

A GROUNDED THEORY STUDY FOR ANTENATAL CARE IN KENYA

Dr. Joyce Owino PhD, RN

Great Lakes University of Kisumu, Kenya

Prof. Frances Legault

School of Nursing, University of Ottawa, Canada

Hazel Miseda Mumbo

Great Lakes University of Kisumu, Kenya

Odhiambo Odera

Masinde Muliro University of Science and Technology, Kenya

Mary Evelyn Ayugi

Department of Sociology, University of Nairobi, Kenya

Abstract

The purpose of the study was to analyze nurse–client interaction processes in rural health facilities. This was an inductive, qualitative, grounded theory study. Constant comparative analysis of data was used to generate themes, concepts and theoretical statements. Six main concepts emerged from data: Willingness of mother to attend antenatal clinic, reciprocal exchange of information, nursing care and treatment, focused preparation of mother, evaluating readiness for delivery within the rural context and referral of client. These concepts were key to the generation of “Owino’s theory of nurse-client interactions for childbirth preparedness”. Nurse-client interaction processes in preparation for delivery by a skilled attendant is influenced by the complex rural context. High quality interaction should help the nurse and mother rise above contextual challenges.

Keywords: Grounded theory, antenatal care, skilled attendant delivery

Introduction

518,420 women die annually from obstetric complications in the developing world, with a maternal mortality ratio (MMR) of 920/100,000 live births in Sub-Saharan Africa (SSA) and 488/100,000 live births in Kenya. This is in comparison to developed nations such as North America, where MMR is 11/100,000 live births (KDHS, 2008-09; UNFPA, 2003; WHO, 2003). These figures translate to a lifetime risk for maternal death in

SSA of 1 in 16 as compared to 1 in 3,800 in developed countries. In Kenya, it is 1 in 39. This huge difference in the risk of maternal deaths between the developing and developed countries is thought to be due to differences in access and use of maternal health care services (WHO, 2003; UN, 2005).

It is evident from literature that there is a gap between nursing theories for practice as taught in the classroom and actual nursing practice. The nurses have little or no knowledge of nursing theories as a basis for practice, and do not knowingly apply nursing theories to practice. Literature further suggests that the theories taught are inappropriate for practice in the African context (Owino et al, 2012; Munjanja et al., 2005). Literature also confirms a high coverage of antenatal care (ANC), 92% in Kenya, but low use of skilled attendants at delivery. Skilled attendant delivery (SAD) in Suba is 6.8%, compared to the national average of 43% (KDHS, 2008-09; MOH, 2006). Some of the factors that contribute to this status in rural Kenya are well described and include: poor sensitization of women to the importance of delivery by a skilled attendant, the highly valued social role played by traditional birth attendants (TBAs) in communities, and the perception that the health facility is a harsh setting for childbirth. Other important barriers include lack of means of transport to the health facilities, cost of transport and delivery, and fast progression of labour. Some women do not think facility attendance is necessary due to previous uneventful home delivery and therefore prefer home delivery (Cotter et al, 2006; Van Eijk et al, 2006).

It is known that ANC is supposed to result in positive health outcomes, that is, marked reductions in infant and maternal mortality and morbidity due to early detection of possible complications and SAD (De Brouwere et al, 1998; Magadi, 2001; Van Eijk et al, 2006), but only 43% of all the antenatal women in Kenya are delivered by a skilled attendant (KDHS, 2008-09). This therefore begs the question as to why the prevalence of SAD is low in relation to the high ANC coverage, and calls for an enquiry into the relation between the processes in the nurse-client interactions during antenatal care, and the basis for nursing practice, in the light of influencing the mothers' decision for delivery by a skilled attendant. In this light, little has been documented on both the quality of nurse-client interactions during antenatal care and on theory based maternal health nursing. Furthermore there is no published evidence of practice outcomes of nursing theory utilization in Kenya. The purpose of the study was therefore to analyze nurse-client interaction processes in rural health facilities, in order to generate a substantive theory of processes influencing decision of mothers for SAD. The objectives of the study included describing concepts from nurse-client interaction processes influencing SAD, describing the context of

antenatal care and generating an appropriate theory of antenatal nursing care for the rural health facilities.

