

Factors influencing the job performance of nurses and midwives in postpartum units in two district hospitals in Rwanda

P. Uwaliraye, T. Puoane, A. Binagwaho and P. Basinga

Abstract

The performance of nurses and midwives in postpartum units can influence maternal health as well as infant survival. This study assessed factors influencing the performance of nurses and midwives working in the postpartum units in two public hospitals in Rwanda.

Ninety-six nurses and midwives were observed while providing postpartum care according to a checklist comprising 30 activities. Each observed nurse and midwife was then interviewed about the presence or absence of specific performance factors. Results were analysed to compare average performance with the presence or absence of specific performance factors.

Nurses and midwives performed poorly in the use of guidelines for postpartum care management. Factors that were associated with good performance included receiving feedback about job performance, training in postpartum care management and in the use of the postpartum guidelines, satisfaction with the work organisation, and organisational interest in staff members' creativity.

Training and postpartum guidelines for staff members, aimed at reducing postpartum morbidity and mortality rates, should be planned in light of the factors that most directly affect the quality of care provided by nurses and midwives. Further analyses of factors contributing to good or poor performance are required.

Background information

One of the objectives of Millennium Development Goal (MDG) 5 was to reduce the maternal mortality rate (MMR) by 5.5% every year from 1990 to 2015 (United Nations, 2010:30). For Rwanda, a country with a high MMR of 487 per 100 000 live births (RDHS, 2010:238), meeting that target required improved antenatal, delivery and postpartum care. Therefore, in 2005, the Ministry of Health in Rwanda adopted a "Performance Based Financing Programme" to reward and encourage improved job performance in healthcare. Despite this programme, the MMR remained high: the two hospitals participating in this research reported 20 and 25 maternal deaths per 100 000 live births (Ministry of Health [MoH], 2010:101), and one of the hospitals reported 24 cases of postpartum haemorrhage and 25 cases of sepsis among the postpartum complications that occurred in 2010 (Ministry of Health [MoH], 2011:20). These results indicated the

need for research on the factors affecting nurses' and midwives' job performance in postpartum units in Rwanda.

Several authors have identified factors that could predict optimal worker performance in low income settings. These factors included clear job expectations, performance feedback, adequate environment and work organisation, work motivators (incentives and employer recognition), and knowledge and skills (Fort & Voltero, 2004:9; Rowe et al., 2009:843; Graner et al., 2010:611; Basinga et al., 2011:1425; Puoane et al., 2008:433). This study used a framework adapted from Fort and Voltero (2004:10) (see Figure 1) to assess factors that influenced the job performance of nurses and midwives working in postpartum units in two public hospitals in Rwanda, focusing on the behavioural component of nurses' and midwives' job performance.

Purpose of the study

This study attempted to identify how nurses and midwives performed their jobs and why some were successful in their task fulfilment and others were not. The objectives of the study were to:

1. assess the practices of nurses and midwives working in postpartum units in the two participating hospitals;
2. describe job-related factors that influence nurses' and midwives' job performance levels;
3. identify nurses' and midwives' perceptions about organisational factors influencing their job performance.

Definitions of keywords

A **midwife** cares for women during pregnancy, labour, and the postpartum period, as well as for newly born babies. He/she prevents problems during pregnancy, detects abnormal conditions and obtains medical assistance when necessary, and provides emergency care in the absence of medical help.

A **nurse** is a licensed healthcare professional who cares for the sick and is skilled in promoting and maintaining health, including postpartum care.

Postpartum care is provided after the delivery of a baby. It lasts approximately six weeks or until the reproductive organs return to their normal size.

Job performance refers to the ability of a worker to practise what he/she knows using experiential and competence-based training methods to accomplish the tasks at hand.

Performance factors can predict optimal worker performance in a variety of areas, including specific job expectations, performance feedback, adequate environment and work organisation, motivation and/or incentives, knowledge and skills (Fort & Voltero, 2004:9).

Research methodology

A cross-sectional study design was used to collect information from nurses and midwives working in postpartum units in two district hospitals in Rwanda. This design fits the study's aim since the researchers wanted to quantify the relationship between factors influencing job performance and the nurses'/midwives' actual performance at one particular point in time. The research was undertaken in two district hospitals located in two different administrative districts in Rwanda. These two facilities were selected because they had recorded 3 400 deliveries per year for District Hospital A and 8 000 deliveries per year for District Hospital B (Ministry of Health, 2010:101).

