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Factors Influencing the Performance of Nurses-Midwives at Labor Wards: A Case Study of Three Regional Referral Hospitals, in Dar es Salaam

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Abstract

Background

Nursing and midwifery professions can transform the way health actions are organized and how health care is delivered if they are regulated and well supported. Despite rising global attention on health care delivery systems strengthening; there is a scarcity of information on the nurse-midwives' performance specifically in the labor wards. The study aimed to assess nurse-midwives' performance working in the labor wards.

Methods

A qualitative case study design that applied in-depth interviews (IDIs) using a semi-structured interview guide conducted between May and June, 2017 in Dar es Salaam City. A purposive sample of 22 nurse-midwives working in labor wards in Amana, Mwananyamala and Temeke regional referral hospitals were recruited. IDIs were recorded by audiotape, then transcribed verbatim and analyzed using deductive content analysis.

Results

Seven sub-categories emerged from the data. The findings were presented into two categories: based on barriers for nurse-midwives' performance include poor working environment, inadequate staffing level, insufficient medical supplies and equipment, and increased workload. The second category included facilitators for nurse-midwives' performance such as Continuous Professional Development (CPD), leadership characteristics and supportive supervision.

Conclusion and Recommendations

The findings indicated interrelated factors influencing nurse-midwives' performance. These factors go beyond the nurse-midwives' desirability to provide high quality services; and cut across at different levels, these may underlie their inability to meet the required standards. The health care managers should support and motivate nurse-midwives to improve their performance. This could be done through provision of adequate medical supplies and equipment necessary for service execution, financial (allowances) for extra duty and non-financial incentives (on job training/seminars), and regular supportive supervision. Further studies among nurses, other health workers and health care managers may be crucial for improvement of maternal health care services.

Keywords: *Nurses, Midwives, Performance, Tanzania.*

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Introduction

One of the major determinants of the Health of any nation is the comprehensiveness of its health care delivery system. The health care delivery system functions well if there is harmonious interconnection between its building blocks: governance, human resources, information system, medicine and pharmaceutical technology, financing and service delivery (1). A key input of every health care delivery system, is its workforce (2). Nurses and midwives constitute more than 50 percent of the health workforce in most countries (3). Currently, it is estimated that of the 43.5 million health workers, 20.7 million are nurses and midwives (3). They contribute to health improvements such as: increased patient satisfaction, decrease in patient morbidity and mortality, and stabilization of financial systems through decreased hospital readmissions and length of stay. Also, they do contribute to reductions in newborn, infant and maternal mortality as skilled birth attendants and providers of neonatal care (3).

Performance is the art to complete the task within the defined boundaries. It is considered to be a combination of staff being available (retained and present), competent (technical knowledge, skills and behaviors), productive (producing the maximum effective health services) and responsive (people are treated decently; regardless of whether or not their health improves) (2). Health workers performance is critical because it has an immediate impact on health service delivery and ultimately on population health. Inadequate performance is a widespread problem in low- and middle-income countries (4). Poor performance is a threat, because low quality health services may be harmful to the patients, and reduce the utilization of health services; also it exposes services to financial risk (4). The nursing shortage occurring worldwide is bringing a serious crisis in terms of adverse impacts on population's health. It poses unprecedented challenges for policy makers and planners in high- and low-income countries (5).

Tanzania is experiencing a nursing crisis, with 5.5 nurses and midwives per 10,000 populations as compared to the minimum threshold of 23 per 10,000 populations. It shows that Tanzania is struggling to provide skilled care at birth to significant number of pregnant women, as well as emergency and specialized services for newborn (6). This may contribute to women not going to the health facility for delivery (7), only 64 percent of births occur in health facilities in Tanzania. So far, in Dar es Salaam City births in health facilities were 95% (8). Shortage of staff may act as an obstacle in implementation of a key objective of the National health policy 2017 which focused on the importance of human resources for health and its role in improving population health. In recognition of the national human resource

crisis, in 2007 the Government of Tanzania through the Ministry of Health and Social welfare (MoHSW) launched the Primary Health Services Development Programme (PHSDP, 2007–2017) to address performance issues of the health sector. In this programme, MoHSW has for example, scaled up the enrollment of nurses in health training institutions as a way to increase the number of qualified health care professionals. The curriculum was also shortened from four to two years, with the aim of producing more nurses in a short period of time, meanwhile registered nurses training required a completion of high school and three years' professional training (9).