Methodology

This was a qualitative study which used Grounded Theory method for data collection and analysis, by the constant comparison of qualitative data (Glaser & Strauss 1967; Glaser 1992). Data collection and analysis were done concurrently to help increase insights and clarify parameters for the consequent substantive theory. Data collection was continued until information saturation of categories was achieved. The aim of this approach was to discover theory that explains the nurse-client interaction processes that influence the decision of antenatal mothers for SAD.

The study was conducted in two rural health facilities in Suba District of Nyanza province. It is estimated that almost one-quarter of all recorded maternal deaths in Kenya occur in Nyanza. The two health centres were the Ogongo Health Center in Ogongo sub location and Lambwe Dispensary in God Jope sub location in Lambwe Division. Nurse-client interaction observations were conducted during regular antenatal clinics, with no manipulation of the environment. Interviews of the nurses were conducted at the health facilities, and postnatal interviews were also carried out at the health facilities, when the mothers returned for postnatal visits.

Research population and sample

The participants included:

1. Seven nurses who were providing antenatal care at the two facilities. The following cadres of nurses participated in the study: 2 Registered Community Health Nurses (RCHN), 4 Enrolled Community Health Nurses (ECHN) and 1 Enrolled Nurse/Enrolled Midwife (EN/EM).
2. Twelve antenatal mothers were observed during ANC nurse-client interaction sessions.
3. Thirteen postnatal mothers who had attended at least one ANC clinic were interviewed. The postnatal mothers interviewed were those who had delivered either in the health facility or away from the health facility and were attending their first postnatal clinics at six to ten weeks post-delivery.

Data collection

Data collection was by observation and interviews. The two methods were used in line with the grounded theory research methodology, which is an observational research suited to a qualitative approach. Interviews are used to validate the observations. Data collection was done in three different phases, i.e. nurse-client interaction observations, in-depth interviews with both the nurses and postnatal mothers. Initial semi-structured interview

protocols were used as interview guides and subsequent protocols were the result of theoretical sampling.

Data Analysis

Table 1: Analysis Framework – Refined to reflect actual sequence of activities

	Phase I	Phase II	Phase III
Aim	Concept development, analysis and synthesis	Statement development, synthesis and analysis	Theory development and analysis
Main Activities	Concept development Using Substantive coding Concept analysis Concept synthesis	Writing the analytic narrative Statement development Statement synthesis (Theoretical coding) Statement analysis	Specifying relationships between two or more concepts in an analytic narrative Theory analysis
	Open coding Selection of core category Selective coding Reflective notes Theoretical Coding Concept selection Selection of core concept Defining the attributes of each concept Identifying a model case Identification of antecedents Identification of consequences Definition of empirical referents	Identification of theoretical statements Simplifying the statements Analysis of the statements Synthesis of the statements	Naming the theory Placing the theory in literary context Giving the conceptual logic and direction of theory Analysis of the theory

(Source: Research Data, 2012)

The data was analyzed using the constant comparative method of qualitative data analysis. Constant comparison of incidents, codes and concepts, and theoretical sampling continued throughout the process of data analysis. The theory development process happened in 3 development and analysis phases as shown in the analysis framework in Table 1. Phase one consisted of various steps in concept development, synthesis and analysis. In phase two, the resultant concepts helped in statement development, synthesis and analysis. In phase three, the theoretical statements formed the building blocks for theory development and analysis.

