



The Open Nursing Journal

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RESEARCH ARTICLE

Information needs for Inclusion in a Post-Discharge Guideline Booklet for Mothers with Prematurely born Babies in a Low-Resource Setting in South Africa

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Abstract:

Background:

Prematurity brings along a high risk of early and late mortality and morbidity that demands specialized care within the NICU. Mothers of premature babies often feel powerless and helpless once the premature baby is discharged from the neonatal intensive care unit (NICU). These experiences might interfere with their transitions into parenthood as they might question their ability to care for their baby. As nurses become greatly concerned regarding the continuity of care at home, the purpose of this study was to explore and describe the information that mothers of prematurely born babies need upon discharge for inclusion in a guideline booklet.

Methods:

A qualitative explorative design was used to conduct interviews with mothers of prematurely born babies in a NICU of a tertiary hospital in Gauteng Province, South Africa. Purposive sampling was used to select mothers whose prematurely born babies were preparing for discharge from NICU and mothers whose babies were discharged and at home and were brought to the hospital for their six weeks follow-up after discharge. Unstructured individual interviews were conducted.

Results:

The following seven themes were identified, namely feeding of a prematurely born baby, positioning of the baby, infection control and hygiene, care for a sick baby or baby with special needs, immunisation and clinic visits, normal development and growth, and information guidelines.

Conclusion:

The findings of this study were used to include essential information in a guideline booklet for mothers with prematurely born babies upon discharge from the NICU.

Keywords: Mother information needs, Prematurely born baby, Neonatal intensive care unit, Low-resource setting, South Africa, Infection, Hygiene.

Article History

Received: January 27, 2021

Revised: August 20, 2021

Accepted: August 23, 2021

1. INTRODUCTION

The need for action for the prevention and care of prematurely born babies is highlighted by the Born Too Soon Report [1] due to the challenges that these babies are exposed to, such as cerebral palsy, blindness, hearing challenges, learning difficulties as well as numerous chronic diseases and the risk of mortality [2].

Mothers of a prematurely born baby often experience anxiety and apprehension due to emotional unpreparedness for the early birth, while the baby might be at risk to have an illness or even die in the short term and if he or she survives suffering lifelong health challenges. Following sometimes an extended period of hospitalisation, discharge should be an exciting time, but the mothers are also faced with health decisions amidst challenges facing the premature baby [1].

Discharge of a prematurely born baby from a neonatal intensive care unit (NICU) might be a very stressful event for a

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mother, leaving a very controlled environment of the hospital and availability of specialised support, and venturing into the unknown [3]. A mother who is well prepared for discharge can contribute to the care of her prematurely born baby and prevent further complications [4].

At the time of discharge home, the mothers of the prematurely born babies in the NICU might feel apprehensive and question their ability to care for their baby. The well-planned, comprehensive discharge of a medically stable infant might help to ensure a positive transition to home and safe, effective care after discharge. Mothers' stress can be reduced by familiarizing them with care interventions that will also boost their self-confidence and capability to care for their premature babies on returning home, which in turn would decrease readmission and the length of hospital stay [5].

Purdy *et al.* [6] indicate that mothers need their information needs, role expectations as mothers, stress and coping mechanisms and social support, especially in the community, to be addressed when the baby is discharged. Newman and Parrot [3] argue that the mother, father, rest of the family, and the community support needs differ significantly from one family to another.

Due to the potential challenges facing mothers of prematurely born babies with special needs once, at home, as well as the unique influencing factors of the mothers in the particular setting, this study explored and described the information needed by mothers upon discharge of their prematurely born baby. More prematurely born babies survive with implications for the baby and the mothers, such as increased levels of stress, and feelings of guilt, tension and the fear of mothers that they would not be able to cope with the baby at home [4]. This is even worse when they are discharged to go home a far distance away from the hospital without the support of the nursing staff.

Sakraida [7] is of the opinion that the coping skills of the mother are vital in the health promotion of the discharged prematurely born baby who is solely reliant on the mother to provide the needed care for the baby to develop and thrive. Smith *et al.* [8] indicated that poor discharge preparation and facilitation of the move from hospital to home might result in poor outcomes for the prematurely born baby, problems at home, increased unplanned seeking of health care usage and re-hospitalisation. Research conducted in a Singapore general hospital found that on early discharge of premature infants, nurses play an important role to empower and motivate mothers to participate in the caring of the baby [9]. Communication was identified as an essential aspect to prepare the mothers emotionally and psychologically for the process.

