

KNOWLEDGE AND PERCEPTIONS OF MIDWIVES REGARDING THE BASIC ANTENATAL CARE APPROACH IN PRIMARY HEALTHCARE CLINICS IN THE ETHEKWINI DISTRICT OF KWAZULU-NATAL, SOUTH AFRICA

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ABSTRACT

South Africa has instituted various strategies to enhance antenatal care services, in an attempt to address the country's high maternal and perinatal mortality rates. The National Department of Health ordered all primary healthcare facilities to adopt the basic antenatal care (BANC) approach by the end of 2008. Some facilities started implementing the BANC approach but failed to sustain it.

This study was conducted in the eThekweni municipality, targeting facilities that had successfully implemented the basic antenatal care approach. The aim of the study was to assess the knowledge and perceptions of midwives regarding this approach. Questionnaires were completed by 59 midwives. The Kruskal Wallis test indicated that midwives' knowledge and perceptions differed according to age, gender, race and years of experience but no significant differences were found. Midwives with positive perceptions and a good understanding of the basic antenatal care approach contributed to its successful implementation.

KEYWORDS: antenatal care, basic antenatal care, midwives' knowledge and perceptions, primary healthcare (PHC) services in South Africa

INTRODUCTION AND BACKGROUND INFORMATION

The provision of adequate antenatal care (ANC) is the cornerstone for reducing maternal and perinatal deaths because high-risk pregnancies can be detected and treated

appropriately (Department of Health [DoH], 2006:13). While effective ANC alone will not reduce global maternal and perinatal mortality rates, the quality of care that a woman receives during pregnancy plays a vital role in determining the outcomes for the mother and baby (ACCESS Program, 2007:3).

In South Africa, the National Department of Health (DoH) introduced the Basic Antenatal Care (BANC) approach during 2007 to be implemented by all primary healthcare (PHC) facilities rendering ANC services (DoH, 2008:12). A traditional approach to ANC was used before the introduction of the BANC approach (ACCESS Program, 2007:2). Some of the differences between the traditional and the basic ANC approaches include:

- the timing and interval between ANC visits;
- palpation techniques;
- standard treatment given to pregnant women;
- recording style.

In the traditional approach, a low-risk pregnant woman's gestational age determines the intervals between clinic visits, whilst in the BANC approach the visits are all six weeks apart irrespective of gestational age. The BANC approach discourages the use of standard abdominal landmarks when doing abdominal palpations to determine the age of the foetus (as described in the traditional approach), but encourages the measurement of symphysis-fundus height using a tape measure. The palpation measurements are recorded on a symphysis-fundus growth chart which is in graph format, to facilitate the detection of intra-uterine growth deviations. The BANC approach also recommends that calcium supplements should be given to all pregnant women to reduce the incidence of pregnancy-induced hypertension. The BANC approach focuses on the quality rather than quantity of ANC visits, and emphasises that ANC visits should be limited and goal directed. The traditional approach involves up to twelve ANC visits during one pregnancy (Pattinson, 2005a:10).

Langer et al. (2002:9) state that policy makers and programme managers should realise that the views of women determine their acceptance and utilisation of maternity services. The perspectives of health professionals therefore need to be considered before and during the introduction of new care models into institutional protocols. Health professionals are conscious players in the process of change, and their involvement contributes to improving providers' commitment to clinical work. Mathole, Lindmark and Ahlberg (2005:388) investigated the dilemmas and paradoxes involved in providing and changing ANC services in Zimbabwe. A respondent in that study commented that nurses and midwives ignored some government directives, and if they were accused of malpractice they would pretend that they had not seen the new regulations. Respondents in that study indicated that the large number of programmes implemented simultaneously

impacted negatively on the nurses' performance. They reportedly became caught up between the demands of the parallel programmes and the requirements of the government's core programmes, on which their individual performance appraisals were based. The BANC approach requires that ANC services be provided every day of the week at every health facility catering for women, to facilitate the early identification of pregnant women and to commence ANC visits as soon as the pregnancy has been diagnosed (Pattinson, 2005a:7).

