© Kamla-Raj 2015
PRINT: ISSN 0973-5070 ONLINE: 2456-6772
Ethno Med, 9(1): 67-75 (2015)
DOI: 10.31901/24566322.2015/09.01.07

Traditional Medicine and Pregnancy Management: Perceptions of Traditional Health Practitioners in Capricorn District, Limpopo Province

Sonto M. Maputle[1], Tebogo M. Mothiba[2] and Lucy Maliwichi[3]

[1]Advanced Nursing Sciences, School of Health Sciences, University of Venda, Private Bag X5050, Thohoyandou, South Africa 0950
Telephone: +27 5962 8125; E-mail: sonto.maputle@univen.ac.za
[2]Department of Nursing Science, University of Limpopo, Private Bag X1106, Sovenga, South Africa 0727
[3]University of Venda, Department of Consumer Sciences, Private Bag X5050, Thohoyandou, South Africa 0950

KEYWORDS Traditional Medicine. Traditional Health Practitioners. Normal Physiological Changes. Indigenous Health Practices. Evil Spirit. Trimesters

ABSTRACT Treatment with traditional medicine during pregnancy is believed to prevent miscarriage, ensuring proper growth of the foetus and to strengthen the womb against witchcraft and to prevent childhood illnesses. The purpose of the study was to determine how Traditional Health Practitioners (THPs) perceive their management of pregnant women with traditional medicine in Capricorn district of Limpopo province. A qualitative, explorative, descriptive and contextual research design was used. A non-probability purposive, snowball sampling method was used to select eight Traditional Health Practitioners. Data was collected through unstructured face-to-face interview and analysed qualitatively using open coding method. Theme and sub-themes emerged, namely: Traditional medicine used during 1st, 2nd and 3rd trimesters. Contextual health information sessions by health professionals should be held with the THPs, to empower them on the potential risk to the foetus when the mother is given traditional medicine while pregnant. Pregnant women should be discouraged from self-medication and taking the traditional medicine.

INTRODUCTION

Women's experience of pregnancy is not just a medical occurrence but one that also reflects her cultural values, family beliefs as well as her own beliefs (Gross and Bee 2004). In various South African societies, the use of traditional medicines is deeply woven into the cultural and spiritual beliefs (Makunga et al. 2008). The use of traditional medicine is a part of the cultural and religious life of the African people. Nordeng et al. (2014) and Steenkamp (2003) were of the opinion that this is attributable to its accessibility and affordability. According to the World Health Organization, traditional medicines include diverse health practices, approaches, knowledge and beliefs about incorporating plant, animal and/ or mineral based medicines, spiritual therapies, manual techniques and exercises applied singly or in combination to maintain well-being as well as to treat, diagnose or prevent illness (World Health Organisation 2002-2005). The use of herbal products in pregnancy has been studied to different extents in different countries; showing a wide range in its frequency due to cultural and regional differences (Cuzzolino et al. 2010; Nordeng and Haven 2005; Moussally et al. 2009). As in South Africa, in many developing countries including some African countries the use of traditional medicine includes up to 80% of the population (Vyagusa et al. 2013; Bodeker et al. 2007; Medical Research Council 2005). Peltzer et al. (2009) confirmed that the traditional health practitioners are involved in pregnancy care at 88.9 percent, prenatal check-ups at 75.9 percent and conducting postpartum visit at 76.9 percent. It was further indicated that the post natal woman are of the opinion that telling their obstetric provider about having used traditional medicine during pregnancy and or in their perinatal period would affect the care (negatively) given by the obstetric care provider.

Peltzer et al. (2009) spoke to traditional herbalists who revealed that pregnant women consulted them during their pregnancies for the following; lack of foetal movement, being past the due date of delivery, problems with foetal position and false labour, morning sickness, abdominal pain, constipation, heartburn, *umoya omdaka* also referred to as the uterus being "full of

wind" or "dirty", sexually transmitted infections (STIs) and high blood pressure. There are traditional herbal remedies used and given to pregnant women. Treatment in the early stages of pregnancy is believed to prevent miscarriage and to ensure proper growth of the foetus and stability of the woman's health (Broussard et al. 2010; Malan and Neuba 2011). Treatment with traditional medicine at the later stages of pregnancy serves to ensure safe delivery with no complications after delivery (Asowa-Omorodion 1997).

A qualitative study carried out in Cape Town found that majority of their Xhosa speaking participants follow indigenous health practices for both themselves and their babies because of the perceived need to "strengthen" the womb against witchcraft and to prevent childhood illnesses. They also followed indigenous practices to treat symptoms that the biosciences cannot treat. In fact, during pregnancy, herbs and minerals are often used as atonic to clean the womb, to ease delivery, to induce labour, and to protect the child from evil and have a healthy child, as well as for pain, sickness or discomfort (Razafindraibe et al. 2013). This is said to give the pregnant women a sense of security (Abrahams et al. 2002). In former Transkei, a decoction of the roots of *Agapanthus africanus* and *typhasp wa*s given from the third trimester to ensure an easy childbirth, to ensure that the child does not develop bowel trouble and also to ensure that the placenta will be delivered without difficulty. The Mpondo women drink this from the fourth or fifth month of pregnancy while the Xhosa take it in the last two months of pregnancy for the same reasons stated above (Chalmers 1990). This was further confirmed in the study by Mothiba et al. (2012) that there was still the use of traditional medicine for family planning, pregnancy, labour and delivery in Limpopo province. They recommended that health workers need to address issues of utilisation of traditional medicine when attending to clients of childbearing age.