Pender's health promotion model highlights the fact that understanding, adjusting and participation influence the possibility of changing health-promoting behaviours [7], in this case, those of the mothers. Heydari and Khorashadizadeh [10] expound that it is crucial for mothers to receive comprehensive information provided by the nursing, medical and allied personnel so that they have the knowledge to support the babies upon discharge for them to survive and thrive, even when they have health challenges. Mothers should understand

the vulnerability of a premature baby after discharge, and the information should support them in the day-to-day care of the baby as well as general care during the first year.

Although information for discharge preparation is available, the researcher observed in the setting of the study that there was still a void as to how best to provide mothers with the most simple and comprehensive knowledge possible on the discharge of the premature baby from the NICU. There were no formal guidelines for the health care staff to give needed health information to mothers when their babies were discharged from the NICU, while medical and nursing staff relied on their own ideas on what to tell the mothers upon discharge. Hence the aim of the study was to explore and describe the information needed by the mothers upon discharge of the premature baby from the NICU of a tertiary hospital for inclusion in a guideline booklet for mothers.

At the particular setting of this study, the discharge criteria for prematurely born babies from the NICU included consistent weight gain and being at least 1.8 kg to be transferred to the Kangaroo Care Unit and 2.5 kg at discharge; absence of dysrhythmias; maintaining own body temperature with appropriate clothing; feeding to a suitable degree, preferably breastfeeding, but in some cases, cup-feeding; and absence of illness or the mother should be able to manage the baby's special needs. With the presence of a long-term complicated illness, the baby might be transferred to a hospital closer to the mother's home. With the acknowledgement that each mother's needs would be unique, discharge planning was considered of high importance.

2. MATERIALS AND METHODS

A qualitative explorative research design was used to understand the information needs of mothers upon discharge of a premature baby from the NICU. The study setting was a NICU of a tertiary public hospital in Gauteng Province in South Africa. The NICU is located within the City of Tshwane Metropolitan Municipality, the capital city of South Africa and the largest metropolitan municipality in the country. In addition to providing intensive care to premature babies from the local catchment area, the NICU receive referred premature or critically ill babies from a large geographical catchment area from rural areas and low-income groups.

2.1. Study Participants

The study population comprised of all mothers whose babies were admitted to the NICU who were preparing for discharge and those whose babies were discharged home and were brought to the hospital for the six weeks check-up. The participants were referrals from the low-resource setting of Mpumalanga province, which does not have an academic hospital, and they were accommodated in the hospital's lodging facility. The sample consisted of ten mothers who were sampled using purposive sampling methods. The sample was controlled by saturation of data [11].

2.2. Data Collection

Unstructured individual interviews were conducted by the researcher at a time that was negotiated with the respective

mothers in a quiet venue commonly used for convening meetings at the hospital. Interviews were conducted after consent was granted by the participants when it was evident that they were fully aware of their participation in the study as well as the purpose of the study. The demographic data of the participants was completed for each interview as the initial information to provide further context and illumination to the findings. In addition, the researcher, used an audiotape recorder during interviews with the consent of participants to capture all the data. Unstructured individual interviews with open-ended questions were conducted using a semi-structured interview guide whereby the following interviewing techniques were used to elicit more information from the participants, for example, probing, clarification and paraphrasing. The interviews were conducted in the language that the participants preferred, English or Afrikaans. Eight interviews were conducted in English according to the participants' preference, and two of the participants answered the questions in Afrikaans. Data collection occurred until saturation was reached after the tenth participant because there was no new information emerging. To ensure autonomy, the participants were informed that they could withdraw from the study at any time without being victimized. Confidentiality was maintained by not attaching names to the collected data, but instead, codes were used. The question asked to the mothers whose babies were still admitted in the NICU was "What information would you like to receive when your baby is discharged?" Those mothers whose babies were already discharged home from the NICU and were brought to the hospital for a check-up answered the following question "What information would you have liked to have received on the discharge of your baby from the NICU?" Each interview lasted for approximately 45 minutes and the data collection period took three months.