The introduction of the BANC approach requires facilities to undergo a process of change, which might be difficult to implement (Victoria Quality Council, 2006:2). Strategies that could be used to overcome resistance to change include engaging others, communication, motivation, conducting of a pilot project, and the evaluation and sharing of results with personnel. The training curriculum for midwives in South Africa is still based on the traditional approach to ANC (SANC, 2001:4). Midwives trained in and practising the traditional approach to ANC are expected to change and adapt to the new BANC approach. Their knowledge, understanding and perceptions of the new approach are crucial for the successful implementation of the new approach. The national DoH provided training to midwives who were destined to become lead BANC trainers in all provinces. The lead trainers were expected to cascade the training and thereafter implementation of the BANC approach in all provinces. The researchers noted in their day-to-day encounters with the eThekweni municipality PHC facilities that not all the PHC facilities had managed to implement the BANC approach successfully.

This study was conducted in PHC facilities that had successfully implemented the BANC approach. The aim of the study was to assess how the midwives' perceptions and knowledge of the BANC approach contributed to the successful implementation of the BANC approach.

STATEMENT OF THE RESEARCH PROBLEM

The midwives working in some PHC facilities in the eThekweni district had not successfully implemented the BANC approach by the end of 2008 as advised by the National Department of Health, while others had managed to do so. The question that arose was why some PHC facilities had succeeded in the BANC implementation process whilst others did not. It was assumed that the knowledge and perceptions of the midwives concerning the BANC approach might influence the way in which the approach had been implemented. This study aimed to identify the BANC knowledge and perceptions of midwives who had successfully implemented the BANC processes.

PURPOSE OF THE STUDY

The purpose of the study was to identify the knowledge and perceptions of the midwives who had successfully implemented the BANC approach in PHC facilities. This information could then be used to train midwives from other facilities to implement the BANC approach in their PHC facilities. The ultimate purpose of the study was to help midwives to enhance the quality of ANC services rendered, and to reduce the maternal and perinatal mortality rates in the study area.

OBJECTIVES OF THE STUDY

The objectives of the study were to:

- assess the midwives' knowledge regarding the BANC approach;
- assess the midwives' perceptions regarding the BANC approach;
- make recommendations to enhance the implementation of BANC at other sites;
- make recommendations to sustain the BANC approach once it has been implemented.

ASSUMPTIONS

The DoH has identified ANC as the cornerstone for improving maternal health and for reducing maternal and perinatal mortality rates in South Africa (DoH, 2006:13). Midwives working in PHC facilities are key role players in the implementation of the BANC approach. If midwives have adequate knowledge regarding the implementation process and positive perceptions of the BANC approach, this could translate into commitment to implementing the BANC approach. Such commitment could then further facilitate the success of the ANC programme, as well as facilitate the attainment of Millennium Development Goals number four (to reduce maternal mortality) and five (to reduce child mortality) (DoH, 2007:6).

RESEARCH QUESTION

What is the knowledge and the perceptions of midwives who have successfully implemented the BANC programme, regarding the BANC approach in PHC clinics in the eThekweni district of KwaZulu-Natal, South Africa?

DEFINITION OF KEY CONCEPTS

Antenatal care (ANC) is the healthcare of pregnant women aimed at early detection and management of those problems already present, or those that can develop, in a pregnant woman and her unborn child (Pattinson, 2005a:5).

Basic antenatal care (BANC) is the minimum level of ANC that every pregnant woman should receive. The care has been simplified to a minimum so that every registered midwife at a clinic should be able to perform the necessary tests and measures. The programme is supported by a detailed system of flow charts that are based on the principles used in the Integrated Management of Childhood Illnesses (IMCI) programme. All aspects of the programme have been developed from the best research evidence, and only aspects of ANC that have been shown to be effective have been included (Pattinson, 2005b:1).

Knowledge is a matrix of impressions within which an individual situates newly acquired information. Knowledge supports people to analyse situations, make judgements, take decisions, and perform actions towards the achievement of organisational goals (Clarke, 2001:1).

A **midwife** in South Africa is a person registered in terms of Section 31 of the Nursing Act (No. 33 of 2005) and who supports and assists the healthcare user, in particular the mother and baby, to achieve and maintain optimum health during pregnancy, all stages of labour and the puerperium (South Africa, 2005:31).

Perception is a process by which individuals organise and interpret their sensory impressions in order to give meaning to their environment. It is a perspective from a particular individual's view of a situation. People's behaviour is based on their perceptions of what reality is, not on reality itself (Robbins, 2010:1).