Results and discussion

Each concept was analyzed using five dimensions. First, the defining attributes of each concept were identified to provide the broadest insight into the concept. Secondly, the empirical meanings were identified to demonstrate the existence of the concept during antenatal care. Next, a model or contrary case was identified to help clarify the meaning and context in which the concept is generally used and then the antecedents to the conceptual pattern were highlighted. Lastly, the consequences of the conceptual pattern were stated. An analytic narrative of the concepts further refined the analysis and synthesis process and gave rise to ten relational

propositions or theoretical assertions. The statements were analyzed using the Walker & Avant (2005) theoretical statement analysis framework, and the resultant list of the main theoretical statements was as follows:

1. The key to the success of the *antenatal process* and consequently to a *safe delivery*, is a meaningful *nurse client interaction for childbirth preparedness*.
2. The willingness of an antenatal mother to attend ANC clinic early and regularly opens the way for dialogue, enabling the exchange of information between the client and the nurse and consequently effective nursing care and treatment.
3. The *dispositions* of both the nurse and the client set the stage for *nurse/client interaction*, while the interaction processes also shape disposition.
4. *Nurse-client interaction* involves a reciprocal relationship for effective *exchanging of information*.
5. The success of *exchanging information* depends on and results in creating a *shared goal* between the nurse and client, built on well *understood and clearly documented* requirements or information.
6. The success of *nursing care and treatment* is dependent on and further strengthens the relationship created when *getting acquainted* and on effective *information exchange*.
7. The nurse-client *consensus building* around the antenatal process requirements provides a stable foundation for *design and implementation* towards achieving the *shared goal* of the safe delivery of a healthy baby with the assistance of a *skilled attendant*, within a *prohibitive context*.
8. *Preparation for childbirth* is holistic and goes beyond the physiological readiness of the mother to encompass psychological, intellectual, social and financial preparedness. The nurse holistically *evaluates the client's readiness for delivery* and assists the client to rise above the *contextual challenges*
9. *Evaluating readiness of the client for delivery* begins at the *period of commencement of ANC*. It helps with reviewing patient responses to determine effectiveness and outcomes of plan of *nursing care* and checks the need, either to rearrange priorities to meet the changing demands of care or for *referral*.
10. An appropriate and successful *referral* depends on the competence and efficient assessment and re-assessments by the nurse and on the *consensus built* with the client.

Owino's theory of nurse-client interactions for childbirth preparedness

Nurse and client perceptions brought out the main area of concern as the “preparation of antenatal mothers for childbirth by a skilled attendant”. It

became apparent that the preparation of a mother by the nurse occurred mainly during nurse-client interactions. The concept was then re-constructed to ‘Nurse-Client Interaction for Childbirth Preparedness’ and was adopted as the title of the substantive theory. Since then, the theory has undergone further analysis and evaluation and the title has evolved to “Owino’s Theory of Nurse-Client Interaction for Childbirth Preparedness” (Owino, 2012).

The theory was developed inductively from observation and interview data. Its focal point is the ANC process patterns that influence the decision of mothers for skilled attendant delivery. It also recognizes and emphasizes the need to address the challenging environmental, physical, psychological, intellectual, social, cultural and economic contexts in which ANC care is given. The theory depicts three phases in the process of preparing for childbirth, and six elements in the interaction process as earlier shown in the integrated framework. These stages occur in taxonomy that though presented here as distinct categories, may sometimes have blurred boundaries. The three activity phases in the preparation process, as shown in the integrated framework, include; assessment, building consensus and the exit phases. The six main categories of behavioural patterns during the nurse-client interaction process include; willingness of mother to attend ANC, exchanging information, nursing care and treatment, focused preparation of the mother for delivery, evaluating readiness of client for delivery and referring the client.

The elements underpinning the main categories are concrete concepts derived from and grounded in the data. The concepts specifically spell out the process of effectively preparing the mother for delivery by a skilled attendant. It is a situation producing or prescriptive process that is therefore best categorized as a substantive or nursing practice theory. The theory gives a set of actions that must be taken by the nurse in partnership with the client throughout the antenatal period. In proposing her idea of practice theory, Jacox (1974) provided the following concise description for a substantive theory:

“It is a theory that says given this nursing goal (producing some desired change or effect in the patient’s condition), these are the actions the nurse must take to meet the goal (produce the change)”.