2.3. Data Analysis

Data analysis occurred simultaneously with data collection. The recorded interviews were transcribed verbatim and analysed by the second author under the supervision of the first author, who had the knowledge, skill and experience of analysing qualitative data. Tesch's steps [12] were used whereby themes and categories emerged. The steps entailed reading of all transcripts to attain a complete sense of them, then selecting one interesting transcribed interview to comprehend what it meant. Thoughts that were obtained from interviews were written in the margin and related aspects were assembled together to reduce the number of categories. Topics were listed from the margin information and similar ones were grouped together under, for example, important, unique and major. The topics were then allocated codes to the correct part in the transcript. Thereafter, similar meaningful topics were classified and titled according to the most descriptive word for that category. The authors reached a consensus over a number of sessions about the final themes.

2.4. Ethical Considerations

Permission to conduct the study was obtained from the School of Health Care Sciences as well as the Research Ethics Committee at Sefako Makgatho Health Sciences University. The study was also granted permission by the Chief Executive

Officer, the NICU Unit Manager as well as the Ethical Committee of the University of Pretoria. Written informed consent was obtained from each participant before data was collected. Participants were ensured about voluntary participation and confidentiality was maintained by not attaching names to the collected data but using identification codes.

2.5. Trustworthiness

Credibility was obtained by triangulation of sources whereby information was obtained from mothers whose babies were still in hospital and those whose babies were discharged home and were brought to the hospital for a check-up, as well as literature control after data analysis. Transferability was enhanced by making a thick description of the process and results available for other researchers to permit judgments about contextual similarity. To ensure dependability, audit information was audio-recorded and transcribed to minimize the potential for researcher bias. Authenticity was demonstrated through the use of audiotapes during data collection, verbatim transcription and participants' quotes.

3. RESULTS AND DISCUSSION

The findings of this study were based on the data collected by means of unstructured interviews with ten mothers. Five of the ten mothers' babies were still admitted to the NICU, while the remaining five were already discharged home but brought to the hospital for a check-up.

The demographic data of the participants revealed that they were between 23 and 34 years old, with only one being 44 years old. Six of the mothers had other children at home, while the remaining four were first-time mothers. For all of them, it was their first experience of having a prematurely born baby.

The themes and categories related to the mothers' information needs obtained from the ten participants were initially analysed separately, but then correlated and integrated as summarised in Table 1. The codes used to identify the participants are indicated as P1, P2, *etc.*

Table 1. Themes and categories of mothers' information needs.

THEMES	CATEGORIES
Feeding of a prematurely born baby	• Milk feeding
	• Introduction to solid foods
Positioning of the baby	• Best position for baby
Infection control and hygiene of the baby	• Infection prevention
	• Hygiene, bathing and clothing of the baby
Care for a sick baby or baby with special needs	• Administration of medication
	• Warning signs and seeking healthcare
Immunisation and clinic visits	• Immunisation and follow-up clinic visits
Normal development and growth	• Supporting normal growth and development
Information guidelines	• Format of a booklet with guidelines

3.1. Feeding of a Prematurely Born Baby

The mothers explained that breastfeeding is the best method of feeding the baby. They reported that the nurses advised them to breastfeed every three to four hours; however, they have observed that their babies become hungry every two hours, and they would not stop crying even when they are cuddled. The mothers also stated that the nurses discouraged them from bottle feeding to prevent infections, hence they requested more knowledge on this issue. The two most important information needs in this regard were milk feeding and introduction to solid foods.

3.2. Milk Feeding

Milk feeding referred to breast feeding as well as formula feeding. The mothers verbalised the following as information needs regarding feeding:

Everyone knows breast feeding is the best, I am breast feeding. I want to know more about that (P3)

They said I should feed every three-four hours; she gets hungry every three-four hours. I don't know if it's right because she won't stop crying? I noticed that she's hungry every two hours (P4)

They told us we must not feed with bottles because they get dirty and infected, we must breast feed (P2)

The bottles because... I think if you feed with a bottle you give them more than a cup. What is another reason besides not being sterilised not to feed with a bottle? (P2)

The World Health Organization (WHO) advocates breastfeeding as the cornerstone of children's survival, nutrition and early development, and is recommended to be used exclusively for the first six months of life due to several advantages such as reduction in a range of illnesses and improved bonding, growth and development [13, 14]. Breastfeeding reduces the risk of illnesses such as diarrhea, respiratory infections, digestive diseases, asthma, allergies, as well as some neurological illnesses [15]. The reality, though is that not all mothers are able to successfully breastfeed. In such a case, the mother should be informed about the right choice of formula feeding as well as the correct calculation, preparation and storage thereof [16].