Primary healthcare (PHC) is a system that provides comprehensive quality healthcare including promotive, preventive, curative, rehabilitative and palliative services, at a level that is below the hospital level (DoH, 2001), and is usually a patient's first contact with the healthcare system.

RESEARCH METHOD

A non-experimental quantitative design was used to assess the midwives' knowledge and perceptions of the BANC approach.

Study setting

The eThekweni district is one of the eleven districts of the KwaZulu-Natal province in South Africa. It is the largest district with a population exceeding 3 million (DoH, 2009:i). The eThekweni municipality is the second largest metropolitan council in South Africa and is sub-divided into three sub-districts: the North, South and West sub-districts. The provision of PHC services in the eThekweni district is shared between the KwaZulu-Natal Provincial Administration (KZNPA) and eThekweni municipality. The study was conducted in the municipality PHC facilities which are distributed amongst

the sub-districts so that there are 29 PHC facilities in the South, 18 in the North, and 13 in the West (DoH, 2010:35).

Sample and sampling technique

At the time of this study the BANC approach had been implemented by 27 municipal PHC facilities. These PHC facilities were clustered according to the three sub-districts. A total of six PHC facilities were randomly selected from each cluster, resulting in 18 (67%) of the PHC facilities being included in the sample. This was followed by purposive sampling of midwives who were working at the selected PHC facilities. All midwives who met the inclusion criteria and agreed to take part in the study were included. Each facility contributed at least two respondents and the sample comprised 59 midwives.

Inclusion criteria:

- Midwives who were working in PHC facilities implementing the BANC approach.
- Midwives who had worked in these ANC programmes for at least 12 months.

Exclusion criteria:

- Midwives who had worked in ANC programmes for less than 12 months.
- Midwives working at sites that had not implemented the BANC approach.

Data collection

Data were collected from the beginning of November 2010 to the end of March 2011, using a self-administered questionnaire to identify the midwives' knowledge and perceptions of the BANC approach.

Data analysis

The data from the questionnaires were captured and analysed using version 19 of the Statistical Package for the Social Sciences (SPSS). The scores for the knowledge of and perceptions of BANC were calculated from the responses. The Kruskal Wallis test was used to assess how the knowledge and perceptions of nurses differed by age, gender, race and years of experience.

Validity and reliability

The questionnaire was pre-tested on six midwives in order to ensure that the data collection instruments were reliable and valid. The results of the pre-test were analysed

by a statistician to determine whether the construct validity was appropriate for statistical purposes. Reliability was ensured by collecting data from midwives who were working in facilities that had successfully implemented the BANC approach. This also ensured content validity of the study, since the information was gathered from respondents involved in implementing the BANC approach. The results of the pre-test were not included in the actual study.

ETHICAL CONSIDERATIONS

The study design, procedures and questionnaires were approved by the Faculty of Health Sciences Research Committee at the Durban University of Technology. Permission was obtained from the eThekweni Municipality Health Research Unit to conduct the study in their PHC facilities. All the respondents were required to sign an informed consent form, and were advised that they could withdraw from the study at any point if they wished to do so. To ensure anonymity, the questionnaires were identified by number only.

RESEARCH FINDINGS

Demographic information

The majority (96.6%; n=56) of the respondents were aged 30–49, and 84.7% (n=50) were females while 15.3% (n=9) were males. A total of 44.1% (n=26) of the respondents had more than ten years' experience as practising midwives and 30.5% (n=18) had between 6 and 10 years' experience.

Understanding of the BANC approach

To test the respondents' knowledge, several true/false statements were supplied about the BANC approach. The correct responses from the respondents were as follows:

- 96.6% (n=56) for the referral of clients with HIV to a higher level of care;
- 91.5% (n=53) for the total number of visits for a low-risk client;
- 78.0% (n=46) for whether the pregnant women could be referred back to PHC level from the higher level of care;
- 61.0% (n=35) for when the first ANC visit should be conducted;
- 52.5 % (n=31) for giving calcium supplements to all pregnant women.