The study population comprised 96 nurses and midwives who were working in postpartum units in the two hospitals during August and September 2011, when data collection took place (n=96). Ethical approval for the study was obtained from the Ethics Committee and the Senate Research Committee of the University of the Western Cape and permission to conduct the study was granted by Rwanda's Ministry of Health.

Data were collected through observations and individual face-to-face interviews. Observation checklists were developed from the national guidelines for postpartum care management and pre-tested on 15 staff members (eight nurses and seven midwives) from a hospital other than the two study sites who did not participate in the actual study.

Observations were done by one researcher to prevent variance attributable to different observers. The structured interview schedules were developed in English, translated into French and translated back by a different person into English to ensure accurate translation. The structured interview schedules were also pre-tested on the same staff members to establish content and face validity. The interviewers were trained to ensure standardisation of the data collection process.

Observations were conducted during August and September 2011 and interviews were conducted during August and September 2011. Using the 30-item checklist, one researcher unobtrusively observed nurses and midwives providing postpartum care. Each participant was observed on two occasions (on different days, for approximately 90 minutes per observation). Scores from the two observations were averaged. Two trained interviewers used a structured interview schedule to conduct individual interviews with nurses and midwives who had been observed. The structured interview schedule included 26 items relating to job expectations, performance feedback, knowledge and skills required to perform the job, incentives and employer recognition (as work motivators), work organisation and environment, and organisational support. Each interview lasted about 30 minutes.

Data analysis

The score of each nurse/midwife for completed tasks in practice was recorded from the checklist.

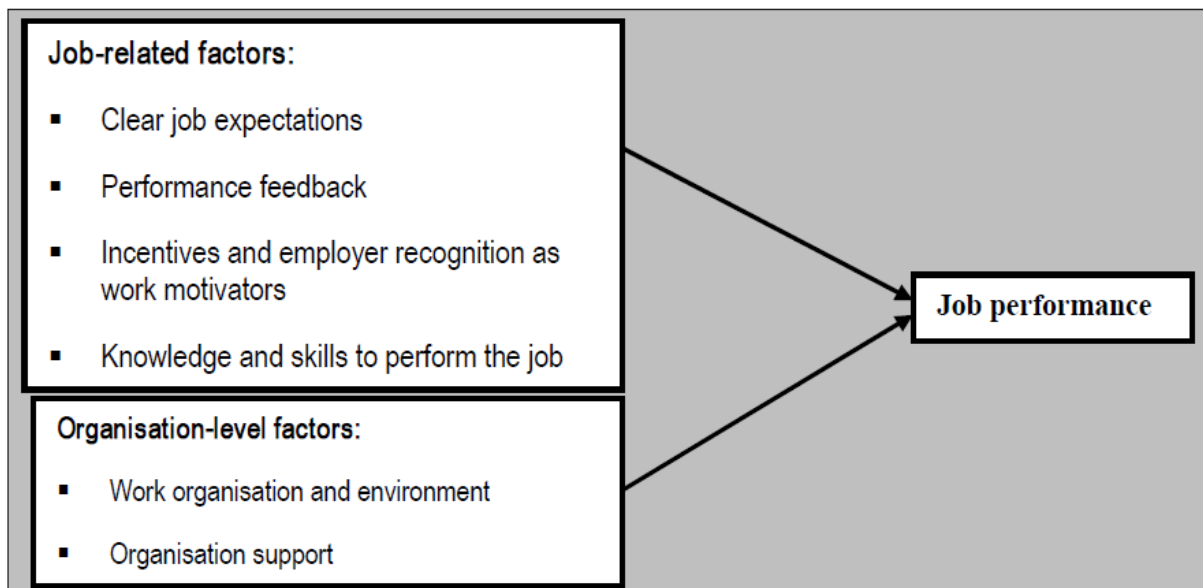


Figure 1: Framework for the performance factors and nurses'/midwives' job performance (adapted from Fort & Voltero, 2004:10)

The scores were obtained from the observation of 30 tasks performed by nurses and midwives. The observational scores were obtained by dividing the number of tasks performed by a study participant by the total number of 30 tasks in the checklist. The job performance, based on scores obtained from the observational checklist, was classified as poor (<80%) versus good ($\geq 80\%$). That meant that the 80% cut-off referred to whether respondents did or did not perform at least 24 of the 30 items on the checklist.