3.3. Introducing Solids

The participants indicated that the nurses did not inform them what to feed the baby after six months. They were only told to feed the babies for six months and thereafter introduce food without specifically being told about the type of food to give to babies, hence the mothers need information on when to introduce solids to their babies. The mothers verbalised the following:

After six months, no they didn't tell me how to feed my baby and with what (P1)

They told us to breastfeed babies up to six months, then we can start feeding with food (P2)

They need to tell me food that I should feed my baby with after six months (P4)

The combination of breastfeeding and nutritional solid foods is important, but the assurance of appropriate and quality nutritional solid food which will support growth and development is vital to prevent incidence of under nutrition or malnutrition. It is very important that it is not introduced too early as it might lead to morbidity [16].

According to Palmer and Makrides [17] the use of breastmilk fortifiers and/or premature infant formula that is supplemented with vitamins and minerals is recommended. The authors further asserted that recognizing the baby's readiness for solids will depend on the following developmental signs: the baby has a reduced tongue thrust (protrusion) reflex, is able to sit in a stable, supported position and can hold his/her head up well.

3.4. Positioning of the Baby

Findings from this study reflect that mothers need to know the best position to be adopted by the baby when sleeping. They expressed concern that nurses in NICU have encouraged them to position the baby on the abdomen while those at the KMC informed them lying on the side position. The participants indicated that they were confused about the contradictory information received from nurses and thus required more clarity about these positions.

An example of what a mother wanted clarity on is as follows:

Baby must sleep on tummy but in KMC they told us the baby must sleep on the side? (P2)

Positioning of a premature baby is important as positioning per se could support the safety of the baby during and post feeding, and provide safety and support for the proper psychomotor and neurological development of the baby when growing up [18]. Halverson [19] mentioned that positioning of a baby's head, rotating between the left and right side to prevent positional plagiocephaly, is one of the aspects that should be shared with mothers. Recommendations for positioning to prevent sudden unintentional infant death have been published by the American Academy of Pediatrics [20].

3.5. Infection Control and Hygiene

Caring for a premature baby at home should focus on protecting the baby's vulnerability. Categories identified included infection prevention and hygiene as being essential.

3.6. Infection Prevention

The mothers expressed concern regarding babies being infected since they are going home and everyone will be having access to the baby. They needed to know whether the baby will be infected if many people were allowed access to the baby. The participants needed clarity on how to prevent the baby from being infected as well as how to identify an infected baby.

The following was indicated by the mothers as needs for information regarding infection prevention:

Now that we go home, everyone will have access to the babies, will that cause infections? (P2)

I would like them to tell me how I will recognise if my baby

is infected is it diarrhoea or what is it, what signs are there that the baby is infected (P3)

What can I do to make my baby not to be infected? (4)

Parents should be advised about measures for infection control that entail: good handwashing, cleaning of the babies' room to ensure a dust-free and clean environment [2, 21], limited use of harsh smelling disinfectants, keeping family and visitors who are ill or sneezing away from the baby, limiting contact with other small children who are not family and restricting the number of visitors. Furthermore, they should be informed that babies with a poor weight gain, feeding problems, and dehydration are prone to infections [21].

3.7. Hygiene, Bathing and Clothing

The participants stated that they needed their babies to remain clean hence they needed information on how to maintain the baby's cleanliness. They also needed the nurses to show them how to bath and clothe a premature baby.

The participants indicated the following needs:

My baby must be clean all the time ... I want the nurses to tell me how to clean the baby... (P8)

If they can show and tell me how to bath and clothe a premature baby ... (P2)

They should explain to me regarding the room climate where the baby is kept (6)

A systematic review [22] reported that immersing premature babies in water caused a temperature drop as well as increased the baby's level of stress. Literature shows that premature babies have sensitive skins which dry out quickly; therefore, it is recommended that they be bathed every second to the fourth day except when babies spit often [21, 23]. The authors further asserted that the room should be warm, the water should be luke-warm, and the baby should be washed top-down, be wrapped warmly and then the hair can be washed. This is followed by dressing the baby warmly and putting on a hat to prevent heat loss through the head.

3.8. Care of a Sick Baby or a Baby with Special Needs

Many premature babies are discharged with special needs and home medication from the NICU and it is essential for the mother to continue with treatment at home. Their needs in this regard are especially related to administration of medication, recognition of warning signs and seeking healthcare.