Nurse-client interaction is characterized by patterns of behaviour (see Fig 2) which are presented here as the six main theoretical concepts that emerged from data:

1. Willingness of mother to attend ANC
2. Exchanging information
3. Nursing care and treatment
4. Focused preparation of the mother for delivery
5. Evaluating readiness of client for delivery and

6. Referring the client

The patterns may occur in succession, concurrently or as an iterative process in three different activity phases: assessment, building consensus and exit which enable the nurse to fulfil the purpose of nursing, which is to assist the individuals and their families to prevent and/or cope with maternal conditions and complications, and to holistically prepare the client for the safe delivery of a healthy baby by a skilled birth attendant. Account must be taken of the antecedents and context of care that influence the preparation process. The antecedents focus mainly on the enablers of safe and efficient ANC delivery. The context in which care is delivered takes into account nursing tasks, disposition during nurse/client interaction and challenges to accessing safe and efficient ANC and skilled delivery services. It also incorporates enablers of safe and efficient ANC and delivery.

It is acknowledged that despite the antecedents and context of care, the nurse has considerable influence on the process of care. The nurse helps the clients realize the importance of early preparation for safe delivery in order to beat the odds and rise above the contextual challenges.

Relational propositions

These can be deduced from the ten theoretical assertions presented earlier, which broadly reflect the fact that activities in antenatal care are concerned with preparing the antenatal mother for safe delivery, nurse-client interaction processes are influenced by the complex context within which care is given and the outcomes of the antenatal process are the result of successful building consensus towards a shared goal for desired outcomes, as influenced by the quality of the interaction process.

Owino's theory of nurse-client interactions for childbirth preparedness also takes into account the difficult context which includes poverty, lack of access roads to the villages, shortage of staff able to go and assist the clients to deliver in their homes among cultural challenges and personal preferences. It therefore asserts that the nurse-client consensus building around the antenatal process requirements provides a stable foundation for design and implementation towards achieving the shared goal of safe delivery of a healthy baby with the assistance of a skilled attendant, within a prohibitive context.

It also recognizes that preparation for childbirth is holistic and goes beyond the physiological readiness of the mother, to encompass psychological, intellectual, social and financial preparedness. The nurse holistically evaluates the client's readiness for delivery and assists the client to rise above the contextual challenges. The theory also emphasizes the need to ascertain readiness for delivery right from the first contact with the client. Assessment and re-assessment continues throughout the antenatal process to

the exit phase, when the client is not only referred to a labour ward on the assumption that the client is ready, but that readiness is confirmed.

Within the rural context, not delivering at the health facility may mean the difference between life and death for both the mother and the child. The theory therefore further asserts that evaluating readiness of the client for delivery begins at the period of commencement of ANC. It ensures the review of patient responses to determine effectiveness of the plan of nursing care, and checks the need, either to rearrange priorities to meet the changing demands of care or for referral. It further states that an appropriate and successful referral depends on the competence and efficient assessment and re-assessment by the nurse and on the consensus built with the client.

Conclusion

This study was conducted for the purpose of generating a substantive theory for antenatal nursing care in rural Nyanza. An analytic narrative of the concepts from the nurse and client perspectives and the nurse-client observations, resulted in the development of theoretical statements addressing meaningful and effective nurse-client interaction for childbirth preparedness.

An analysis of the Theory of Nurse-Client Interactions for Childbirth Preparedness showed that it describes its professional context by defining the metaparadigm concepts depicted. It recognizes the unique and prohibitive rural context in which antenatal care takes place, and states the need for both nurse and client to adopt dispositions that help them to rise above the contextual challenges. It emphasizes that nurse-client consensus building around the antenatal process requirements provides a stable foundation for design and implementation towards achieving the shared goal of SAD within a prohibitive context, and further suggests that ascertaining readiness for delivery begins at the onset of ANC. It continues throughout the antenatal period, with deliberate confirmation during the exit phase of the antenatal process. Appropriate referral is then done. Diligence and accuracy in documentation and communication ensures continuity of care.