Table 1: Midwives' knowledge about the BANC approach

Statement	Percentage	P value
The BANC approach requires that the first visit ANC be done by three months' gestation.	61.0%	<.0005
HIV positive women should be referred to a higher level of care irrespective of CD4 cell count or WHO staging.	96.6%	<.0005
The average number of ANC visits for a low-risk woman is five visits.	91.5%	<.0005
All pregnant women should be given calcium supplements to prevent pregnancy-induced hypertension.	52.5%	<.0005
All pregnant women who have been referred to a higher level of care should never be referred back to PHC level.	78.0%	<.0005

Perceptions of the BANC Programme

Ten statements were used to assess the midwives' perceptions of the BANC programme. The respondents had to express their views regarding the statements by indicating whether they strongly agreed, agreed, were neutral, disagreed, or strongly disagreed with each statement. The results indicated that most respondents had positive perceptions about the BANC programme and that 50.8% (n=30) of the respondents agreed with all ten statements. All respondents (100%; n=59) agreed that the BANC had made the assessment of pregnant women much easier, assisting midwives to identify women with high-risk pregnancies, and improving maternal, child and women's care services.

Table 2: Midwives’ perceptions of the BANC approach

	Agree	%	Average Score	Mean	Std. Deviation
The BANC approach provides added benefits for the midwives and the pregnant woman.	59	100%	<2.5	1,66	.545
ANC assessments are easier than with the traditional ANC procedures.	58	98.3%	<2.5	1,52	.504
Identification of high-risk pregnant women is much easier.	59	100%	<2.5	1,54	.502
Improves MCWH services.	59	100%	<2.5	1,63	.488
Reduces the workload of the midwives.	57	96.6%	<2.5	1,98	.641
Checklists are useful tools to ensure safe practice.	58	98.3%	<2.5	1,71	.562
The BANC approach does not add more work for the midwives.	57	96.6%	<2.5	2,16	.702
It is necessary to use the checklists as additional recording documents.	58	98.3%	<2.5	2,07	.814
The BANC approach is better than the traditional approach.	57	96.6%	<2.5	1,82	.601
Too much time is not spent with one client.	59	100%	<2.5	2,47	.751

No significant differences existed between midwives’ age, gender, race or experience and their BANC knowledge and perceptions. For example, the study results revealed that all respondents (100%; n=59) irrespective of age, gender, race or years of experience, agreed with the statements indicating that the BANC approach provided benefits for the midwives and pregnant women, and facilitated the identification of women with high-risk pregnancies and that too much time was not spent with one pregnant woman.

DISCUSSION

Most midwives were knowledgeable about the BANC and had positive perceptions of the BANC approach.

The midwives’ knowledge of the BANC approach could have been as a result of the training that they had received or because of the support they had received from

midwives who had been trained in BANC. Ngxongo (2011:74) found that one of the factors that influenced the successful implementation of the BANC approach was that these PHC facilities had at least one midwife and supervisor who were trained in the BANC approach. Although some respondents did not have BANC training, they were working with at least one midwife who had been trained in the BANC approach, which had a positive influence on the PHC facility's implementation of the BANC approach. Pattinson (2005b:2) recommended that champions should be trained for each facility so that they could lead the process of BANC implementation. The importance of having a trained person leading the implementation process was also highlighted by Ngxongo (2011:79).

Most midwives perceived the BANC approach positively, which might have contributed to its successful implementation in the participating sites. According to Vaughan (2001: 3), the strength of an individual's involvement is directly related to the extremity of his or her attitude towards the system. With increased user involvement and positive attitudes, users have an increased desire to participate in programme development. As attitudes are generally formed on the basis of beliefs, if an individual believes that the system is personally relevant then he/she will be more likely to form positive attitudes towards that system. The author further states that implementers would be able to enhance the probability of effective user involvement by assessing user predisposition towards the system. This would include analysing users' beliefs regarding their perceived abilities to make effective contributions during the development process. It is essential to involve key decision makers for their insights, authority and sponsorship. Anyone who would be touched by the system should also be involved. Staff members involved with daily operations can offer important insights into critical operational success factors. The project's success depends on the invested insights and knowledge of members who are expected to embrace the system (Vaughan, 2001:4). The positive perceptions of the midwives pertaining to the BANC approach are important for their involvement, acceptance and intentions to sustain the BANC approach. Sangster-Gormley, Martin-Misener and Burge (2013:10) identified and verified involvement, acceptance and intention as the three sensitising concepts that influence implementation. These authors stressed that because of their interconnectedness, there was a need to consider these three factors simultaneously throughout the implementation process.