3.9. Administration of Medication

Findings from this study reflect that mothers were eager to learn more about the correct medication for their babies, the effects of medication and how it should be administered to the baby.

Administration of medication was indicated as an information need by the mothers as illustrated by the following:

Which medicine is good for the baby? (P6)

How to take medicine for treatment and yes, what kind of

treatment? (P10)

Jefferies *et al.* [24] pronounced that medication recommended for discharged premature babies is to support their nutritional deficit, immune system, and general health, for example, vitamin D for bone mineralization and iron supplements during their first year for haemoglobin levels and iron stores. According to NANN [21], parents need to be informed why the baby should have the specific medication, how and how much and when the medication should be administered to the baby, the possible side effects of the medication, and what needs to be done if one dose is missed. They also need to know about medication prescriptions and the risks of buying over the counter, storage thereof and the actual administration. They must also be knowledgeable on what the medication is, and how often and for how long the medication should be administered.

3.10. Warning Signs and Seeking Healthcare

The findings of the study revealed that mothers needed information on the first signs that the baby would present, indicating that they needed to seek medical assistance. They needed to be empowered to identify babies with breathing difficulties and know the appropriate time to transport the baby to the hospital. The participants also needed information to recognize signs of infection and what to do when the baby is vomiting. This is supported by the following quotations:

I would like to know what are the first signs, especially with a premature baby. How do I know if her breathing has gone down? When should I come to the hospital? (P10)

I would like them to tell me how I will recognise if my baby is infected - is it diarrhoea or what is it, what signs are there that the baby is infected (P3)

Yes, because it is really confusing ... once they start vomiting, what must I do? (P4)

Researchers emphasise the importance of mothers of premature babies being educated on care principles, but especially on warning signs of illness and when to seek health thus contributing to early diagnosis and treatment and prevention of morbidity and mortality [2, 24]. Similarly, Jefferies *et al.* [24] added that parents should be confident and able to administer medications and any other special medical care, as well as be able to manage emergency situations. The AAP [20] and NANN [21] added information that should be taught to mothers prior to discharge.

3.11. Immunisation and Follow-up Clinic Visits

The mothers expressed dismay at nurses because they were given immunisation charts to keep a record but without any explanation provided. They wanted to know the importance of immunisation and when to visit the clinic for their babies to be immunised. They also expected nurses to inform them about the progress of their babies and to be informed on whether to continue with clinic attendance. The following excerpts support the participants' information needs:

They gave me a pamphlet [immunisation chart] and said I must record everything, but what, why and how? (P3)

Why my baby should be immunised and when? (P3)

I want them to tell me that my baby is fine, and if I must continue the clinic or what ... (P8)

Immunisation is considered important to meet the Sustainable Development Goals of 2030 to further the reduction of child mortality for the age group less than five years [25]. The information should be given to mothers such as in the form of the Road-to-Health booklet [13]. Newman and Parrot [4] stressed the importance of managing prematurely born babies after discharge in terms of vaccination, individual disease management, general medical examinations and for screening that needs to be done for vision, hearing and development, as well as follow-up for specific special needs.

3.12. Normal Development

The participants' aspirations were to have a comprehensive knowledge regarding the premature baby, to know how to take care of and feed the baby. They also sought to know about how to take control of the baby. The mothers demanded to be given the guidelines that would assist them to care for the baby. They also needed information on how to care for a premature baby with Down syndrome. One of the mothers explained that she saw a chart in the baby's file and that she would like to be educated about it. Based on the above-stated information, the participants raised the following needs:

You know, sometimes you want to know everything about a premature baby, how to take care, how to feed and how to take control. They must just give us guidelines (P3)

Yes, some time ago in the file I saw a chart; I would love to know about that (P2)

Yes, I want information about how the micro grows and how to look after it (P8)

Yes, because my baby is not only premature but also Down syndrome (P11)

Developmental care interventions after discharge are dependent on the baby's mother and the family [1]. Parents' active involvement enhances bonding, physiological and psychosocial growth, as well as neuro-psychomotor development [26]. Similarly, Craig *et al.* [27] state that the development of a prematurely born baby should be approached in a collaborative team approach where NICU personnel and parents play vital roles to contribute to the baby's development.

3.13. Information Guidelines

Except for identifying the mothers' information needs, it was also necessary to understand in which format they wanted the information.

