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Full Length Research Paper

Cross River State experience of the mandatory continuing professional development program for nurses: A case study of the 34th session in Calabar, Cross River State, Nigeria

Alberta David Nsemo*, Effioawan Irene Nkere and Emmanuel Chukwunwike Enebeli

Department of Nursing Science, Faculty of Allied Medical Sciences, University of Calabar, Calabar, Cross River State, Nigeria.

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Continuing professional development (CPD) is a key aspect of any profession and fundamental to the development of a nation. The Mandatory Continuing Professional Development Program (MCPDP) as it is known in the nursing profession in Nigeria is aimed at sustaining capabilities and introducing new skills for modern day practice needs. It also offers the prospect for nurses to improve and broaden their knowledge, expertise and develop the personal and professional qualities. This study analysed the experiences of nurses, both participants and facilitators of MCPDP during the 34th session of the MCPDP in Calabar, Cross River State, Nigeria. A sequential explanatory mixed method design was adopted for the study. All the eighty nurses in attendance participated in the study. A self-developed semi-structured questionnaire was used to collect the quantitative data. Qualitatively, eight participants and two facilitators were selected for in-depth interviews. The findings revealed that 18.9% of the respondents attended the MCPDP for license renewal, 18.9% attended to update their knowledge on current practices, while 59.5% attended for both purposes. The challenges in attending MCPDP were lack of time 24.6%, lack of relief staff 23.3%, and high cost of MCPDP registration 20.9%. Organizational challenges included lack of finance due to low turnout of participants. Majority of the participants expressed willingness to participate in MCPDP in the future, while the few retired ones expressed having no need for MCPDP afterwards. The study disclosed that the existing approach for the program may require some form of adjustment so as to meet participants' and facilitators' needs. It was therefore recommended that the Nursing and Midwifery Council of Nigeria should review the program structure and organisation.

Key words: Mandatory professional development program, nurses, experiences.

INTRODUCTION

The development of the nation is deeply and partially established on a judicious, pertinent and sustained investment in continuing professional development as a cognate sector of the education system in most African countries, especially, Nigeria and South Africa (Oduaran,

2014). The continuing professional development (CPD) which has developed into a key aspect of the education system is fundamental to the development of the nation (Govender, 2015; Shagrir, 2015). Some areas that are steadily developing with the changing demands and

evolving society are the healthcare practices and patient care standards (Viljoen et al., 2017).

Nursing is an important central component of healthcare service. The ability to practice caring skills with logical thinking that meets the needs of clients with the evolving technology is essential in nursing (Fukada, 2018). Health care consumers expect health professionals to constantly deliver care that is safe, effective, qualitative, efficient, timely and patient-centred (Nsemo et al., 2013). As knowledge changes and new tools, technologies and procedures are developed, nurses are committed to update knowledge, obtain new skills and attitude, to become capable and competent in the clinical procedure and judgment through on-going teaching and training for nurses which is seen as an important investment strategy (Dickerson, 2010). These proficiencies are established and developed through several continued professional development actions (Hariyati and Safril, 2018). Continuing Professional Development Programme for Nurses (CPDP) is aimed at sustaining capability and new skills as mandatory for modern-day practice needs and offering the prospect for nurses to "... maintain, improve and broaden their knowledge, expertise ... and develop the personal and professional qualities required throughout their personal lives" (Australian Nursing and Midwifery Council, 2009).

Nurses and midwives must obtain and preserve specialized knowledge required to provide extremely skilled care and to show their competencies to the public, employers, and the profession on a constant basis throughout their profession. Professional development prospects are necessary to involve health care professionals in its professional growth (Ross et al., 2013). The Mandatory Professional Development Programme (MCPDP) as called by some states/countries (Nigeria in particular) is a vital mechanism that allows nurses enlarge their knowledge, skill, and competence (Iliffe, 2011; Katsikitis et al., 2013), thus the professional growth. The American Nurses Association (ANA) view professional development as the lifelong process that nurses and midwives should regularly engage in to enhance their skills for professional practice (ANA, 2010). This "acts as a champion of scientific inquiry, generating new knowledge and integrating best available evidence into practice" (Harper and Maloney, 2016:45).

The Health and Care Professions Council HCPC (2010) defines CPD as a range of learning activities by which health care professionals maintain and develop knowledge and skills throughout their career to ensure that they retain their capacity to practice safely, effectively and legally within their evolving scope of practice. These programmes ought to be purposeful,

patient-centred (for clinicians) or student-centred (for educators) and directed towards learning needs of individual practitioner. Accordingly, reviews of best practices to promote effective CPD have revealed that CPD demands professional skills that extend beyond knowledge such as management, education and training, information technology, audit, communication, and team building (Filipe et al., 2014). CPD has also been defined as lifelong learning that takes place in a professional career after the initial. It is thought that continued professional development programmes help in achieving lifelong learning so, it should be a voluntary continuous act that drives throughout life so that individual becomes responsible to themselves and their society (Laal and Salamati, 2012). Literature shows that, lifelong learning can be acquired both from informal and formal learning (Puteh et al., 2015).

Furthermore, study by Davis et al. (2014), to identify characteristics and essential elements of lifelong learning revealed that the most essential characteristics of a lifelong learner are reflection, questioning, enjoying learning, understanding the dynamic nature of knowledge, and engaging in learning by actively seeking learning opportunities. Formal learning is carried out in a learning institute such as accredited university studies. Certain activities foster formal learning in line with university studies. These include; conferences, publications and lectures. On the other hand, informal learning involves learning that can be carried out any place, any where and anytime. Examples may include experiences gained over time, direction from colleagues and peers and through individual reading (Taylor, 2016).

According to Jackson (2018), CPD is especially important in the healthcare sector as it has important implications for the public and in the care industry, the purpose of CPD is to enhance the quality of care that patients and clients receive. In Nigeria, the MCPDP is an intelligent idea of the Nursing and Midwifery Council of Nigeria (NMCN) established in March 2010. The MCPDP was considered and developed for implementation so that professional nurses in Nigeria can continue to be relevant and be well-informed of modern trends in their area of practice. It was made mandatory so that all nurses can be involved in the lifelong learning process and in other to be able to keep track of this learning (Nsemo et al., 2013). In support of this, Davis et al. (2014), posit that keeping the mind active is essential to both lifelong learning and being able to translate knowledge into the capacity to deliver high quality nursing care.

After the preliminary licensing, nurses are required to renew their licences on a three years basis, during which time they must have participated in two MCPDP to earn 6

*Corresponding author. E-mail: albertansemo@yahoo.com. Tel: +2347031931751.

credit units, or at least One MCPDP (3 credit unit) and any other 3 credit unit programme approved by the NMCN. These MCPDPs activities are decentralized in the 36 states of the country and to different regions of each state. Each state has the state facilitator and an assistant state facilitator of MCPDP. The state facilitator forms an National Association of Nigerian Nurses and Midwives (NANNM), retired nurses, private nurses, community implementation committee with representatives of health nurses, federal and state sectors as members and the state's Director of Nursing Services as the adviser of the implementation committee. The facilitators and implementation committee serve a three-year tenure. In Cross River State (CRS), the MCPDP has a nine-member implementation committee that helps to organising the programme in two centers, Calabar and Ogoja Centers currently, although a third center, Obudu, had been tried once. More sessions have been held in Calabar (29) with fewer sessions in Ogoja (5) and Obudu (1). This is because Calabar is a central area, the capital of Cross River State and more nurses are closest to Calabar as more health facilities where qualified nurses work are in Calabar metropolis compared to other local government areas.

Despite the importance of CPE, not many nurses/midwives in Cross River state and generally in Nigeria avail themselves of the opportunity to attend such programs unless they are organized in the health institutions in which they work or is organised for free or sponsored (Ihudiebube-Splendor et al., 2017; Schweitzer and Krassa, 2010). Other challenges of nurses' Continuing Education Program as shown by various studies: Being an obligatory education with poor motivation for learning for some nurses (Ihudiebube-Splendor et al., 2017), financial resources restriction (Katsikitis et al., 2013; Priscah et al., 2017), restriction in the number of clinical places, nursing school work overload which leads to lack of adequate time for educational courses, shortage of educational budget, high number of participants in class (Fitzgerald et al., 2012), lack of interest and distances (Priscah et al., 2017), time limitation and lack of workforce (Chong et al., 2011; Onyango, 2012; Schweitzer and Krassa, 2010), type of planning for Continuing Education activities, work overload and familial responsibilities causing tiredness and limiting attendance (Chong et al., 2011; Katsikitis et al., 2013), lack of satisfaction with time and schedule of the educational classes conducted, and low applicability of lectures.