Besides increasing the stock of health workers mainly nurses, the second major route is to utilize the existing workforce more effectively. This can be achieved through increased productivity, improved performance and through more effective (and equitable) deployment of personnel (4). Grabher, (10) stated that, the performance is inadequate since they are poorly motivated and managed, not sufficiently qualified or simply absent from work. In relation to qualifications and availability of equipment, other author reported that, in maternity health care services, 22 percent of registered and enrolled nurse-midwives had performed removal of retained products or assisted vaginal delivery (24 percent and 11 percent respectively). There is inadequate equipment and supplies, also lack of knowledge and skills in performing emergency obstetric care (11). This study may be essential for improvement of the quality of health services; also it may provide the evidence base, which could be useful for local health managers to create mechanisms that can support nurse-midwives to improve their performance. Moreover the study findings may be valuable for other researchers to do further investigations on the area of performance among health workers.

Methods

Study context and Design

The study was conducted in Dar-es-Salaam region at Amana, Mwananyamala and Temeke regional referral hospitals. These are public hospitals, which provide services to majority of citizens in Dar es Salaam City including deliveries of pregnant women. They also receive referral cases from different health facilities including pregnant women who are in labor. This study employs a qualitative case study design that applied descriptive approach; it describes and analyzes phenomenon and the real-life context in which it occurred (12). In this study the researcher presented the real situation that nurse-midwives face at work.

Participants

The study comprised the nurse-midwives who were employed at the selected study hospitals, with more than one year working experience; who agreed to participate in the study. This group was suitable because they have real experience at workplace. A purposeful sampling was used to recruit 30 nurse-midwives, however the final sample size was 22 nurse-midwives as the saturation point was reached (the point at which the answers from respondents seemed to be the same), and no more interviewees were recruited.

Data collection

In-depth interviews

Interviews were conducted using a semi-structured interview guide, which comprised open ended questions. This allowed probing and introducing new questions from informants. A tape recorder and notebook were used in recording information during interview, which took approximately 45 minutes. All nonverbal responses were noted and taken into account. Data were collected between May and June, 2017. Interviews were conducted in appropriate time, to avoid an interference with duties.

Data Analysis

Data analysed concomitantly with data collection; by using deductive content analysis (13). Initially, the researchers were listening carefully to the audio tape interviews and all transcripts were transcribed verbatim, then translated from Kiswahili into English. Next, each transcript read line by line to generate initial codes in a codebook. The deductive content analysis approach was focusing on the research questions in the interview guide which helped to determine the initial coding or relationships between codes. Also, the researchers used the interview questions as a guide to identify the predetermined codes, and continued to code all text. Codes organized to identify themes and those data that matches the themes were grouped together and labelled. Themes that recur in the data were organized into subcategories then coherent categories that summarize and bring meaning to the text. The researcher continued to build categories until no new themes and subcategories were identified. Finally the data was interpreted and presented in descriptions including quotation to illustrate the respondent's points.

Table 1: Example of process of analysis to come with insufficient medical supplies and equipment theme using deductive content analysis

Codes	Theme	Relevant quotes
No medical supplies Out of stock Looking for equipment (gloves, catheter) Did not come with gloves Inadequate equipment	Insufficient medical supplies and equipment	"..No medical supplies here, sometimes we assist delivery with clean gloves instead of sterile ones. The problem comes once the woman did not come with gloves and in the ward is out of stock. We go to other wards to look for gloves, sometime equipment is available, sometime are out of stock completely; most of the time is out of stock" (Registered nurse-midwife number 10 Amana Hospital). "..You may look for equipment to use and never get any. Yesterday the doctor has ordered me to catheterize a woman; in the ward there is no catheter, today her relative came, she bought and brought it. Service provision may delay due to inadequate equipment" (Enrolled nurse-midwife number 17, Mwananyamala Hospital).