In the bivariate analysis, correlations between job performance scores and the answers from the structured interview schedule were assessed using chi-square statistics with their respective confidence intervals.

Research findings

Background characteristics

A total of 96 nurses/midwives were observed and interviewed in the two district hospitals. The respondents' mean age was 32.2 years with a standard deviation of 7.2. Most respondents (86.5%; n=83) were females and 13.5% (n=13) were males. Most respondents (70%; n=67) were nurses and 30% (n=29) were midwives. The majority (69.8%; n=67) were between 25 and 34 years old and 40.6% (n=39) had 2–5 years of work experience in the current workplace (see Table 1).

Table 1: Background characteristics of the respondents (n=96)

Variables	Characteristics	District Hospital A (n=34)		District Hospital B (n=62)	
		n	%	n	%
Gender	Male	8	23.5	5	8.1
	Female	26	76.5	57	91.9
Work Category	Nurse	26	76.5	41	66.1
	Midwife	8	23.5	21	33.9
Age groups	15–24 years	1	2.9	3	4.8
	25–34 years	29	85.3	38	61.3
	35–44 years	3	8.8	17	27.4
	More than 45 years	1	2.9	4	6.5
Years in current workplace	Less than 2 years	7	20.6	19	30.6
	2–5 years	27	79.4	12	19.4
	6–10 years	0	0	22	35.5
	More than 10 years	0	0	9	14.5

Respondents' performance scores

Most of the respondents (76%; n=73) from both facilities scored less than 80% in job performance, meaning that they performed fewer than 24 out of the 30 activities stated in the checklist.

Job-related factors in the two hospitals affecting midwives' job performance

Only one midwife reported during the interviews that she had a clear job description and was aware of her hospital's performance objectives. At Hospitals A and B, respectively, 94.1% (n=32) and 93.5% (n=58) of respondents were not receiving performance feedback; 65.6% (n=21) and 56.5% (n=35) did not receive any training in postpartum care; 97.1% (n=33) and 93.5% (n=58) did not receive any non-financial incentives; and 73.5% (n=25) and 79.0% (n=49) had never received opportunities for promotion.

Four out of the six respondents who were receiving feedback from supervisors about their job performance, reported receiving it "rarely". However, 93.8% (n=30) of the respondents from District Hospital A and 80.5% (n=50) from District Hospital B reported that they had received verbal recognition or appraisal from their supervisors. A larger percentage of respondents (56.5 %; n=35) from District Hospital B as compared to those from District Hospital A (32%; n=11) reported that they had been trained in the use of obstetrical care instruments, neonatal resuscitation instruments and vital signs monitoring machines.

Organisation-level factors in the two hospitals affecting midwives' job performance

Most of the respondents from both hospitals reported that they perceived their hospitals as being good workplaces (81.3%; n=26 and 72.6%; n=45), and were satisfied with their organisation (100%; n=32 and 79.0%; n=49) but did not regard their hospitals as being

interested in staff members' creativity because they did not invite their staff members to propose ideas to improve their job performance (75.0%; n=24 and 85.5%; n=53). All respondents reported not having received supervisors' evaluations regarding their assigned jobs during the preceding six months.

Job-related factors affecting midwives' job performance

Due to a small sample size, data from both hospitals were combined in this section. In both hospitals more than half of respondents (62.5%; n=60) reported that they did not have clear job descriptions. Most respondents (93.8%; n=90) said they did not receive any feedback about their job performance. Only six respondents had reportedly received work-related feedback from their supervisors.