In lieu of this, a study by Bertulis and Cheeseborough (2008), in the Royal College to identify nurses' needs in area of knowledge to improve practice in the clinical area and information to support lifelong learning revealed that nurses have no or limited access to information technology and internet, and that employers' attitudes impact greatly on nurses' information seeking habits. In addition, studies have shown that facilitators to CPD arise

from individual, professional and organizational perspectives (Griscti and Jacono, 2006), hence proper coordination and harmonization of CPD management will bring efficiency to the process and overcome barriers ((Filipe et al., 2014). For health professional education to meet the health and social needs of the populations being served, CPD planning must take into account local and national priorities as well as personal learning needs (Fleet et al., 2008).

This study analysed the MCPDP experiences of nurses in CRS, both participants' and facilitators' experiences. The study assessed the participants' experiences in the aspect of their knowledge of the aim of MCPDP, factors that influence MCPDP attendance, the effect of MCPDP on knowledge and the perceived impact on practice, while the facilitators experiences, assessed the challenges in the implementation of MCPDP in CRS. The study is a case study of the 34th MCPDP session held in Calabar, the Adolescence and Youth Friendly Service module; however, two modules were floated including the Long Acting Reversible Contraceptives as the 35th session, and participants attending either one of them.

MATERIALS AND METHODS

Study design/setting

A sequential explanatory mixed method design (a cross sectional descriptive design and a descriptive qualitative design) was adopted for the study. A sequential mixed method design is a multiple phased data collection process where the research purpose, and particular set of research questions, determine the particular sequence (Halcomb and Andrew, 2009); in sequential explanatory mixed method, the quantitative phase which gathers a board and general data is followed by a qualitative phase that seeks to gather in-depth knowledge on a particular phenomenon. The reason for using a mixed method is that the quantitative method aided the researcher to measure the responses from the professional nurses objectively while the qualitative method enabled the researcher to describe the professional nurses' and facilitators' experience of their MCPDP activities. The goal of mixed methods research is to draw on the strengths and meet the purpose of the study. The setting of the study was Calabar. Calabar is the Capital of Cross River State, Nigeria. Majority of the health facilities were registered nurses who work in Cross River State in Calabar metropolis. These include the University of Calabar Teaching Hospital, General Hospital, Navy Hospital, federal neuropsychiatric hospital etc, making it have a high concentration of registered nurses. The Calabar centre for MCPDP is one of the two centres in Cross River State.

Data source and procedure

All registered nurses who attended the 34th session of the MCPDP in Calabar, Cross River State, Nigeria were included in the study. Of the eighty questionnaire items given, 74 were returned giving a response rate of 92.5%. A semi-structured questionnaire was used to collect quantitative data and an interview was used to obtain qualitative data. The questionnaire was a self-explanatory researcher-developed questionnaire with twenty items divided into four sections (socio-demographic, knowledge, attendance and

impact on practice). This was validated using face and content validity and a reliability test-retest procedure was used with 10 nurses attending nurses' continuing education programme at University of Calabar Teaching Hospital (UCTH) $r = 0.76$ and was used to collect data. Some items were open ended questions giving opportunity for respondents to make broad comments and these generated some qualitative data. An unstructured (in-depth) interview was carried out on 8 participants purposefully selected, to explore some issues noted by participants on the questionnaire items. Also, the two facilitators of MCPDP for Cross River State were interviewed using structured interview, to ascertain the facilitators' experiences in the organization and challenges in MCPDP. Each interview session lasted for 20 min and was carried out by the researchers. Members checking, triangulation (data and method), peer debriefing, and peer review were done to increase the strength of the qualitative data.

Data analysis procedure and ethical consideration

Data collected were analysed using SPSS 25 and dependent t-test was used for hypothesis testing. The qualitative data were analysed according to these common themes identified ("not learner-driven", "programmes do not gain enough CPE points" "poor timely registration" "poor concentration for lectures"). Ethical permission to carry out the study was obtained from the implementation committee of MCPDP for Cross River State. Informed consent was obtained from participants and all were willing to participate in the study.

RESULTS

Socio-demographic characteristics

A total of 78 respondents were studied; majority (87.8%) of the respondents were females while 12.2% were males (Table 1). The respondents were between the ages of 26 to 60, with highest (27%) being within the age range of 51-55 and the lowest (5.4%) being within the age range of 26-30; 4.1% of the respondents refused to disclose their age.

A lot of the respondents (44.6%) have had 21-30 years of experience, 24.3% have had 11-20 years of experience while only 1.4% have 41-50 years of experience. About half of the respondents (48.6%) had a bachelor's degree certificate as their highest educational qualification, none had a PhD, 5.4% had a Masters while 35.1% had the SSCE as their highest educational qualification. Only 35.1% of the respondents had just the RN professional certificate, 35.1% had the RN/RM, while 10.8% had the RPHN certificate and 1.4% had the RAEN certificate.

Table 2 shows that half (50%) of the respondents were currently working in University of Calabar Teaching Hospital, 14.9% in General Hospital Calabar, 5.4% are retired. Table 3 shows that 36% of the respondents were currently practicing as general nurses, 22% are in the midwifery/maternal and child health unit, 10.3% were in perioperative nursing, 5.1% were retired while 2.6% were nurse educators, in psychiatric nursing and A&E. Table 4 shows that majority (59.5%) of the respondents saw

MCPDP as a program organised for updating the knowledge of nurses and midwives, 1.4% saw it as just a requirement for licence renewal, 20.2% of the respondent saw it as both for updating knowledge and as a requirement for licence renewal, 4.1% had no answer to the question, 14.9% said it is just a mandatory continuing profession development program brought by NMCN. Most respondents (44.6%) got their information about MCPDP from their workplace, 13.5% from the State Ministry of Health, 10.7% from the National Association of Nigerian Nurses and Midwives (NANNM), 12.2% from Social media while another 12.2% had no response to their source of information about MCPDP (Table 5).

Participants' attendance and factors influencing the attendance of MCPDP

Table 6 shows that, 85.1% of the respondents had previously attended MCPDP, while 14.9% were just attending for the first time. Of the respondents that have attended before, 47.6% had attended just once, 31.7% had attended twice, 19% thrice and 1.4% had attended six times. All the respondents but one indicated it is interesting to attend subsequent MCPDP; and when probed further, the respondents revealed that retirement was the reason for not wanting to attend subsequent MCPDP. Majority of the respondents (83.6%) prefer Calabar for next MCPDP, 8.2% would prefer Ogoja while 1.4% prefer Port Harcourt.

Table 7 shows that 18.9% of the respondents attended the MCPDP just to renew their licence as it is a criterion for licence renewal, 18.9% attended to update their knowledge while majority of the respondents (59.5%) attended for the purpose of licence renewal and to gain timely knowledge, and 2.7% did not provide an answer concerning why they came for MCPDP. Table 8 shows the main challenges in taking MCPDP, 26.4% of the response was lack of time, 23.3% response was lack of relief staff, 20.9% of the response was that the program was too expensive 7.4% of the response was the program was not always in their location (facility and area) and the was no response on the fact that the program is not interesting.

Table 9 shows that 75.7% of the respondents would like to adjust the program while 24.3% of the respondents are okay with the program the way it is. Of the respondents that want adjustments to be made, 18.8% of the response was for proper time management, 15% for timely distribution of the materials, 11.3% of the response was of the opinion that the program should be organised more regularly and frequently; 8.8% of the response said the cost should be reduced while 1.2% said it should be increased.

Participants perceived impact of MCPDP

Table 10 shows that majority (64.1%) response gain new

Table 1. Participants Socio-demographical characteristic.

