)
Reducing workload and increasing efficiency	291 (72.8)
Increases access to family planning services	87 (21.8)
Negative consequences of task shifting*	
Self-reliance in performing task	81 (20.3)
Incompetence due to lack of training	314 (78.5)
Inter-cadre conflict	172 (43.0)
Personification of a higher cadre of staff	76 (19.0)

*Multiple response

about 40% of the respondents had over 15 years of nursing experience and a fewer number (13.8%) had been working in the study site for over 15 years (Table 1).

Willingness to task shift family planning services and practice of task shifting of family planning services among respondents.

Although majority (91.5%) of the respondents were aware of the concept of task shifting, only 52.2% 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 (Table 2).

The commonly reported family planning services that have been task shifted by the respondents are patient assessment (33.8%) and record maintenance (32.3%). Other less commonly reported family planning services that have been task shifted by the respondents are contraceptive counselling (3.5%), administration of injectable contraceptives (2.8%), and insertion of contraceptive implants (2.5%). (Table 3) Prompt and

Table 4: Bivariate and multivariate analysis of willingness to task shift family planning services

Variable	Willingness to task shift family planning services		P-value*	Adjusted OR (CI)**	Adjusted P-value
	No	Yes			
Age					
< 40 years	90 (54.9)	74 (45.1)		1.00 (Reference)	
≥ 40 years	101 (42.8)	135 (57.2)	0.017	2.15 (1.09-4.24)	0.026
Marital status					
In union	138 (43.8)	177 (56.2)		1.38 (0.79-2.43)	0.260
Not in union	53 (62.4)	32 (37.6)	0.002	1.00 (Reference)	
Highest educational qualification					
BNSc	70 (58.8)	49 (41.2)		1.00 (Reference)	
Postgraduate	18 (51.4)	17 (48.6)		1.41 (0.63-3.15)	0.401
RN/RM	103 (41.9)	143 (58.1)	0.009	1.90 (1.17-3.06)	0.009
Years of experience as a nurse					
1-5	51 (59.3)	35 (40.7)		1.00 (Reference)	
6-10	34 (44.7)	42 (55.3)		1.51 (0.77-2.96)	0.231
11-15	30 (39.5)	46 (60.5)		1.16 (0.53-2.51)	0.713
> 15	76 (46.9)	86 (53.1)	0.072	0.59 (0.26-1.37)	0.224
Awareness about task shifting					
No	26 (76.5)	8 (23.5)		1.00 (Reference)	
Yes	165 (45.1)	201 (54.9)	< 0.001	3.66 (1.58-8.55)	0.003

*P-value in Chi-square test

**Adjusted odds ratio in logistic regression (confidence interval)

timely service delivery (50.7%) and reduction in workload as well as increased efficiency (72.8%) are some of the positive consequences of task shifting reported by the respondents. The negative consequences of task shifting identified by the On bivariate analysis, age ($p = 0.017$), marital status ($p = 0.002$), highest educational qualification ($p = 0.009$) and awareness about task shifting ($p < 0.01$) were all found to be significantly associated with willingness to task shift family planning services. On multivariate analysis however, only age, highest educational qualification and awareness about task shifting were found to be predictors of willingness to task shift family planning services. Family planning providers who were 40 years and above in age were twice more willing to task shift family planning services compared to those who were less than 40 years old [OR 2.15 (CI: 1.09 – 4.24)]. Family planning providers with a registered nurse/registered midwife degree as their highest educational qualification were also twice more willing to task shift family planning services when compared to those with a Bachelor in Nursing Science (BNSc) or Postgraduate degree as their highest educational qualification [OR 1.90 (CI: 1.17 – 3.06)].

Family planning providers who were aware of the concept of task shifting were about 4 times more willing to task shift family planning services when compared with those who were not aware of task shifting [OR 3.66 (CI: 1.58 – 8.55)] (Table 4).

Predictors of practice of family planning services task shifting among respondents.

On bivariate analysis, age ($p = 0.002$), marital status ($p < 0.001$), years of nursing experience ($p = 0.004$), awareness about task shifting ($p < 0.001$) and willingness to task shift family planning services ($p < 0.001$) were all significantly associated with the practice of task shifting family planning services. In logistic regression however, only marital status, awareness about task shifting and willingness to task shift family planning services were found to be predictors of the actual practice of task shifting family planning services. Family planning providers who were in a marital union were about 9 times more likely to practice task shifting of family planning services when compared to those not in a union. [OR 9.19 (CI: 3.86 – 21.85)]. Family planning providers who were aware of the concept of task shifting were about seven times more likely to

Table 5: Bivariate and multivariate analysis of practice of task shifting family planning services