Table 2: Job-related factors' influence on midwives' job performance

Variable/Factor	Job performance				OR (95% CI)	P-value
	Good (n=23)		Poor(n=73)			
	n	%	n	%		
Received performance feedback						
Yes	5	21.7	1	1.4	0.05 (0.005-0.45)	0.0004
No	18	78.3	72	98.6		
Received training in postpartum care						
Yes	17	73.9	23	31.5	0.16 (0.06-0.46)	<0.0001
No	6	26.1	50	68.5		
Received training in the use of tools						
Yes	20	87	26	35.6	0.083 (0.02-0.31)	<0.0001
No	3	13	47	64.4		
Has knowledge and skills required to perform the job						
Inadequate	0	0	0	0	-	0.57
Somewhat adequate	23	100	72	98.6		
Very adequate	0	0	1	1.4		

Although 98.6% (n=72) of respondents reported that their level of skills to perform their jobs was adequate, no significant association (p=0.57) was found between respondents' performance and their level of skills to perform the job. A few respondents (41.7%; n=40)

had reportedly received postpartum care training and fewer than half of them (42.5%; n=17) had done so within the two previous years. Some respondents (52.1%; n=50) had not been trained to use obstetrical care instruments, neonatal resuscitation instruments and vital signs monitoring machines. Training in postpartum care management and in using tools was associated with respondents' performance ($p < 0.001$) (see Table 2).

All respondents received financial bonuses, in addition to their salaries, when their assigned work had been well performed, as performance-based financing (PBF) incentives were paid on a monthly basis.

Most respondents (94.8%; n=91) did not receive any non-financial incentives such as transport or communication cards from their hospital. However, most of them (83.3%; n=80) responded positively to receiving verbal recognitions from their supervisors.

Organisation-level factors (bivariate analysis)

All respondents reported that their departments encountered shortages of instruments and supplies required for providing good quality care to their patients. Nevertheless, most respondents (74.0%; n=71) perceived their hospitals to be "good" working places and were satisfied (84.4%; n=81) to work there. A significant positive association was found between being satisfied with their hospital and respondents' job performance level ($p < 0.001$).

Table 3: Work organisation and environment versus respondents' job performance

Variable/Factor	Job performance				OR (95% CI)	P-value
	Good (n=23)		Poor (n=73)			
	n	%	n	%		
General view of the workplace						
Very good	5	21.7	3	4.1	-	0.06
Good	15	65.2	56	76.7		
Fair	3	13	13	17.8		
Poor	0	0	1	1.4		
Level of satisfaction about work organisation						
Completely satisfied	10	43.5	2	2.7	-	<0.001
Somewhat satisfied	12	52.2	69	94.5		
Not at all satisfied	1	4.3	2	2.7		
Organisations' interest in staff creativity						

Yes	13	56.5	6	8.2	0.07(0.02-0.22)	<0.001
No	10	43.5	67	91.8		

Discussion

Observations of nurses' activities revealed a lack of adherence to established guidelines and standards for postpartum care management. Most of the tasks included in the checklist were crucial procedures for ruling out life-threatening complications after birth. These findings provided insight into the high rates of postpartum complications and patient complaints about quality of care that have been reported (Ministry of Health, 2011:20).

This lack of adherence to guidelines might have been due to the fact that many respondents did not have clear job descriptions, were unaware of their hospitals' performance objectives, did not receive performance feedback, lacked skills to perform their jobs, did not receive training in postpartum care, did not receive non-financial incentives, and had no opportunities for promotion. These findings are supported by other studies (Dieleman et al., 2006:5; Leach et al., 2009:36; Olenja et al., 2009:15) reporting that appropriate training was a key contributor to adequate job performance.

Fort and Voltero (2004:12) showed that training in the use of the tools required for daily job performance correlated with nurses/midwives' performance levels (Nkowane et al., 2009:81; Bradley & McAuliffe, 2009:17).

Respondents who were satisfied with the way their work was organised and those who found their organisation to be interested and to allow staff creativity in general performed better than those who were not positive about their organisation, similar to results reported by other studies (Crigler et al., 2006:113; Smith et al., 2009:547; Rechel et al. 2009:1028).

Conclusion

The most important finding of the present study was the statistically significant association between the nurses/midwives' performance levels and five performance factors: receiving feedback about job performance, training in postpartum care management, training in the use of the tools, satisfaction with the way the work was organised, and the organisation's perceived interest in the staff members' creative contributions towards enhancing performance levels.

Limitations

The observer tried to minimise bias by conducting observations unobtrusively. Although the process of being observed might have resulted in improved performance, this risk was minimised because the physician observer made observations while seeing patients and conducting ward rounds. The generalisability of the findings is limited due to the small sample size.

Acknowledgements

The authors thank Mushingantahe, J., Ruzigana, G., Kantengwa, I., Uwimbabazi, M. and Gatera, E. for their invaluable help during field work. We also thank every nurse/midwife who agreed to be interviewed. Without their participation there would have been no data to report.