Variable	Frequency	Percentage
Gender		
Male	9	87.8
Female	65	12.2
Total	74	100.0
Age		
26-30	4	5.4
31-35	9	12.2
36-40	8	10.8
41-45	10	13.5
46-50	14	18.9
51-55	20	27.0
56-60	6	8.1
AD	3	4.1
Total	74	100.0
Years of experience		
1-10	16	21.6
11-20	18	24.3
21-30	33	44.6
31-40	6	8.1
41-50	1	1.4
Total	74	100.0
Highest educational qualification		
SSCE	26	35.1
HND	3	4.1
NCE	1	1.4
B.Sc.	36	48.6
PGDE	4	5.4
M.Sc.	4	5.4
PhD.	Nil	0.0
Total	74	100.0
Highest professional qualification		
RN	26	35.1
RM	26	35.1
RPN	6	8.1
RPHN	8	10.8
RNT	3	4.1
RAEN	1	1.4
RPoR	3	4.1
Orthopaedic	1	1.4
Total	74	100.0

knowledge/had an update of existing knowledge on adolescence and youth friendly service and long acting reversible contraceptives; 18.5% of the response

indicates that new and old friends were met, 17.4% of the response indicates that a lot was gain from the experience but did not indicate a particular thing and no

Table 2. Current facility of practice.

Variable	Frequency	Percentage
Airforce Clinic	1	1.4
Cottage Hosp. Akpet	1	1.4
CRUTECH, Calabar	1	1.4
Dr. L H Memorial Hosp.	1	1.4
Eja Mem. Joint Hosp. Iligidi	2	2.7
FNPH	2	2.7
Gen. Hosp. Akamkpa	1	1.4
Gen. Hosp. Calabar	11	14.9
Gen. Hosp. Obanluku	1	1.4
Gen. Hosp. Obubra	1	1.4
Gen. Hosp. Ogoja	1	1.4
Govt House Clinic	1	1.4
Holy Family Hosp. Ikom	1	1.4
Lutheran Hospital	1	1.4
Pri. Health Care Dev. Agency	1	1.4
Prison Clinic, Obudu	2	2.7
Retired	4	5.4
SOM Ogoja	1	1.4
SON, Calbar	1	1.4
Staff Clinic	1	1.4
UCTH	37	50.0
Unemployed	1	1.4
Total	74	100.0

response was placed on nothing gained.

The effect of MCPDP on the knowledge of participants

Before the start of MCPDP, a test was given to the participants to assess their knowledge and also after the series of lectures and MCPDP activities, a post-test was administered. Comparing the means of the pre-test score and the post-test score using the dependable t-test determines whether there was a difference in the participants' knowledge before and after the MCPDP. The dependent t-test (called the paired-samples t-test in SPSS Statistics) compares the means between two related groups on the same continuous, dependent variable. Here the dependent variable was "knowledge of participants", and the two related groups were the test score "before" and "after" MCPDP).

Null H₀: MCPDP has no effect on the knowledge of participants

Table 11 shows the differences between the two test scores. There was a statistically significant average difference between the participants' pre-test score and their post-test score ($t_{79} = 20.95, p < 0.001$); there was an

increase in the mean score of the participants post-test when compared to the pre-test. On the average, post-test scores were 24.53 points higher than the pre-test scores (95% CI [22.20, 26.85]). Therefore, the null hypothesis was rejected and it can be inferred that MCPDP has an effect on the knowledge of the participants.

Qualitative review

Results from the in-depth interview of participants generated the themes as follows "not learner-driven", "programmes do not gain enough CPE points". From the facilitators' interviews the generated themes included "finance" "poor timely registration" "poor concentration by participants" "CPE content not learner-driven": Participants commented that they would have preferred another module of study rather than the implemented module, as some of them had no need for the topic handled.

"I would have preferred core midwifery to enable me practice effectively in my area of practice". Facilitators reported that education is done according to the modules provided by the NMCN. *"Currently there are 16 modules available and training session is organized such that the*

Table 3. Current area of practice.

Current area of practice	Frequency	Percentage
General Nursing	28	36
Midwifery	17	22
Psychiatry	3	3.8
Public Health	4	5.1
Peri Op	8	10.3
Orthopaedic	1	1.2
A&E	2	2.6
Nephrology	1	1.2
Retired	4	5.1
ICU	1	1.2
Paediatrics	3	3.8
Nurse tutors	2	2.6
Heart to heart unit	2	2.6
ENT	1	1.2
Ophthalmic nursing	1	1.2
Total	78	100

Table 4. Participants knowledge of the aim of MCPDP.

Aim of MCPDP	Frequency	Percentage
Just a mandatory programme initiated by NMCN	12	14.9
Updating knowledge	46	59.5
A requirement for licence renewal	1	1.4
Both for renewal of licence and updating knowledge	16	20.2
No answer	3	4.1
Total	78	100

Table 5. Sources of knowledge about MCPDP.

Sources of knowledge of MCPDP	Frequency	Percentage
At work	34	44.6
Conference	3	4.1
Ministry of health	11	13.5
NANNM	8	10.7
NMCN	2	2.7
Social media	10	12.2
No answer	10	12.2
Total	78	100

lectures follow a particular module of training. Only one or two trending issues can be added if there is time" (003).

The programme does not consider what the participants need but turns the nurses to accept what is presented. Participants reported credit units for MCPDP should be

raised so that only one programme can be used for registration.

"If only the MCPDP can give us up to 6 credit unit hours so that with only one MCPDP certificate our professional licence can be renewed, then the twenty-thousand-naira

Table 6. Showing attendance of MCPDP.

Variable	Frequency	Percentage
Previous attendance of MCPDP		
Yes	63	85.1
No	11	14.9
Total	74	100
No. of MCPDP attended		
1	30	47.6
2	20	31.7
3	12	19
4	0	0
5	0	0
6	1	1.6
Total	63	100
Subsequent attendance of MCPDP		
Yes	73	98.6
No	1	1.4
Total	74	100
Preferred location for subsequent MCPDP		
Calabar	61	83.6
Ogoja	6	8.2
Port Harcourt	1	1.4
Ikom	1	1.4
Ogoja and Calabar	3	4.1
Biase	1	1.4
Total	73	100

Table 7. Participants' reasons for attending MCPDP.

Reasons for attending MCPDP	Frequency	Percentage
To update my knowledge	15	18.9
To enable me renew my licence	15	18.9
To update knowledge and renew my licence	46	59.5
No answer	2	2.7
Total	78	100

payment would be very adequate (001)

Challenges in the implementation of MCPDP in Cross River State

Although before attending MCPDP, participants are supposed to pay a certain amount. This amount is stipulated by NMCN. Despite the amount paid, the money tends not to be enough or sufficient for floating the program, so the facilitators try to get as many number of

persons/participants (80-100) as possible before commencing the program.

"if you float a program and you have fewer number of participants, you are still going to pay the same number of resource person and other statutory money and there would not be enough money to run the program"(002).

In trying to get the minimum number of persons required for the program, there may be a shift in the initial date and planning for the program,

Table 8. Showing factors influencing the attendance of MCPDP.

Variable	Frequency	Percentage
Lack of time	43	26.4
Lack of relief staff	38	23.3
Lack of support from supervisors	22	13.5
Too expensive	34	20.9
Programme Cancelled	2	1.2
Already completed number of participants for session	4	2.5
Ill health	2	1.2
Not always my location	12	7.4
Others Specify	6	3.7
Not interesting	Nil	0.0
Total	163	100.0

Table 9. Suggested adjustments to be made to the program.

Variable	Frequency	Percentage
Should any adjustment be made to the program		
Yes	56	75.7
No	18	24.3
Total	74	100.0
Suggested areas of adjustments		
Adequate power supply	6	7.5
Decentralization and addition of more centres	7	8.8
Regular and Frequent organisation of the program	9	11.3
Online Platform for registration and choosing module	4	5
Reduce cost of the program	7	8.8
Improve on food and feeding	4	5
Reduce no. of MCPDP required for licence renewal	8	9.8
Proper time management	15	18.8
Timely distribution of materials	12	15
Better lecturers	3	3.8
Reduce cost of the handout	4	5
Increase cost of the program``	1	1.2
Total	80	100.0

“we were supposed to hold this program in July, but as at that July we didn't have up to 60 persons who registered, so we had to shift the programme”(001)

A shift of the date of one program distorts the entire calendar of the proposed date of the program for that year.