Ethical considerations

Ethical approval was sought from Institutional Review Board (IRB) of Muhimbili University of Health and Allied Sciences No.MU/PGS/SAEC/Vol./IX/; then permission to conduct the study was obtained from Regional Administrative Secretary and Executive Directors of Ilala, Temeke and Kinondoni Municipals. The permission to access the participants was granted from the Medical officers in charge of Amana, Temeke and Mwananyamala hospitals. Participants were thoroughly informed about the study aims and how the findings will be used. A consent form was signed upon agreement of participation in the study. Confidentiality was guaranteed and only numbers were used to identify participants.

Results

Table 2: Categories and sub-categories emerged from data

No.	Categories	sub-categories
1	Barriers for nurse-midwives' performance	• Poor working environment • Inadequate staffing level • Insufficient medical supplies and equipment • Increased workload
2	Facilitators for nurse-midwives' performance	• Continuous Professional Development • Leadership characteristics • Supportive supervision

Characteristics of Participants

A total of 22 nurse-midwives were included in the study. Six were male and sixteen were female, their ages ranged between (22) to (47) years. Thirteen (59.09%) of respondents had certificate in nursing while nine (40.91%) had diploma. They spent between one and twenty-four years of working experience; with between six months and six years working experience in labor wards. The researchers presented the study findings based on the factors affecting nurse-midwives' performance and workplace factors enhancing nurse-midwives' performance working at labor wards.

Barriers for nurse-midwives' performance

Irresponsibility-using working hours for unproductive work

Participants argued that using of working hours for unproductive work; may endanger life of both women and expected newborn. Co-workers may overwork and the health facility may end up with poor performance.

> *"…you may receive an emergency case report that needs you to go to theatre. Instead of taking a quick action may be someone continues charting with colleague. In that case may cause a ruptured uterus, thus women and fetus may die" (Enrolled nurse-midwife number 03, Temeke Hospital).*

Another participant added that,

> *"…this leads to low quality service provision in health facility. If a person is not committed to their work it may lead to overworking colleagues in a shift, because he/she will have to do his/her work and also work of the uncommitted person. (Registered nurse-midwife number 20, Mwananyamala Hospital).*

Four subcategories emerged from data analysis, which may affect nurse-midwives' performance:

Poor working environment

Participants claimed that poor working condition may affect their performance. Not only physical environment, also inadequacy of personal protective gears.

One participant highlighted that;

> *''…It depends on the working condition; sometimes the pipe has broken and water is flowing everywhere, sometimes electricity has switched off even for half an hour, how do you work in condition like that" (Registered nurse-midwife number 20, Mwananyamala Hospital).*

Another participant added:

> *"…The environment is unsafe, you may provide services to a woman; out from nowhere the blood spills on your mouth. Protecting yourself sometimes is not possible because sometimes protective gears are out of stock." (Enrolled nurse-midwife number 08, Amana Hospital).*

Inadequate staffing level

Shortage of the trained nurse-midwives to assist women in labor is real as elaborated in the background section of this study. Nurse-midwives are overworked and extend the working hours from morning to evening; the number of personnel is significantly inadequate compared to the number of women whom they serve.

One participant narrated that:

> *"…you may find three staff in a shift; and it is a day to transfer referral to Muhimbili, one nurse may go to Muhimbili. It happens another one is required to go to theatre, only one nurse remains in the ward. For one nurse to work alone it is very risky; there are some things that you may fail to do on time" (Registered nurse-midwife number 07, Temeke Hospital).*

Another participant highlighted:

> *"…Today I supposed to come at evening shift only. My in charge called me and insisted that I have to come and work in double shifts from morning 7:30 am to night 8:00 pm, because there was only one staff another staff is sick. There is a lot of work, you may assist delivery here and there; this woman is pushing, that one is pushing; it's obvious that you will provide insufficient service; not quality service at all." (Enrolled nurse-midwife number 08, Amana Hospital).*

Insufficient medical supplies and equipment

Participants complained about scarcity of materials necessary for doing work appropriately. Sometimes they are required to go to different wards looking for missing supplies and drugs to save the woman and her baby. This leads to delay in service execution at facility level.