The participants needed a user-friendly booklet, with detailed information to consult speedily for information regarding the care of the baby. They articulated a need for guidelines on the management of the baby. They also expressed their anxiety for not knowing when the baby might be sick. Responses from the mothers were as follows:

I would want a booklet that I can consult quickly that has every detail in there that I need to know about bathing,

dressing, etc. (P4).

Very stressed because you never know when she won't be fine. I have a lot of anxiety and I need some guidelines how to manage that (P10).

According to Ferecini *et al.* [28] an information booklet could be utilised in preparing mothers for discharge of the baby through material which was didactically applied and used by mothers to look for answers to their questions and hence providing support to improve health and prevent illness.

CONCLUSION

Information about post-discharge of babies born prematurely is crucial for the continuity of care. The study identified key elements that need to be included in the guidelines discharge booklet. The provision of a guidelines booklet to address their needs was expected to reduce the mothers' anxiety and fears, while providing evidence-based information to enhance appropriate behaviour. In turn, it is expected that this will benefit prematurely born infants.

RECOMMENDATIONS

The findings of this study may add value to the NICUs both in private and public hospitals by enabling the nurses to provide mothers of premature babies' from a low-resource setting with appropriate information to be used when the baby is discharged.

Based on the findings of this study, the researchers recommend that the babies should be breastfed on demand as highlighted by the Department of Health [29] that mothers may feed on demand and be able to recognize the feeding cues from the baby, as it may occur that the baby will, at times, have more frequent feeding days [29]. Lubbe [30] adds that during "growth spurts" at the age of two to three weeks, six weeks, three months, and six months, the baby may require more frequent feeding thus, breastfeeding should revert to two-hourly until sufficient breastmilk is produced and not use food supplements.

Introducing solids to the baby should depend on the baby's developmental milestones. This notion is alluded by Palmer and Makrides [17] that the baby's readiness for solids should be identified by the following developmental signs: the baby has a reduced tongue thrust (protrusion) reflex, is able to sit in a stable supported position, and can hold his/her head up well.

The best positions to be adopted by the baby when sleeping are lying on the side and abdomen with the head turned to the side to prevent aspiration of vomitus if it occurs. According to Halverson [19], changing a premature baby's posture regularly may benefit the development, which shows an enhancement in the neurological and psychomotor assessment.

Mothers of premature babies should maintain infection control by strict hand washing before and after handling the baby as well as keeping the environment clean and well ventilated. Regarding the cleanliness of the baby, the mother should be demonstrated how to perform baby bath.

The nurse should request the mother of a premature baby with special needs to repeat the information given to them

regarding the care of the baby as well as medication frequency, quantity and dosage that would be evident that the mother understood what she was taught. The mother should be provided with telephone numbers for her to contact an appropriate person when she encounters crises regarding the baby, and she should be taught on how to intervene in emergency situations.

Based on immunisation, the mother should be given immunisation chart to keep after a detailed explanation of what it entails and information given on the next date to visit the clinic and the purpose thereof.

Furthermore, the study could be repeated in other provinces, specifically for rural areas, and also address different cultural beliefs. This will assist all mothers of premature babies to be well equipped with the correct information that they need for the survival of their premature babies.

LIMITATIONS OF THE STUDY

The study was contextual, and the purpose was not to generalise the results. The small sample size also constituted a limitation of the study. Even though eight participants preferred to speak English, they might have shed more insight had they used their home language.

LIST OF ABBREVIATIONS

KMC = Kangaroo Mother Care

UNEDSA = University-Based Nursing Education in South Africa

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

Ethical approval was obtained from the ethics committee of Sefako Makgatho Health Sciences University and the ethical committee of the University of Pretoria with approval number MREC/H/268/2012:PG.

HUMAN AND ANIMAL RIGHTS

No animals were used in this research. All human research procedures were followed in accordance with the ethical standards of the committee responsible for human experimentation (institutional and national), and with the Helsinki Declaration of 1975, as revised in 2013.

CONSENT FOR PUBLICATION

Written informed consent was obtained from each participant before data was collected.

AVAILABILITY OF DATA AND MATERIALS

Data supporting the conclusions of the article are available from the corresponding author [M.S.] upon request.

FUNDING

The study was funded as part of a bigger study by UNEDSA with grant number 09-ESA003.

CONFLICT OF INTEREST

The authors declare no conflict of interest, financial or otherwise.

ACKNOWLEDGEMENTS

Declared None.

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