DISCUSSION

Participants' knowledge on the aim of MCPDP

This study was a case study of the 34th session of

MCPDP in Calabar Cross River State, Nigeria to determine the experiences of the participants and facilitators. Majority of the respondents viewed MCPDP as a program organised for updating the knowledge of nurses and midwives. This is actually in line with the reason for the introduction of the program by NMCN, so that nurses can be abreast with current trends in the management of patients. This is in line with the findings from the review by Griscti et al. (2006), which revealed that continuing education is intended to ensure healthcare practitioners' knowledge is current. Contrary to this, the findings of Katsikitits et al. (2013) among Australian nurses documented that very few nurses could

Table 10. Influence of MCPDP on participants.

Variable	Frequency	Percentage
Achievements from MCPDP		
A lot	16	17.4
New/Update knowledge and skill	59	64.1
Socialize	17	18.5
Nothing	Nil	0.0
Total	92	100.0
Influence on practice		
Improve on patient/client education	19	31.7
Improve on patient/client counselling	21	35
Apply SNL	8	13.3
Improve on documentation	2	3.3
Improve on client involvement in care	4	6.7
Improve on infection control and hand washing	6	10
Total	60	100.0
How will your patient/client gain from your acquired knowledge		
Improved patient/client knowledge	30	43.5
Reduced hospital stay	3	4.3
Improved patient/client life style	22	31.9
Improved and detailed counselling	14	20.3
Total	69	100.0
Barriers to making changes		
Hospital policy	10	11.8
Lack of finance	17	20.0
Lack of support and cooperation from colleagues	9	10.6
Lack of equipment and manpower	24	28.2
Lack of time	12	14.1
Lack of basic amenities	6	7.1
None	7	8.2
Total	85	100.0

articulate the main goals of the programme. Although it is a requirement for licence renewal, its main aim is for the improvement of the knowledge level of nurses, so viewing it as just a requirement for re-licensure is against the aim of the NMCN. This is because NMCN made it a requirement for licence renewal as a motivator for nurses to participate in it regularly; and nurses will need to update their licence every three years they will attend MCPDP at least once in every three years. Some of the respondents (20.3%) viewed it as both for updating knowledge and as a requirement for licence renewal. This finding is supported by the study conducted in Enugu State Nigeria (Ihudiebube-Splendor et al., 2017). This might be because they tend to actually appreciate both the main aim of the program and the motivation technique used by the NMCN to ensure the attendance of the program by nurses, because without making it a

criterion for licence renewal, many nurses will not participate in the activities. Workplace happens to be the major (44.6%) place where nurses obtain information about MCPDP, showing that there is great interactions and exchange of information among nurses in their place of work.

Participants' attendance of MCPDP

The number of participants (85.1%) that have attended MCPDP in the past and the number of participants willing to attend MCPDP in the future (98.6%) show high level of participation of nurses in the MCPDP which contrast the report by Ihudiebube-Splendor et al. (2017) who stated that nurses do not avail themselves of such program unless it is free or organised by their place of work or

Table 11. Paired samples test.

Test	Paired differences					t	Df	Sig. (2-tailed)
	Mean	Std. deviation	Std. error mean	95% confidence interval of the difference				
				Lower	Upper			
Post_test - Pre_Test	24.53	10.47	1.17	22.20	26.85	20.95	79	.000

sponsored; but Price and Reichert (2017) noted that nurses have strong desires and positive perception towards continued learning. This high participation of nurses in lifelong learning will enable them to be relevant in the health care industry as they will be conversant with new innovations and modification of previous practices and up to date knowledge on patient care and different disease conditions. This is because NMCN continually reviews the contents and modules of MCPDP as to add recent trends and issues in nursing and the health care system at large. If this high level of participation is maintained, a time will come where Nigeria will have highly informed nurses and this will directly influence patients' care in the healthcare delivery system in Nigeria. This corroborates the findings from the study by Finnish Nurses Education (2018), which emphasized the importance of CPD for nurses in Finland.

Majority of the respondents' intent for attending the program was for knowledge advancement and licence renewal; some attended solely to improve their knowledge. This shows that attendance of the program is based on the understanding of the benefit of the program and not just because it is a criterion for licence renewal. Although some nurses initially came for the program just because it is a requirement for licence renewal, pleasing, and similar to other studies (Katsikitis et al., 2013; Hallin and Danielson, 2008), the majority of nurses valued the benefits of the learning programme and gained new knowledge on the module taught (adolescence and youth friendly service). They indicated that they will attend the programme often to update their knowledge because the program is very educating.

A majority of the respondents (83.6%) chose Calabar as their preferred venue because of distance from home or work place, some of them indicated that they would like a change of venue, that is, they would prefer their workplace instead of the current venue as this will make it easier for the nurses to attend the program. This is supported by the work of Priscah et al. (2017) that documented 27.2% nurses and midwives had distance as a challenge to attendance.

A facilitator however commented that NMCN advised that workplace should not be used to prevent people from being distracted and prevent truancy because the development programme is supposed to have a 100% participation and using nurses' place of work for MCPDP will negate this 100% participation as nurses will want to

shuttle between work and the program, distracting themselves and distracting others. This is supported by findings from studies by Davis et al. (2014) and Griscti et al. (2006), who concluded that for CPD to be effective, learners must actively engage in the learning process, and have a more participatory role in their learning.

"if UCTH is used, more nurses will participate in the program, because those on duty will also attend the program, as they will be able to quickly rush in and rush out" (004).

Factors influencing the attendance of MCPDP

The study showed that the main challenge in attending MCPDP was lack of time and lack of relief staff. This is supported by some studies (Chong et al., 2011; Onyango, 2012; Schweitzer and Krassa, 2010). The lack of time and relieve staff reflects the high workload of nurses and the shortage of nurses in Cross River State and Nigeria as a whole. These nurses although want to attend the program regularly but cannot do this because they do not have spare time and there is no one to cover for them in their work places as such they tend to miss out from MCPDP activities.

However, this study documented 20.9% response of expensive training fees. This is in line with many studies (Schweitzer and Krassa, 2010; Fitzgerald et al., 2012; Katsikitis et al., 2013; Priscah et al., 2017), that also documented expensive training fee as their constraint to attending CPE. Some respondents in this current study suggested a reduction in cost of the program for all; while few said the cost should be reduced for just the retired nurses attending the program. This is because retired nurses have no source of income and it is not fair for them to pay the same amount of money with those in active service. Only one respondent who claimed to have gained a lot from the program suggested an increase in the cost for participation. She said

"the money paid is quite small for the knowledge gained" (006).

According to her, the knowledge acquired from the MCPDP activities when quantified are way more than the amount of money paid.

Participants' perceived impact of MCPDP on practice

Improved knowledge on adolescence and youth friendly service was the most reported impact of the MCPDP. This shows that the programme is actually achieving the purpose of its creation and also participants commented on how they will apply the knowledge gained which further shows the usefulness of the program in nursing practice. If nurses actually put into practice what they have learnt as perceived despite the barrier, it will lead to better practice and improved patient care. However, some nurses that gained new knowledge complained of not being able to practice what have been taught or to use some aspect of this new knowledge in practice because the module (adolescence and youth friendly service and long acting reversible contraceptives) taught is not in line with their area of specialty and not applicable in their work places. In support of this, findings from the study by Griscti and Jacono (2006), observed that it is difficult to determine if those who attend these courses are implementing what they have learnt.

"I am a psychiatric nurse and I work in a psychiatric hospital; what I have learnt is more or less something for the midwives and the general nurses, therefore it is a shame that what I have learn I can't apply"(003).

Another participant commented that,

"the inability to choose what we want to learn makes us learn what we do not need" (004).

This was also reflected in a study by Ihudiebube-Splendor et al. (2017) and Mohamadi and Dadkha (2005) which showed that 25% of the individuals evaluated the applicability of lectures as low. Chong et al. (2011) also identified low applicability of lectures as one of the factors affecting participation in lifelong learning programs. This brings the need for proposed participant of any MCPDP session to choose the module which is relevant to them making the program to be learner driven, or the facilitators allow only those who are currently practicing in areas related to the current module to register for that particular MCPDP. In support of this, studies have revealed that for CPD to be effective, planning must take into account local and national priorities as well as personal learning needs, and also involve a widening of accountability to patients, the community, managers and policy makers (Fleet et al., 2008).