One participant stated that:

> *"…No medical supplies here, sometimes we assist delivery with clean gloves instead of sterile ones. The problem comes once the woman did not come with gloves and in the ward is out of stock. We go to other wards to look for gloves,*

sometime equipment is available, sometime are out of stock completely; most of the time is out of stock." (Registered nurse-midwife number 10 Amana Hospital).

Similarly, one participant added:

"…you may look for equipment to use and never get any. Yesterday the doctor ordered me to catheterize a woman; in the ward there was no catheter, today her relative came, she bought and brought it. Service provision may delay due to inadequate equipment" (Enrolled nurse-midwife number 17, Mwananyamala Hospital).

Increased workload

Participants reported that they are overwhelmed with the number of women attended in labour wards. Heavy workload may increase due to shortage of staff**,** the services become poor as the nurse-midwives fail to provide the standard needed for saving life; sometime they arrive at work but until the time of changing their shift, they did not have time to rest.

One participant remarked that:

"…There is a heavy workload here; you may arrive at work in the morning 7:30 am but until 3:00 pm no one has even a minute to rest. Some works interrupt others; example when you are at labor ward while proceeding with work, birth before arrival (BBA) may come from home, and after arrival in the labor ward the BBA starts post-partum hemorrhage (PPH), you may leave other work to handle that emergency. Such work interrupts others." (Enrolled nurse-midwife number 17, Mwananyamala Hospital).

Another participant highlighted:

"…Shortage of staff and large number of patients increased workload. Example you may have different kinds of patients, some requiring Cesarean section, but there are three rooms in the theatre. In the day of general surgery, you need to transfer women indicated for Cesarean section to Muhimbili National Hospital, sometimes they may refuse to accept the patient and you may come back with her. At the end of the day, you have mixing of the work, delivering of low score and fresh still births" (Registered nurse-midwife number 11, Amana Hospital).

Facilitators for nurse-midwives' performance

Participants portrayed that performance may improve eventually with different circumstances which they might face in the life of clinical practices. Three subcategories were emerged:

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Continuous Professional Development

Participants argued that training has a great contribution in acquiring new knowledge and skills. This may increase ability in provision of quality services.

One of the participants said that:

> *''….yesterday I attended training on Helping Baby to Breath, they have trained us on how to resuscitate those babies with birth asphyxia. It improved my skills on resuscitation of newborn baby" (Registered nurse-midwife number 04, Temeke Hospital).*

Another one emphasized that:

> *''…when I was studying in a college; fundal pressure was accepted and vacuum discouraged. Nowadays things have changed; no longer fundal pressure rather than vacuum extraction. Training helps to acquire new knowledge, and we do it" (Enrolled nurse-midwife number 16, Mwananyamala Hospital).*

One participant emphasized on the importance of attending higher education.

> *"…for this level I have achieved, I need more advancement. I believe in midwifery, things are not the same, there is some deeper knowledge. I believe if I can attain that, it will be better" (Registered nurse-midwife number 11, Amana Hospital).*

Leadership characteristics

It was reported that immediate supervisors should become frontline, in assisting subordinates in doing work especially in complicated cases. Participants have appreciated the encouragement and support as narrated below:

> *''…my incharge has provided greater support in doing my work. Sometimes assisted normal delivery failed, you may perform vacuum extraction also it failed, the baby never come out, once my incharge were around, she provides an advice immediately on what to do'' (Enrolled nurse-midwife number 09, Amana Hospital).*

Another participant added that:

> *"...My leader has supported me a lot. When I started to work, if the baby had critical condition (asphyxia), I was afraid to perform resuscitation. She encouraged, helped and assisted me to do so" (Enrolled nurse-midwife number 02, Temeke Hospital).*