References

- Basinga, P., Gertler, P.J., Binagwaho, A., Soucat, A.L.B., Sturdy, J. & Vermeersch, C.M.J. 2011. Effect on maternal and child health services in Rwanda of payment to primary health-care providers for performance: an impact evaluation. *Lancet*, 377:1421–1428.
- Bradley, S. & McAuliffe, E. 2009. Mid-level providers in emergency obstetric and newborn health care: factors affecting their performance and retention within the Malawian health system. *Human Resources for Health*, 7:14–17.
- Crigler, L., Fort, A.L., De Diez, O., Gearon, S. & Gyuzalyan, H. 2006. Training alone is not enough. *Performance Improvement Quarterly*, 19(1):99–116.
- Dieleman, M., Toonen, J., Touré, H. & Martineau, T. 2006. The match between motivation and performance management of health sector workers in Mali. *Human Resources for Health*, 4:2–5.
- Fort, A. & Voltero, L. 2004. Factors affecting the performance of maternal health care providers in Armenia. *Human Resources for Health*, 2(1):8.
- Graner, S., Mogren, I., Duong, Le Q., Krantz, G. & Klingberg-Allvin, M. 2010. Maternal health care professionals' perspectives on the provision and use of antenatal and delivery care: a qualitative descriptive study in rural Vietnam. *BioMedCentral Public Health*, 10:608–611.
- Leach, L.S., Myrtle, R.C., Weaver F.A. & Dasu, S. 2009. Assessing the performance of surgical teams. *Health Care Management Review*, 34(1):29–41.
- Ministry of Health (of Rwanda). 2011. *Annual Report 2009–2010*. Available at: <http://moh.gov.rw/english/wp-content/uploads/2012/05/Final-MoH-annual-report-July-2009-June-2010.pdf> (accessed 10 December 2012).
- Ministry of Health. 2011. *Annual Report 2010–2011*. Available at: <http://moh.gov.rw/english/wp-content/uploads/2012/05/MoH-annual-report-2010-2011.pdf> (accessed 19 December 2012).
- Nkowane, A.M., Boualam, L., Haithami, S., Ahmed El Sayed El T. & Mutambo, H. 2009. The role of nurses and midwives in polio eradication and measles control activities: a survey in Sudan and Zambia. *Human Resources for Health*, 7:78–81.
- Olenja, J., Godia, P., Kibaru, J. & Egondi, T. 2009. *Influence of provider training on quality of emergency obstetric care in Kenya*. Kenya Working Papers No. 3. Calverton, Maryland: Macro International.
- Puoane, T., Cuming, K., Sanders, D. & Ashworth, A. 2008. Why do some hospitals achieve better care of severely malnourished children than others? Five-year follow-up of rural hospitals in Eastern Cape, South Africa. *Health Policy and Planning*, 23(6):428–437.
- Rechel, B., Buchan, J. & McKee, M. 2009. The impact of health facilities on healthcare workers' well-being and performance. *International Journal of Nursing Studies*, 46:1025–1034.
- Rowe, A.K., Onikpo, F., Lama, M., Osterholt, D.M., Rowe, S.Y. & Deming, M.S. 2009. A multifaceted intervention to improve health worker adherence to integrated management of childhood illness guidelines in Benin. *American Journal of Public Health*, 99(5):837–846.

- Rwanda Demographic Health Survey (RDHS). 2010. *Final report*. Kigali: National Institute of Statistics of Rwanda. Available at: <http://www.measuredhs.com/pubs/pdf/FR259/FR259.pdf> (accessed 21 December 2010).
- Smith, D.R., Mihashi, M., Adachi, Y., Shouyama, Y., Mouri, F., Ishibashi, N. & Ishitake, T. 2009. Organizational climate and its relationship with needlestick and sharps injuries among Japanese nurses. *American Journal of Infection Control*, 37:545–550.
- Takase, M., Maude, P. & Manias, E. 2005. Explaining nurses' work behaviour from their perception of the environment and work values. *International Journal of Nursing Studies*, 42:889–898.
- United Nations. 2010. The Millennium Development Goals Report. Available at: <http://www.un.org/millenniumgoals/pdf/MDGReport2010> (accessed 20 September 2012).