Challenges in the implementation of MCPDP in Cross River State

The major challenge faced by the facilitators in organising the MCPDP program is finance. Although before attending MCPDP, participants are supposed to pay a certain amount, stipulated by NMCN. To successfully run a programme there must be about 100 persons. When

registered participants are less, the money tends to be insufficient for floating the program, because, there is a certain amount of statutory money due for any MCPDP program. Therefore, the facilitators try to make sure there are as many persons/ participants (80-100) as possible before commencing the program. Also having module of training fixed by NMCN limits the number of trending issues to be included, or even giving room to run the course of training the way they think best will benefit the participants. Other challenges including having to wait to get the required number of participants for the training which sometimes is quite difficult and which leads to postponement and distortion in the planned calendar for the year. Hence, several studies have concluded that proper coordination and harmonization of CPD management will bring efficiency to the process and overcome barriers (Filipe et al., 2014; Health and Care Professionals Council, 2010).

Implications for nursing

The MCPDP is important to update nurse's knowledge and provides one criterion to assist in licence renewal. Nurses need to attend these programs to meet up with the changing society irrespective of their schedule duties. The unit manager therefore has the responsibility to adjust roaster to accommodate those for training. Also, the nurses' participation is affected by employers' demands; therefore release to attend for personnel development is required by nurse leaders. This should be rotated so that everyone has a chance to also attend especially where training site is outside the working facility.

Limitation

This study was conducted among only nurses who attended the 34th section of the MCPDP held in Calabar, Cross River State. Mainly nurses in Calabar attended the programme. It is therefore possible that only certain concerns and expectations will be highlighted, and others from nurses in the others parts of the state may be overlooked. Some local government areas were not represented in this research. The findings represent the experiences of nurses from mainly Calabar urban of Cross River State.

CONCLUSION AND RECOMMENDATIONS

- (i) Each hospital should make provisions in the roster for nurses to be off duty during the period of MCPDP, so that nurses can participate fully during the program.
- (ii) There should be more frequent organisation of MCPDP in Cross River State.
- (iii) An online platform should be created for intending

participant to choose the particular module to be floated, making the program “learner driven”.

(iv) More point should be given to a particular MCPDP.

(v) There should be a review regular of the program by the Nursing and Midwifery Council Nigeria at least every three years. Continuing Education is an essential part of the nursing professionalization and it can be helpful for the nursing practice development. This study showed that the present approach of nurses' continuing education needs some form of modification so as to meet nurses' and facilitators' needs. Facilitators of the MCPDP programmes should float the program online so that individuals can access it at their own pace. Registrations for the programme should also be done online which could help assess the number of registered persons to prepare for and the stipulated statutory money should be reduced to enable facilitators have enough money to run the program effectively.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

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Full Length Research Paper

Evaluation of quality of antenatal care services in selected healthcare centres of Mumbwa and Lusaka districts of Zambia: Pregnant women's perspectives

Katowa-Mukwato Patricia^{1*}, Kwaleyela Namukolo Concepta², Mwiinga-Kalusopa Victoria¹, Musenge Emmanuel¹, Banda Yolanda³, Mutinta Crecious Muleya² and Maimbolwa C. Margaret²

¹Department of Basic and Clinical Nursing Sciences, School of Nursing Sciences, University of Zambia, Zambia.

²Department of Midwifery, Women and Child Health, School of Nursing Sciences, University of Zambia, Zambia.

³Department of Research, Monitoring and Evaluation, School of Nursing Sciences, University of Zambia, Zambia.

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Antenatal care (ANC) has been recommended as a service that can reduce both maternal and newborn mortalities. However, even in areas recording high ANC attendance, there are unevenly high levels of maternal and new born mortalities. Evidence of a weak relationship between ANC use and maternal and newborn survival has motivated recent calls to focus on content and quality of care provided rather than mere ANC attendance. This was a descriptive cross sectional study which was designed to evaluate the quality of antenatal care services in two health facilities in Lusaka and two in Mumbwa districts of Zambia. The health facilities were selected purposively based on poor maternal outcomes such as high maternal mortality ratio. Women attending antenatal clinics were selected using simple random sampling. Data was collected using a client exist interview schedule designed by World Health Organization for assessing quality of antenatal care. Data was analyzed using Statistical Package for Social Scientist (SPSS) version 24.0. The study revealed a lot of variations in the care provided at the four sites. None of the women had all the blood tests for haemoglobin, grouping and X-match, HIV and syphilis conducted from three out of the four health facilities, while at the fourth, only 30% of women had all the blood tests conducted. Furthermore, less than 20% of women had a full head to toe examination. While less than 10% of women from each of the facility reported that the health providers met the requirements for provision of privacy. Despite not meeting the minimum standards of care, only less than 5% of women categorized the care as poor. All the four health facilities recorded low quality of care on all domains of antenatal care. Therefore, if antenatal care has to achieve its intended purpose of reducing adverse maternal and new born outcomes, then quality of care delivered during pregnancy should be the focus as opposed mere attendance.

Key words:Quality, antenatal care services, evaluation.

INTRODUCTION

Every day, approximately 800 women die from preventable causes related to pregnancy and childbirth (WHO, 2017). To this effect, Antenatal Care (ANC) has

been recommended as one means to reduce both maternal and newborn mortalities (WHO, 2005). ANC services enable early identification of pregnancy related

*Corresponding author. E-mail: mukwato.patricia@unza.zm or patriciakatowamukwato@gmail.com. Tel: +260977564486.

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risks and complications and ensure access to services including health education, vaccinations, diagnostic tests and treatments (Gross et al., 2011). Additionally, WHO (2016) states that antenatal care does not only serve as a platform for health promotion, prevention, screening, and diagnosis of diseases but also as an opportunity to provide pregnant women with the social and psychological support necessary for healthy motherhood. However, even in areas recording high ANC attendance, there are unevenly high levels of maternal and new born mortalities (Kyei et al., 2012). For example in Zambia, more than 9 in 10 (96%) mothers received antenatal care from a skilled provider for their most recent pregnancy, while the maternal mortality ratio is still standing at 398/100,000, while neonatal and infant mortality stands at 24 deaths/1,000 and 45/1,000, respectively.

Evidence of a weak relationship between ANC use and maternal and newborn survival has motivated recent calls to focus on content and quality of care provided rather than mere ANC attendance (WHO, 2015). Similarly, Kyei et al. (2012) and Nwaeze et al. (2013) asserted the need to focus on resources and strategies to be tailored towards improving the quality of care provided in order to optimize the results other than focusing on mere ANC attendance. This is in view of the evidence that effectiveness of ANC relies on the quality of care provided during each visit (Ejigu et al., 2013).

Quality health care delivered during pregnancy and childbirth has been shown to prevent most of the adverse outcomes of pregnancy, and antenatal care provides an important platform to achieve a reduction in pregnancy-related mortality and morbidity (Tunçalp et al., 2017). The essence of ANC therefore is to prepare women for birth and parenthood and prevent problems for pregnant women, mothers and babies through early detection, alleviation and/or management of health problems that affect mothers and babies during pregnancy (Lincetto et al., 2010).

In addition to focusing on quality of ANC services with regard to structures, processes and outcomes, it should be realized that pregnant women have the rights to participate in decisions involving their well-being and what may or may not be done to their bodies (Wheatley et al., 2008; Sword et al., 2012; Shabila et al., 2014). Understanding women's perspectives of antenatal care services is particularly important for enhancing effectiveness of healthcare delivery as it ensures that strategies for improving care are inclusive of the end user views.

Furthermore, Wheatley et al. (2008) and Sword et al. (2012) assert that understanding women's perspectives and experiences of ANC can result in provision of ANC services which are responsive to women's needs and expectations.

Despite the documented evidence of the significance of quality of ANC services in comparison to mere attendance, a numbers of studies conducted in African

countries have reported less desirable quality of ANC services. For example, Fagbamigbe and Idemudia (2015) in a study conducted to assess quality of ANC services in Nigeria found that less than 5% of ANC users in Nigeria received desirable quality of ANC services with about one tenth receiving minimum acceptable quality. In the same study, it was revealed that although most attendees made four visits, it was very striking that about 1% did not receive any of the ten ANC components considered in that study. This study revealed further that the commonest component of ANC offered in Nigeria are measurement of blood pressure and distribution of iron supplement as they were offered to nearly all the attendees while other important components of ANC such as health education on PMTCT, IPT and urine testing were reported to be low.