References:

- Cotter, K., Hawken, M. & Temmerman, M. (2006) Low Use of Skilled Attendants' Delivery Services in Rural Kenya *Journal of Health, Population and Nutrition*, 24(4): 467 – 471.
- De Brouwere V., Tonglet R. & Van Lerberghe W. (1998) Strategies for reducing maternal mortality in developing countries: What can we learn from the history of the industrialized West? *Journal of Tropical Medicine and International Health*, 3:771-782.

- Fawcett, J. (2005). *Contemporary Nursing Knowledge: Analysis and Evaluation of Nursing Models and Theories* (2nd Ed.) Philadelphia: F.A. Davis Company.
- Glaser, B. (1992). *Basics of Grounded Theory Analysis: Emergence vs Forcing*, Mill Valley, CA: Sociology Press.
- Glaser, B. G. & Strauss, A. S. (1967). *The Discovery of Grounded Theory: Strategies for Qualitative Research*. Chicago: Aldine.
- Jacox, A. (1974). Theory Construction in Nursing: An Overview, *Nursing Research* 23(1).
- KDHS (2008-9). *Kenya Demographic and Health Survey: Preliminary Key Findings* Nairobi: Central Bureau of Statistics.
- KDHS (2008-09). *Kenya Demographic and Health Survey: Preliminary Key Findings* Nairobi: Central Bureau of Statistics.
- Magadi, M., Madise, N. & Diamond, I. (2001). Factors Associated with Unfavourable Birth Outcomes in Kenya. *Journal of Biosocial Science* 33: 199-225.
- MOH (2006) *Baseline survey for Maternal and Neonatal Health in Homa Bay, Migori, Kuria and Suba Districts in Nyanza Province.* = MOH: Division of Reproductive Health; May 2006.
- Munjanja, O., Kibuka S. & Dovlo, D. (2005). *The Nursing Workforce in Sub-Saharan Africa Issue Paper 7*; Switzerland: ICN.
- Owino, J. (2011) *A study of the theory in use in facility-based antenatal nursing care.* A thesis submitted in candidacy for the degree of Doctor of Philosophy to The Tropical Institute of Community Health and Development. Great lakes university of Kisumu.
- Owino, J. (2012) *Owino's Theory: Nurse-Client Interaction for Childbirth Preparedness Analysis and Evaluation* Lambert Academic Publishers. Deutschland: Germany
- Owino, J. Orwa, W. & Okong'o, O. (2012) *A nursing theory for facility-based antenatal care: A Grounded Theory Approach To Theory Development*; Lambert Academic Publishers. Deutschland: Germany
- UN (2005) *The Millennium Development Goals Report: Executive Summary of the Report of the Secretary-General.* New York. United Nations Department of Public Information
- UNFPA (2003) *WHO/UNFPA/UNICEF/WORLD BANK: Joint statement for reducing maternal mortality.* Maternal Mortality Update 2002: A focus on Emergency Obstetric Care. New York.
- Van Eijk, A., Bles, H., Odhiambo, F., Ayisi, J., Blokland, I., Rosen, D., Adazu, K., Slutsker, L. & Lindblade, K. (2006) Use of antenatal services and delivery care among women in rural western Kenya: a community based survey. *Reproductive Health*, 3:2 <http://www.reproductive-health-journal.com/content/3/1/2>

Walker, L. O. & Avant, K.C. (2005) *Strategies for Theory Construction in Nursing* (4th ed.). Norwalk, CT: Appleton & Lange.

WHO (2003) *Antenatal care in developing countries: promises, achievements and missed opportunities: an analysis of trends, levels and differentials, 1990-2001*. Geneva: Joint publication of UNICEF and WHO (http://www.who.int/reproductive-health/docs/antenatal_care.pdf).