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Supportive supervision

Participants reported that supportive supervision increases their abilities and performance. Nevertheless, some of supervisors still used abusive language:

> *"…supportive supervision helps, it excludes things like why did you not do this? In now days; it looks like a coaching, somehow it brings changes" (Registered nurse-midwife number11, Amana Hospital).*

Another participant added:

> *"…Somehow it helps, but it discourages. A supervisor may come, never saying in polite language. There is a kind of language used to educate a person" (Enrolled nurse-midwife number18, Mwananyamala Hospital).*

Informants argued that continuous support from immediate supervisors helped them gaining confidence and ability in doing their duties. Providing feedback for what they have done may be useful to increase morale, in turn improving quality of health services to save women and babies' lives.

Discussion

Working environment has great effect on health care service delivery. Participants described that working environment consists of the physical environment together with working tools. They argued that when the environment is distorted physically it may interfere with provision of maternal services; meanwhile when the required working tools are inadequate, nurse-midwives fail to conduct delivery properly so their efficiency also diminished. Working in unsafe environment has exposed staff to acquire blood borne infection, from the mothers they saved. Unsafe environments increase health workers absenteeism, turnover and risk of abandoning the profession, short-term sick leave, longer-term disability, and even death. Inadequate supplies, outdated or missing equipment, and lack of potable water and/or electricity demotivate workers in turn lower the productivity (14).

Shortage of staff and heavy workload of labor ward lead to ineffective service delivery. Due to shortage of staff, present ones are forced to prolong the working hours from morning 7:30 am to 8:00 pm, and sometimes they have to work without off days for a week even two weeks. In doing so they become exhausted with increased workload, the service provided is in low quality and not timely since more than one mother in the labor ward were pushing at the same time. This may lead to mixing of the work, delivering of low score and fresh

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stillbirths, thus may demoralize and affect their performance. Shortage of nurse-midwives also may be the cause of some women not utilizing maternal services in turn may look for traditional birth attendants for delivery (7), only 64 percent of births occur in health facilities in Tanzania (8). This study is consistent with other study, which shown that nurse-midwives were being overburden by the number of women coming for deliveries due to shortage of personnel (15). They had to work overtime, select whom they should give care (serious cases), and leave other women to give birth on their own without support.

The government of Tanzania has made effort on increasing availability of nurses through shortening of enrolled nurses' curriculum from four to two years. Such shortening of enrolled nurses' curriculum may allow more nurses to graduate in a defined time. Given that they get employed, it may facilitate their availability in more health care facilities in the country and so help to increase the number of births delivered with their assistance (9). The third Human Resource for Health Strategic Plan 2014-19 stressed on increasing the number and capacity of health and social welfare workers, enhance retention and improve utilization (16). Improvement of retention and utilization of existing health workers and nurses as well will be crucial for the women to access and utilize maternal health services and attended by skilled birth attendant soon at health facility level when they arrived. In Canada, it was noted that with too few nurses and too many responsibilities nurses feel torn from the core values and elements of their work, find it difficult to feel proud or satisfied with their work, and experience a drop in productivity and effectiveness (17). The findings of this study stress out the negative impact, which may arise during or after delivery due to ineffective services, newborns may have scored low or increased neonatal sepsis meanwhile the nurses may end up with physical and psychological exhaustion which in turn may lead to low productivity and poor performance.

The findings of this study further show that labor ward nurse-midwives are experiencing significant scarcity of materials and supplies; this may force them to go to different wards while women are in labor, to look for required equipment. As it were, this is risky as it leaves the laboring mothers on their own at critical times. Nurses become frustrated and stressed in turn, they fail to execute effective services; both nurses and the women become unsatisfied. This is supported by other research identified that nurses may lack of materials, drugs and safe blood for transfusions in the health facilities that are basic and essential tools to ensure that they can carry out their duties effectively. As a result, nurse-midwives see themselves as working in very difficult environments that hinders their ability to provide quality birth care

(15). The government of Tanzania through (PHSDP 2007–2017) acknowledges on inadequacy of equity in access to essential medicines and related supplies, with a consequent impact on quality of care. Also has experienced a disproportion between the needs and allocated budget for the purchase of medicines and medical supplies (9). This hampered the implementation of health policy that emphasized execution of free maternal health services. Increasing the budget of the health sector is crucial so as reach the Abuja declaration 15% for the improvement of maternal health services including availability of medicines, medical supplies and equipment. When the medicines, medical supplies and equipment are available, the nurses may implement exemption policy easier and the women may access the services.