Catenacci (2010:1) described how certain individual-level variables, including biographical characteristics such as personality, ability and learning, could affect productivity, absenteeism, staff turnover, and job satisfaction levels. According to Catenacci (2010:1), behaviours in the workplace are based on people's perceptions of the workplace, and employees' perceptions about their work situation influence their productivity. Absenteeism, high staff turnover and job satisfaction are linked to an employee's job perception. Those individuals who perceive their jobs in a negative light are likely to have increased absenteeism, higher staff turnover rates, and lower levels of

job satisfaction. These views support the finding of the present study, in that if midwives display positive attitudes towards the BANC programme, they are likely to implement the programme successfully.

No single quality of management practice is more highly correlated with success than employee participation. The question then becomes: How can this participation be structured to ensure success for the employee, the project and the organisation? Waldron, Vsanthakumar and Arulraj (2011:284) asserted that user acceptance of a new system is facilitated when changes are realistically anticipated through input from knowledgeable sources. Other relevant factors include discussions among co-workers and between implementers and users, when surprises are minimised through preview and realistic testing, and when assistance is provided for coping through the availability and coaching of experienced implementers. Waldron et al. (2011:76) also maintained that enhancement of control through involvement can be accomplished by offering choices to the employees. This means involving employees in meaningful decisions during the process, as well as laying the groundwork for predictability by providing a complete and accurate picture in advance. It also implies allowing the employee to assume some responsibility during the design and implementation processes. Part of this responsibility includes making employees accountable for the results of specific tasks of the implementation process, and encouraging shared ownership of the project. Offering opportunities to reduce or escape from the stress that is inherent in the implementation of a systems project should also be considered.

Six (10.2%) midwives demonstrated negative perceptions towards the BANC approach. Even the respondents who responded that the BANC approach required too much time to be spent with one pregnant woman, responded positively to other statements. Not all midwives agreed with the statements about the BANC approach, which could indicate some negative perceptions. Out of those midwives who did not agree with some of the statements, there were none that indicated that they strongly disagreed with these statements. The midwives' perceptions of the BANC approach were thus generally positive.

The findings highlighted the influence and the importance of adequate knowledge and positive perceptions on the successful implementation of the BANC approach. The midwives' knowledge and positive perceptions of the BANC approach contributed to the successful implementation of the BANC approach.

RECOMMENDATIONS

The following recommendations pertain to policy development and implementation, institutional management and practice, nursing education, and further research.

Policy development and implementation

Relevant policies, service delivery guidelines and protocols should be available in all facilities that provide BANC services. All midwives should be trained in the appropriate use of these guidelines and protocols to ensure safe and standardised practice. This will assist in improving the BANC knowledge of midwives, and will also provide a reference source to guide the BANC practice of midwives.

Institutional management and practice

Active participation of all midwives involved in the BANC approach should be encouraged, and all levels of staff should be given opportunities to participate in planning the approach so that they feel part of, and own, the approach. This can promote positive perceptions about the BANC approach.

Nursing education

Effective training and skills development is required to ensure the successful implementation of the BANC approach. All midwives involved in ANC should be trained in the BANC approach. The department should work towards getting every midwife trained in the BANC approach. Where circumstances do not allow the training of all midwives, each facility should strive to have more than one midwife trained in the BANC approach. The trained midwives would then be able to complement each other. This will assist in sustaining the approach in circumstances where there are high staff turnover rates. The BANC approach should be incorporated into the basic midwifery training curriculum, so that every trained midwife is able to use this approach.

Further research

The current study focused only on the midwives who were working in facilities that had successfully implemented the BANC approach. There was no comparison with those who were working in facilities that had not done so. Further research should be undertaken to assess the understanding and perceptions of midwives who have not implemented the BANC approach. This would determine whether such factors could prevent the successful implementation of the BANC approach, and the results could facilitate the implementation of corrective measures to overcome the identified barriers.

LIMITATIONS OF THE STUDY

Data were collected from midwives using self-administered questionnaires. As there were no face-to-face interviews it was not possible to gain clarity where the responses were

not clear (for example where midwives from the same facility gave different responses). Only midwives from facilities where the BANC approach had been successfully implemented were interviewed. The views of midwives working in facilities where this has not happened might have been different. Only the data obtained from the midwives' completed questionnaires were considered. No observations were done in the clinics to ascertain whether or not the midwives actually performed BANC procedures. No comparisons were made between maternal and infant mortality and morbidity figures of PHC facilities that used the BANC approach and those that did not do so.

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