Similarly, a study conducted in Zambia by Kyei et al. (2012), revealed inadequacies with regard to services provided during ANC. For example, while folate/iron supplementation, tetanus vaccination and IPT of malaria were provided by the vast majority of ANC facilities, detection and prevention of mother-to-child transmission of HIV was only available at a third of ANC facilities. Most screening tests were not commonly available: only 16% of ANC facilities provided haemoglobin testing which is helpful in diagnosing anemia, and only half provided syphilis testing. Urine protein testing, which is important for detecting hypertensive complications of pregnancy such as pre-eclampsia, was performed by less than a quarter of ANC facilities. With this background, the present study sought to evaluate the quality of antenatal care services from the pregnant women's perspectives in selected healthcare centres of Mumbwa (mainly rural) and Lusaka (mainly urban) districts of Zambia.

MATERIALS AND METHODS

A descriptive cross sectional multi-site study design was used to evaluate the quality of antenatal, intranatal and postnatal care services in two health centres in Lusaka district and two 1st Level hospitals in Mumbwa district of Zambia. The Lusaka based sites constituted the urban setting, while the Mumbwa district sites constituted rural sites. The study involved evaluating the structures, processes, outcomes and provider's perspectives of services in the antepartum, intrapartum and postpartum areas in the selected health facilities. However, the focus of this article is the quality of antenatal care services in the selected health centres, while other aspects of the study have been reported elsewhere.

The health facilities which were included were purposively selected based on poor maternal outcomes such as high MMR. On the other hand, pregnant women were selected using simple random sampling. All women within the reproductive age groups of 15 to 49 years who were seeking antenatal care services at the selected health centres during the study period constituted the study population.

Data were collected using a client exist interview schedule designed by World Health Organization for assessing quality of antenatal care. The tool obtained data under three main categories of demographic characteristics, quality and content of services available at the ANC clinic and client's perceived quality of ANC

services. Data was then entered and analyzed using Statistical Package for Social Scientist (SPSS) version 24.0. Descriptive statistics were computed for the demographic data to understand the demographic characteristics of the study participants. Furthermore, attributes of quality were computed as percentages in order to compare with the WHO recommended minimum quality of care which is set at 80%.

RESULTS

A total of 172 pregnant women attending antenatal care were interviewed; 124 from the two urban health centres and 44 from the two rural health centres. The demographic characteristics are shown in Table 1. The WHO recommended minimum package for ANC includes history obtained from the pregnant woman, physical examination, observations and laboratory tests, drugs and immunizations provided. Others are information on the importance of ANC, nutrition during pregnancy, birth preparedness, danger signs in pregnancy, prevention of HIV in general and prevention of mother to child transmission (PMTCT) in particular (USAID/Population Council, 2006). This study therefore evaluated the quality of ANC and perceived satisfaction with care received at the four health facilities against each component of the WHO ANC package. Quality of care was evaluated with regard to the percentage of women receiving each component of care. Results are presented in Tables 2 to 6.

DISCUSSION

Quality health care delivered during pregnancy and childbirth has been shown to prevent most of the adverse outcomes of pregnancy, and that antenatal care provides an important platform to achieve a reduction in pregnancy-related mortality and morbidity (Tancalp et al., 2017). However, it has been argued that mere ANC attendance does not always accrue to reduction in pregnancy related mortality and morbidity as it has been observed that even in areas recording high ANC attendance, there are unevenly high levels of maternal and new born mortalities (Kyei et al., 2012). This discrepancy has heightened the call to focus on quality and not simply the quantity of ANC.

In Zambia, a typical ANC visit should involve history taking, physical examination, conducting of essential tests including haemoglobin, HIV, syphilis, counselling on risk factors, danger signs and how to handle them, counselling on birth preparation and prevention of Mother to Child Transmission (PMTCT). Other activities include administration of tetanus toxoid vaccine, supply of Fansidar (Sulfadoxine Pyrimethamine) and other essential supplements and prophylaxis medication. Despite this prescribed standard package of care, there were a lot of variations in the care provided at the four sites where the study was undertaken. According to Osungbade et al.

(2008), history of current pregnancy is essential at any visit as it provides an opportunity to obtain information that may influence maternal and child health outcomes. However, this was not the case in the current study, for example, the two urban health facilities, less than half of the women had all the different components of history taken (past medical, surgical, family history, and present obstetrics history). While for the two rural health centres, more than 50% of the women had all the different components of the history taken, with the most frequently asked question being on past medical history (Table 2).

World Health Organization advocates that only examinations and tests serving an immediate purpose and proven to be beneficial should be performed during antenatal visits (WHO, 2001). These examinations should include, at a minimum, measurement of blood pressure, testing of urine for bacteriuria and proteinuria, and blood tests to detect syphilis and severe anaemia (WHO, 2003).

With regard to the different types of observations carried out, the present findings revealed that all health facilities recorded at least 50% of all women having their blood pressure, weight and height measured (Table 2). This is against the recommendation by WHO that all women should have their blood pressure checked, and urine and blood tested. Considering that not all the women had their basic observations done, taking for example blood pressure, this implies that those with elevated blood pressure and at risk of pre eclampsia were missed resulting into potential for increased morbidity and mortality.

While it is recommended that all pregnant women should have a complete head to toe examination at all visits for early detection of conditions such as anaemia, renal dysfunction, hypertensive disorders and assessment for fetal growth and viability, the present study showed that less than 20% of women accessing ANC at the four health centres had a full head to toe examination (Table 2). On the other hand, blood laboratory test such as haemoglobin, grouping and X-match, HIV and syphilis were not conducted on all women.

The present findings revealed that none of the women had all the tests conducted from three out of the 4 centres assessed, while the fourth centre, only 30% of women interviewed had all the blood tests done. Other tests such as urine protein testing, which is important for detecting complications for hypertensive disorders such as pre-eclampsia were similarly not performed on all women. This finding is similar to the findings by Kyei et al. (2012) in a similar national wide study conducted five years before the current study in which it was indicated that urine testing was performed by less than a quarter of ANC facilities assessed. Findings of this study therefore are an indication that not much changes have occurred with regard to quality of ANC in the last five years in the country.

Provision of drugs and other immunization are an

Table 1. Demographic attributes of the pregnant women accessing antenatal care.

Variable	Provider (health center)			
	Kanyama [n (%)]	Ng'ombe [n (%)]	Mumbwa [n (%)]	Nangoma [n (%)]
Age, Mean (SD)	23±5.3	27.3±5.4	28.7±8.6	23.8±5.3
Marital status				
Married	58 (87.9)	53 (84.1)	19 (86.4)	21 (95.5)
Single	8 (12.1)	7 (11.1)	3 (13.6)	1 (4.5)
Widow	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Separated/Divorced	0 (0.0)	2 (3.2)	0 (0.0)	0 (0.0)
Number of children	1.1±1.4	1.6±1.2	3.1±3.1	1.7±1.7
Highest level of education				
Grade 1 - 4	2 (3.0)	6 (9.5)	1 (4.5)	0 (0.0)
Grade 5 - 7	25 (37.9)	20 (31.7)	9 (40.9)	7 (31.8)
Grade 8 - 9	25 (37.9)	8 (12.7)	7 (31.8)	9 (40.9)
Grade 9 - 12	6 (9.1)	13 (20.6)	2 (9.1)	2 (9.1)
College and university	8 (12.1)	15 (23.8)	3 (13.6)	4 (18.2)
Occupation				
Teacher	3 (4.5)	3 (4.8)	1 (4.5)	0 (0.0)
Nurse	0 (0.0)	1 (1.6)	0 (0.0)	0 (0.0)
Accountant	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Police	1(1.5)	0 (0.0)	0 (0.0)	0 (0.0)
Business	12 (18.2)	11 (17.5)	2 (9.1)	0 (0.0)
Housewife	33 (50.0)	29 (46.0)	13(59.1)	6 (27.3)
Domestic worker	0 (0.0)	6 (9.5)	0 (0.0)	5 (22.7)
Farmer	0 (0.0)	0 (0.0)	2 (9.1)	8 (36.4)
Other	17 (25.8)	10 (15.9)	1 (4.5)	3 (13.6)
Gestational age in weeks, mean±SD	22.2±9.3	24.9±7.7	30.2±8.1	32.5±3.5
How many times they went for ANC				
Once	23 (34.8)	2 (3.2)	1 (4.5)	0 (0.0)
Two times	12 (18.2)	23 (36.5)	6 (27.3)	7 (31.8)
Three times	18(27.3)	25 (39.7)	7 (31.8)	6 (27.3)
Four times	8 (12.1)	7 (11.1)	7 (31.8)	4 (18.2)
Other	4 (6.1)	4 (6.3)	1 (4.5)	4 (18.2)
Number of times they thought a woman needed to go for ANC				
Once during pregnancy	1(0.01)	0 (0)	0 (0)	0 (0)
Four times	14 (21.5)	24 (39.3)	6 (28.5)	7 (33.3)
More than four times	9 (13.8)	16 (26.2)	4 (19)	0 (0)
Didn't know	41 (63)	21(34.4)	11(52.3)	14 (66.6)

important package of ANC. In Zambia, it is recommended that all pregnant women should receive preventive medicines to prevent certain conditions. These are Tetanus Toxoid immunization to prevent tetanus, iron/folate supplementation to prevent iron deficiency

anaemia thus contributing to the prevention of severe anaemia and complications like pre-term birth, congenital anomalies and intrauterine growth restriction. Others are intermittent preventive treatment (IPT) with Fansidar and albendazole and mebendazole for treatment for

Table 2. Quality of care in relation to history, physical examination, observations and blood and urine tests carried out, drugs and immunizations administered.