Participants emphasized that attending in service training such as BEmONC and resuscitation of new born babies are among the other training that increased their knowledge and abilities in performing their duties. Similarly they have explained on the importance of joining in higher education so as to gain knowledge and skills on maternal health services. It may build confidence among nurses and are being able to handle normal deliveries and obstetric emergencies as well. Similar to other study findings, in that study was revealed that for health workers to provide quality care and meet their communities changing health care needs, they must become lifelong learners dedicated to upgrading their professional knowledge, skills, values and practice (18).

In Tanzania through (PHSDP 2007–2017) pointed out that in-service training and continuing professional development is essential for updating and maintaining health workers skills and knowledge and for assuring quality service provision (9). However it is common to find health workers who have not been refreshed for periods of 5 years or more while others have attended several trainings. After all, there has been little follow up of those who attended such training to establish the effect of the training on their performance (16). Fairly selection of personnel on attending in training as well as permission to attend higher education is crucial for the knowledge acquisition and improvement of performance among nurses.

Being assisted and supported by senior build trust and helps to gain confidence in doing work. Informants argued that, in charges of the wards as an immediately supervisors have supported and encouraged on doing their work, especially in handling of complicated cases. Other authors documented that transformational leaders are very passionate, enthusiastic and energetic. They work to transforms the skill, capabilities, values and belief of their followers. This study acknowledge the encouragement of immediate supervisors however

the high authority has the role of managing and utilize the subordinates effectively maintain the morale of work (19).

Supportive supervision is the final category to emerge from data. Participants portrayed that supportive supervision looks like a coaching method that builds their confidence. Being supervised may help to improve skills since supervisors may use this method to train subordinates; nurses may increase their abilities on conducting deliveries and immediate care of newborn babies. Other study stressed that, improving health services requires continuous support for health workers to allow those in the frontline of service delivery to perform as expected. In the context of strengthening human resources for health (HRH), making supervision systems more effective also holds potential for increasing health worker productivity and improving retention (20).

Study limitations

The study involved only nurse-midwives at labor wards, nurses from other departments may have encountered different situations in their work. More information may be valuable from other nurses, and health facility managers as well. The study also involves only service providers, however opinions from the users of services may help to check out information across informants. In-depth interviews only was used as data collection method to seek an opinion from participants, though triangulation of data was also achieved through space triangulation, it involves three regional referral hospitals.

Conclusion

The study revealed that inadequate resources in terms of human and non-human resources act as major obstacles on nurse-midwives' performance. On the other hand improvement of performance may be enhanced through capacity building, and this might be achieved by different measures to be taken in the working environment. The government and other development partners should increase the number of nurse-midwives and increase their capacity to meet the demand of women in labor. This may be done by training, employing, retaining and motivating the nurse-midwives to have enough skilled birth attendants. Also the government should equip health facilities with adequate materials necessary for service execution. This helps nurse-midwives to implement exemption policy effectively and the women may access free maternal health services. Moreover, the health care managers should support the staff in supervising the nurse-midwives to acquire competence and build

confidence in performing their work. Improving nurse-midwives' performance will help in achieving the global ambitions such as universal health coverage and the Sustainable Development Goals. The findings from this study may be used to help other researchers to do further investigations on the area of performance among nurses and other health workers; to know the most important factors and at which level might be influencing their performance.

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Author contributions

TJS Designed the study, collected and analyzed data, and drafted the manuscript. ADK contributed to study conceived and design, was accountable for all coordination of phases of the study and providing a technical review of the manuscript. All authors read and approved the final manuscript.

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