Variable	Practice of task shifting family planning services		P-value*	Adjusted OR (CI)**	Adjusted P-value
	No	Yes			
Age					
< 40 years	116 (70.7)	48 (29.3)		1.00 (Reference)	
≥ 40 years	130 (55.1)	106 (44.9)	0.002	0.88 (0.44-1.77)	0.882
Marital status					
In union	168 (53.3)	147 (46.7)		9.19 (3.86-21.85)	<0.001
Not in union	78 (91.8)	7 (8.2)	<0.001	1.00 (Reference)	
Highest educational qualification					
BNSc	81 (68.1)	38 (31.9)			
Postgraduate	19 (54.3)	16 (45.7)			
RN/RM	146 (59.3)	100 (40.7)	0.181		
Years of experience as a nurse					
1-5	64 (74.4)	22 (25.6)		1.00 (Reference)	
6-10	50 (65.8)	26 (34.2)		0.85 (0.38-1.90)	0.687
11-15	48 (63.2)	28 (36.8)		0.75 (0.32-1.75)	0.501
> 15	84 (51.9)	78 (48.1)	0.004	1.56 (0.63-3.87)	0.342
Awareness about task shifting					
No	32 (94.1)	2 (5.9)		1.00 (Reference)	
Yes	214 (58.5)	152 (41.5)	<0.001	6.94 (1.54-31.36)	0.012
Willingness to task shift family planning services					
No	151 (79.1)	40 (20.9)		1.00 (Reference)	
Yes	95 (45.5)	114 (54.5)	<0.001	4.26 (2.66-6.91)	<0.001

*P-value in Chi-square test **Adjusted odds ratio in logistic regression (confidence interval)

task shift family planning services when compared to those who were not aware of the concept [OR 6.94 (CI: 1.54 – 31.36)]. Lastly, family planning providers who were willing to task shift family planning services were about 4 times more likely to task shift family planning services when compared to those who were not willing to task shift [OR 4.26 (2.66 – 6.91)] (Table 5).

DISCUSSION

In this study willingness to task shift family planning services and the actual practice of task shifting family planning services were low. Registered nurses or registered midwives who were 40 years or above in age and who were aware of the concept of task shifting were more willing to task shift family planning services to lower cadre staff while family planning providers who were in a marital union and were aware of the concept of task shifting and also willing to task shift were more likely to practice task shifting of family planning services.

The proportion of staff who were willing to task shift some family planning services within their purview to lower cadre health workers was not encouraging. In contrast, Ivers and colleagues reported that all cadres of staff interviewed in a study conducted in rural Haiti were willing to task shift some of their Human Immunodeficiency Virus (HIV) management tasks.¹⁹ A possible explanation for the poor willingness found in this study could be due to the perceived negative consequences reported by the respondents. The perception that the lower cadre staff are not trained for the roles to be task shifted and the perception that task shifting can lead to inter-cadre rivalry are reasons that can be given for the low willingness of our study respondents to task shift some of their duties.

Older registered nurses or registered midwives who were aware of the concept of task shifting were more willing to task shift family planning services in this study. Reasons that may account for this includes the fact that these older nurses/midwives, who might be overburdened with so many other duties might not be as strong and agile as a younger person to carry out all their activities, and so will rather allow other people to do some of their work for them, if these other people are capable of doing so. This is buttressed by the fact that some respondents in this study still perceived reduction in workload and increased efficiency as a positive consequence of task shifting. In addition to this, their awareness and professional qualifications as registered nurses or registered midwives, might make them to be more optimistic about the concept of task shifting. The likely ripple effect, however, of older professional nurses task shifting their family planning

services to younger cadre of staff is work overload at the lower level which has been reported by other studies.^{15,16}

Although the proportion of respondents who reported that they practice task shifting of family planning service was low in this study, this is not so disturbing. Task shifting is done from a higher-level cadre of staff to a lower-level cadre of staff.⁵ In an organization, the staff composition is organized in such a way that the lower cadre staff are somewhat more than the higher cadre staff. This might be what is reflecting in this study. So, there is a possibility that the few higher cadre staff with more years of experience are the ones reporting that they practice task shifting of family planning services as depicted by the statistically significant association between years of experience as a nurse and the practice of task shifting in our study.

In this study, we found that married nurses who were aware of task shifting and also willing to task shift were more likely to practice task shifting of family planning services. The reason why married nurses are more likely to task shift is not clear. It is however not surprising to find that respondents who were aware of the concept of task shifting and also willing to task shift, actually reported practicing task shifting. The combination of these two factors, awareness and willingness, is likely to enhance any action.

Although this study provides useful information for policy makers and managers of human resources management for health, the limitation of this study must be mentioned. In this study, the practice of task shifting was assessed based on self-report from the respondents which might bring about some degree of social desirability bias. Also, like any other cross-sectional study, causality cannot be claimed among the variables studied. Further studies using more objective ways to assess the practice of task shifting is therefore recommended. These include use of both quantitative and qualitative studies to explore the views and experiences of lower cadre health workers about task shifting from senior cadre workers.