Variable	Provider (Health Centre)			
	Kanyama [n (%)]	Ng'ombe [n (%)]	Mumbwa [n (%)]	Nangoma [n (%)]
Information obtained from mothers during ANC visit (Past medical history, family history, surgical history, past and present obstetric history)				
Less than 50% of the information	24 (36.4)	8 (12.7)	2 (9.1)	1 (4.5)
50% of the information	10 (15.2)	8 (12.7)	0 (0.0)	3 (13.6)
Between 50 and 100% of the Information	11 (16.7)	18 (28.6)	5 (22.7)	4 (18.2)
100% of the information	18 (27.3)	23 (36.7)	12 (54.5)	14 (63.6)
Observations carried out on mothers during ANC visit (Blood pressure and weight and height)				
Less than 50% of the observations	1 (1.5)	1 (1.6)	0 (0.0)	1 (4.5)
50% of the observations	5 (7.6)	25 (39.7)	7 (31.8)	6 (27.3)
Between 50 and 100% of the observations	0 (0.0)	2 (3.7)	2 (9.1)	0 (0.0)
100% of the observations	60 (90.9)	33 (52.4)	13 (59.1)	15 (68.2)
Examinations carried out on mothers during ANC visit (head to toe, pallor, pedal oedema, breast examination, fundal height, fetal heart rate, vaginal examination and pelvic assessment)				
Less than 50% of the examinations	3 (4.5)	13 (20.6)	8 (36.4)	0 (0.0)
50% of the examinations	7 (10.6)	13 (20.6)	4 (18.2)	2 (9.1)
Between 50 and 100% of the examinations	53 (80.3)	33 (52.4)	9 (40.9)	16 (72.7)
100% of the examinations	3 (4.5)	2 (3.2)	1 (4.5)	4 (18.2)
Blood tests done on mothers during ANC visit (Heamoglobin, Grouping and X-match, HIV and syphilis)				
Less than 50% of the tests	18 (27.3)	5 (7.9)	19 (86.4)	6 (27.3)
50% of the tests	18 (27.3)	52 (82.5)	1 (4.5)	13 (59.1)
Between 50 and 100% of the tests	8 (12.1)	4 (6.3)	1 (4.5)	2 (9.1)
100% of the tests	20 (30.3)	0 (0.0)	0 (0.0)	0 (0.0)
Urine tests conducted on mothers during ANC visit (protein, glucose)				
Less than 50% of the tests	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
50% of the tests	3 (4.5)	10 (15.9)	2 (9.1)	0 (0.0)
Between 50 and 100% of the tests	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
100% of the tests	18 (27.3)	21 (33.3)	13 (59.1)	5 (22.7)
Drugs and immunization given to mothers during ANC visit (Iron, SP, TTV)				
Less than 50% of the drugs & immunization	3 (4.5)	1 (1.6)	1 (4.5)	0 (0.0)
50% of the drugs & immunization	12 (18.2)	6 (9.5)	7 (31.8)	9 (40.9)
Between 50 and 100% of the drugs & immunization	0 (0.0)	35 (55.6)	0 (0.0)	0 (0.0)
100% of drugs & immunization	51 (77.3)	19 (30.2)	14 (63.3)	13 (59.1)

hookworm infestation. Despite the significance of these preventive medicines, there were variations in the provision of these essential drugs. For example, while in one urban centre more than 77% of women received all the preventive medicines, in the other urban centre only 30% received all. This finding agrees with the findings reported in a study conducted in Namibia and Kenya by Do et al. (2017) where despite the iron and folic supplements being available in the facilitates which were

assessed in Kenya, they were provided to only a few.

Pregnant women need to be taught about the importance of ANC, danger signs during pregnancy and PMTCT (Table 3). Regarding the importance of ANC, the information should include early detection and treatment of problems and complications, prevention of complications and diseases, while danger signs during pregnancy should include vaginal bleeding, severe headache, convulsions, labour pains before 37 weeks,

Table 3. Quality of care in relation to information on importance of ANC, danger signs and PMTCT.

Variable	Provider (Health Centre)			
	Kanyama [n (%)]	Ng'ombe [n (%)]	Mumbwa [n (%)]	Nangoma [n (%)]
Information discussed on the importance of ANC (early detection and treatment of problems and complications, prevention of complications and diseases, birth preparedness and complication readiness, health promotion)				
Less than 50% of the information	0 (0.0)	1 (1.6)	4 (18.2)	1 (4.5)
50% of the information	4 (6.1)	7 (11.1)	3 (13.6)	4 (18.1)
Between 50 and 100% of the information	5 (7.6)	14 (22.2)	0 (0.0)	3 (13.6)
100% of the information	54 (81.8)	39 (61.9)	14 (63.6)	14 (63.6)
Danger signs of labour during pregnancy discussed with mothers during ANC visit (vaginal bleeding, severe headache, convulsions, labour pains before 37 weeks, fever, early rupture of membranes)				
Less than 50% of the signs discussed	0 (0.0)	9 (14.3)	0 (0.0)	3 (13.6)
50% of the signs discussed	12 (18.2)	5 (7.9)	2 (9.1)	6 (27.3)
Between 50 and 100% of the signs discussed	19 (28.8)	27 (42.9)	6 (27.3)	6 (27.3)
100% of the signs discussed	28 (42.4)	19 (30.2)	10 (45.5)	4 (18.2)
Information discussed about PMTC during ANC visit (Taking the prescribed antiretroviral therapy, exclusive breast feeding, no breast feeding)				
Less than 50% of the information	22 (33.3)	25 (39.7)	4 (18.2)	12 (54.5)
50% of the information	22 (33.3)	18 (28.6)	6 (27.3)	5 (22.7)
Between 50 and 100% of the information	11 (16.7)	12 (19.0)	6 (27.3)	1 (4.5)
100% of the information	4 (6.1)	1 (1.6)	0 (0.0)	0 (0.0)

Table 4. Quality of care in relation to information on birth preparedness, need for clean and safe delivery and signs of labour.

Variable	Provider (Health Centre)			
	Kanyama [n (%)]	Ng'ombe [n (%)]	Mumbwa [n (%)]	Nangoma [n (%)]
What mothers learnt about birth preparedness during ANC visit (making arrangements for delivery with the assistance of a skilled provider, making arrangements for a place of delivery at a health facility, preparation for transportation to the hospital for delivery and emergency care, saving money to pay for hospital bills, a companion to stay with the woman during labour)				
Less than 50% of the information	2 (3.0)	7 (11.1)	2 (9.1)	9 (40.9)
50% of the information	7 (10.6)	2 (3.2)	4 (18.2)	2 (9.1)
Between 50 and 100% of the information	7 (10.6)	27 (42.9)	3 (13.6)	3 (13.6)
100% of the information	50 (75.8)	25 (39.7)	12 (54.5)	7 (31.8)
Items discussed as needed for a clean and safe birth during ANC visit (perineal pads, soap, clean bed clothes, new unused razor blade, water proof plastic cover, cord ties and warm clothes for the baby)				
Less than 50% of the items	0 (0.0)	12 (19.0)	1 (4.5)	5 (22.7)
50% of the items	5 (7.6)	48 (76.2)	0 (0.0)	1 (4.5)
Between 50 and 100% of the items	25 (37.9)	1 (1.6)	3 (13.6)	4 (18.2)
100% of the items	35 (53.0)	0 (0.0)	17 (77.3)	12 (54.5)
Signs of labor which indicate need to consult a skilled provider which were taught during ANC visit (regular progressive uterine contractions, low back pain radiating from fundus, show, rupture of membranes or draining liquor)				
Less than 50% of the signs	4 (6.1)	1 (1.6)	1 (4.5)	4 (18.2)
50% of the signs	7 (10.6)	7 (11.1)	1 (4.5)	3 (13.6)
Between 50 and 100% of the signs	11 (16.7)	24 (38.1)	5 (22.7)	1 (4.5)
100% of the signs	20 (30.3)	27 (42.9)	7 (31.8)	7 (31.8)

Table 5. Quality of care in relation to privacy, respect and care during ANC visit.