CONCLUSION

We have been able to demonstrate that older registered nurses or registered midwives who were aware of the concept of task shifting were more willing to task shift family planning services. Also, this study showed that a combination of both awareness and willingness to task shift among married women enhances the practice of task shifting of family planning services. Programs to increase the knowledge of health workers on task shifting and their willingness to task shift is therefore encouraged. Regular trainings can be

organized to achieve this in addition to provision of an enabling environment. This should however be done only when necessary to avoid work overload for lower level cadre of staff. There should also be written protocols to guide task shifting in any organization.

Declarations

Ethics approval and consent to participate

Ethical approval to conduct this study was obtained from the University of Ibadan/University College Hospital (UI/UCH) Ethical Review Committee. Written informed consent was sought and obtained from all participants in the study.

Authors' contributions

OOA and AS conceptualized the study, AS and OA collected the data while OOA, AS and VOA analysed the data and wrote the manuscript. All authors approved the final manuscript.

REFERENCES

1. **de Francisco Shapovalova N**, Meguid T., Campbell J. Health-care workers as agents of sustainable development, *The Lancet Global Health*. 2015, 3, e249-e250.
2. **Chen L**, Evans T, Anand S, *et al.* Human resources for health: overcoming the crisis, *The Lancet*. 2004, 364, 1984-1990.
3. World Health Organization The world health report 2006: working together for health, 2006.
4. World Health Organization A universal truth: No health without a workforce, 2014.
5. World Health Organization Task shifting: rational redistribution of tasks among health workforce teams: global recommendations and guidelines, 2007.
6. **Dovlo D**. Using mid-level cadres as substitutes for internationally mobile health professionals in Africa. A desk review, *Human resources for health*. 2004, 2, 7.
7. **Morris MB**, Chapula BT, Chi BH, *et al.* Use of task-shifting to rapidly scale-up HIV treatment services: experiences from Lusaka, Zambia, *BMC health services research*. 2009, 9, 5.
8. **Zachariah R**, Ford N, Philips M, *et al.* Task shifting in HIV/AIDS: opportunities, challenges and proposed actions for sub-Saharan Africa, *Transactions of the Royal Society of Tropical Medicine and Hygiene*. 2009, 103, 549-558.
9. **Dawson AJ**, Buchan J, Duffield C, *et al.* Task shifting and sharing in maternal and reproductive health in low-income countries: a narrative synthesis of current evidence, *Health policy and planning*. 2013, 29, 396-408.
10. Center for Disease Control and Prevention Providing quality family planning services. Recommendations of CDC and the U.S. Office of Population Affairs, *Morbidity and Mortality Weekly Report*. 2014, 63.
11. US Department of Health and Human Services; Centers for Disease Control and Prevention Update: Providing quality family planning services - Recommendations from CDC and the U.S. Office of Population Affairs, 2017, *Morbidity and Mortality Weekly Report*. 2017, 66, 1383 - 1385.
12. **Hoke T**, Brunie A., Krueger K., *et al.* Community-based distribution of injectable contraceptives: introduction strategies in four sub-Saharan African countries, *International perspectives on sexual and reproductive health*. 2012, 38, 214.
13. **Hoke TH**, Wheeler SB, Lynd K, *et al.* Community-based provision of injectable contraceptives in Madagascar: 'task shifting' to expand access to injectable contraceptives, *Health policy and planning*. 2011, 27, 52-59.
14. **Deller B**, Tripathi V, Stender S. *et al.* Task shifting in maternal and newborn health care: key components from policy to implementation, *International Journal of Gynecology & Obstetrics*. 2015, 130, S25-S31.
15. **Ferrinho P**, Sidat M, Goma F, Dussault G. Task-shifting: experiences and opinions of health workers in Mozambique and Zambia, *Human Resources for Health*. 2012, 10, 34.
16. **Bocoum FY**, Kouanda S, Kouyaté B, *et al.* Exploring the effects of task shifting for HIV through a systems thinking lens: the case of Burkina Faso, *BMC Public Health*. 2013, 13, 997.
17. Federal Ministry of Health Task-shifting and task-sharing policy for essential health care services in Nigeria. 2014.
18. National Population Commission Federal Republic of Nigeria 2006 Population and Housing Census. Priority Table IV. Population distribution by age and sex (state and local government), 2010.
19. **Ivers LC**, Jerome JG, Cullen KA. *et al.* Task-shifting in HIV care: a case study of nurse-centered community-based care in rural Haiti, *PLoS One*. 2011, 6, e19276.