Variable	Provider (Health Centre)			
	Kanyama [n (%)]	Ng'ombe [n (%)]	Mumbwa [n (%)]	Nangoma [n (%)]
How health provider ensured privacy for the mother during ANC visit (use of closed antenatal care room during the consultation, use of drapes during examination, limiting number of people entering the room and drawing curtains in the room during the consultation)				
Less than 50% of the requirements	8 (12.1)	28 (44.4)	7 (31.8)	7 (31.8)
50% of the requirements	32 (48.5)	12 (19.0)	8 (36.4)	11 (50.0)
Between 50 and 100% of the requirements	22 (33.3)	14 (22.2)	5 (22.7)	1 (4.5)
100% of the requirements	4 (6.1)	6 (9.5)	2 (9.1)	1 (4.5)
How the provider treated mothers with regard to respect during ANC visit (Gave me a warm welcome, spoke in a quite gentle tone of voice, addressed me by my name and obtained my permission before examination)				
Less than 50% of the requirements	3 (4.5)	4 (6.3)	0 (0.0)	1 (4.5)
50% of the requirements	16 (24.2)	4 (6.3)	7 (31.8)	8 (36.4)
Between 50 and 100% of the requirements	24 (36.4)	20 (31.7)	6 (27.3)	6 (27.3)
100% of the requirements	23 (34.8)	30 (47.6)	9 (40.9)	7 (31.8)
How providers cared about mothers during ANC visit (made me comfortable, listened actively to what I had to say, asked if I had any questions or concerns, spoke clearly in a language I could understand, avoided distractions while providing ANC)				
Less than 50% of the care	7 (10.6)	0 (0.0)	0 (0.0)	12 (54.5)
50% of the care	8 (12.1)	14 (22.2)	7 (31.8)	4 (18.2)
Between 50 and 100% of the care	26 (39.4)	13 (20.6)	10 (45.5)	2 (9.1)
100% of the care	25 (37.9)	18 (28.6)	5 (22.7)	3 (13.6)

Table 6. Client satisfaction with ANC services.

Variable	Provider (Health Centre)			
	Kanyama [n (%)]	Ng'ombe [n (%)]	Mumbwa [n (%)]	Nangoma [n (%)]
Satisfaction with overall quality of ANC received				
Good	46 (70.8)	24 (39.3)	17 (77.3)	16 (72.7)
Satisfactory	17 (26.2)	34 (55.7)	5 (22.7)	5 (22.7)
Poor	2 (3.1)	3 (4.9)	0 (0.0)	0 (0.0)

fever, and early rupture of membranes. On the other hand, information on PMTCT should include taking the prescribed antiretroviral therapy, exclusive breast feeding and not breast feeding at all if someone makes such a choice.

Findings of the current study revealed that at least 60% of all pregnant women across the four facilities had received all information on the importance of ANC, meanwhile only less than 50% of women interviewed had received all information pertaining to danger signs in pregnancy, with one rural health centre recording only 18% of women receiving all the information. This situation can have negative effect if those who are missed happen to experience some danger signs which they may not

have information about and it could result in delay in seeking care. The findings of the present study are similar to those reported from Kenya by the Kenya National Bureau of Statistics (2010) where less than half of the pregnant women reported to have been informed of signs of pregnancy complications. PMTCT was the lowest in terms of information given. None of the women interviewed from the two rural facilities had all the information on PMTCT, while the two urban facilities record less than 10% of women receiving all information on PMTCT. Meanwhile information on HIV is highly desired by pregnant women as reported in a study conducted by Katowa-Mukwato et al. (2017), that one of the health information need of pregnant teenagers was

knowing and dealing with HIV and clarifying myths and misconception of both pregnancy and HIV and a desire to have nurses teach pregnant teenagers separately from older women especially on issues of PMTCT.

Findings of the current study reviewed a lot of variations in relation to information on birth preparedness, need for clean and safe delivery and signs of labour (Table 4). On information regarding birth preparedness, which include making arrangements for delivery with the assistance of a skilled provider, arrangements for a place of delivery at a health facility, preparation for transportation to the hospital for delivery and emergency care, saving money to pay for hospital bills, and having a companion to stay with the woman during labour. One urban facility recorded 75.8% of women receiving all the information while the other one only 39.7% received all the information. Similarly, 54.5% of the women from one rural facility indicated having received all information on birth preparedness compared to only 31.8 from the other rural facility who received all the information. Regarding items discussed as needed for clean and safe delivery, three out of the four facilities included in the study had more than 50% of women stating that they received all the information to this effect. The study reviewed disappointing results in that less than 50% of women from the four health facilities had all the information on signs of labour taught to them. These results agree with those of Kanyangarara et al. (2017) in a study of quality of ANC services across sub-Saharan Africa, who reported low coverage of barely all components of ANC components including information on signs of labour. Similar findings have been reported by Saad-Haddad et al. (2016) and Victora et al. (2015).

The scenario of inadequate information provision by midwives spans the whole continuum of maternity care from ANC, to labour and delivery and postnatal as reported by Muleya et al. (2018), Bhavnani and Newburn (2010) and Almeida and Silva (2008). These studies reported poor information giving by care providers including midwives despite all women irrespective of parity desiring information about their health, the health of their infants, danger signs, and postnatal checkup and how to behave as mothers. The inadequate information created anxieties among mothers and constituted a negative experience of care.

The final category of quality assessed was on respectful care, that is provision of privacy, respect and general concern and care during ANC (Table 5). This category was the poorly scored. For example, under privacy less than 10% of women from each of the facility reported that the health providers meet these requirements; closed antenatal care room during the consultation, use of drapes during examination, limiting number of people entering the room, and drawing curtains in the room during the consultation. With regard to respect that should be given including a warm welcome, speaking in a quite gentle tone of voice, addressed client by name, obtaining permission before

examination, and less than 50% of women from all the health centres reported to have been accorded all the attributes of respect. This could impact negatively on quality of ANC and level of satisfaction with care. Do et al. (2017) reported that the client's ability to discuss concerns with providers, provider's explanation of problems and treatment, quality of the examination and women's ability to share information is related to the level of privacy and associated with satisfaction with care.

Regarding provision of comfort, active listening, asking, allowing women to ask questions or clarifying concerns, speaking in a language that a lay person can understand and avoiding distractions while providing care, less than 50% of the women from all the four health facilities reported their care meeting all the desirable attributes. Despite not meeting the minimum standards of care, when asked about the overall satisfaction about care, surprisingly only less than 5% of women categorised the care as poor with most women generally reporting satisfactory care. This finding is contrary to that reported by Do et al. (2017) who reported low levels of satisfaction with ANC services in public facilities both in Kenya and Namibia.

Conclusion

All the four health facilities recorded low quality of care on all domains of Antenatal Care as outlined by WHO: History obtained during ANC, observations of vital signs, antenatal examination, laboratory blood investigations, provision of drugs and immunization, and education on nutrition, prevention of HIV, identifying danger signs and provision of respectful care. Therefore, if antenatal care has to achieve its intended purpose of reducing adverse maternal and new born outcomes, then quality of care delivered during pregnancy should be the focus as opposed mere attendance.

Limitation

The study reports quality of ANC from the pregnant mothers' perspectives. Although this is one of the parameters for evaluating quality of ANC services according to World Health Organization, observation of care provided would have been conducted.

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CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

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