Problem Statement

The maternity unit of one public hospital in Capricorn district recorded several cases in which it was believed that adverse pregnancy outcomes had occurred following the use of traditional medicines during pregnancy. The midwives points that women admitted to have taken traditional medicines commonly drank a mixture called *makgorometsa (herbs given to speed up labour)* which led to violent" labour, foetal distress. Most of the women stated they did not know the potential effects of the traditional medicines and mixtures they were given but continue to use them as instructed by the family member with the THPs. Contrary, Holstet al. (2009) stated that of some concern is that 76 percent of the pregnant women reported of not informing their doctor or midwife that they were using herbal medicines, and that family or friends were the most frequently cited source of information about herbal remedies during pregnancy. The purpose of the present study was to determine the perceptions of THPs on their management of pregnancy through traditional medicine. The objective was to explore and describe the perceptions of THPs on their management of pregnancy through traditional medicine at Capricorn district in Limpopo province.

METHODOLOGY

Research Design

A qualitative, explorative, descriptive and contextual research design was used (de Vos et al. 2006). The design was chosen to assist researchers to obtain complete and accurate information about traditional medicine used for pregnancy by selected BaPedi in the Capricorn District. The contextual interest by the researchers was aimed at understanding events of the study within the concrete, natural context of the participants in which the practices occur.

Sampling

A non-probability purposive, snowball sampling method was used to select participants (de Vos et al. 2006). The criteria for inclusion were, participants should be THPs and should consult and manage pregnant clients at their homes. THPs should have more than two years affiliated with their association because they would have been regulated to practice under the association and believed that he/she would have assisted women during pregnancy. Eight THPs voluntarily consented to participate in the study.

Data Collection Methods

Permission to access the village and conduct the study was obtained from the Chief of

the area. Ethical standards were adhered throughout the interview session regarding privacy, anonymity and confidentiality (DENOSA 1998). The participants were informed that field notes would be written and that a voice recorder would be used to capture the proceedings of the interview sessions. The appointment for data collection was made with the participant. Data was collected at participants' home through unstructured face-to-face interview for about forty five minutes to one hour. The central question was *"could you describe how you manage the pregnant mother with traditional medicine during pregnancy?"* The interviews were conducted in the local language (SePedi) and the voice recordings were transcribed verbatim and translated in English (de Vos et al. 2006). The question was followed by probing as a communication skill which elicited more information from the participants as postulated by (de Vos et al. 2006; Neuman 2011) until data saturation was subsequently reached. The probing 'focussed on each trimester of pregnancy'.

Data Analysis

Tape recordings of the interview sessions conducted were transcribed verbatim. The narrative data from the in-depth interviews were analysed qualitatively using Tesch's open coding method cited in (Creswell 2009; Botman et al. 2011). The method included the following steps: the researcher read carefully through all the transcripts to get a sense of whole. After the completion of all transcripts, a list of similar topics was compiled. Data were grouped according to themes and sub-themes and field notes were also coded and categorized. A literature control was done to contextualise the results of the study (Creswell 2009).

Trustworthiness

Trustworthiness was maintained by using Guba's model (de Vos et al. 2006; Babbie and Mouton 2009). Credibility was ensured by prolonged and varied field experiences where the researchers collected data for a period of two months 2011 September and October until data saturation was reached. Triangulation was ensured by utilisation of the voice recorder to capture all interviews proceedings and field notes were written during interview sessions. Transferability was ensured by using purposive sampling to include the participants in this study. Dense description of the research method was presented to ensure transferability. To collect the precise data with conformity, a voice recorder was used to capture the proceedings of the interview sessions and the field notes were noted in written form.

RESULTS

All the THPs belonged to the Traditional Health Practitioners' Association which was recognised structure in the province as presented in Table 1.

The results reflect the THPs' perceived management of pregnant women by traditional medicine in Polokwane municipality, Capricorn District of Limpopo Province. The study revealed one theme and three sub-themes (Table 2).

Table 2: Themes and sub- themes

Theme	*Sub- themes*
Traditional medicine used during all 3 trimesters of pregnancy	Sub-theme 1.1: Traditional medicine used during 1st trimester Sub-theme 1.2: Traditional medicine used during 2nd trimester Sub-theme 1.3: Traditional medicine used during 3rd trimester

Table 1: Demographic profile of traditional health practitioners

Age	*Duration practising*	*Gender*	*Type of diseases managed*	*Years in the THPs association*
38	4 years	M	All	4 years
44	9 years	M	All	9 years
50	20 years	F	All	Since its inception can't remember the year
53	15years	F	All	Can't remember the year
60	35 years	M	All	Since its inception
65	35 years	F	All	Since its inception
70	40 years	M	All	Since its inception
77	45 years	M	All	Since its inception

DISCUSSION

Theme: Traditional Medicine Used During All 3 Pregnancy Trimesters

The findings of the study revealed that in all the three trimesters traditional medicines are used to treat pregnancy. Participant 3 said *"When a woman is pregnant, she is weak and vulnerable to get any bad air, which is dangerous to the baby. So she needs to be strengthened"*. In various South African societies, the use of traditional medicines is deeply woven into the cultural and spiritual beliefs (Makunga et al. 2008). Herbal medicines have been used during pregnancy and many users take for granted that being of plant origin; they are harmless (Pinn and Pallett 2002; Holst et al. 2009; Forster et al. 2006; Bussmann and Glenn 2010; Wayland 2011). The traditional herbal remedies were used and given to pregnant women; in the early stages of pregnancy is believed to prevent miscarriage and to ensure proper growth of the foetus and stability of the woman's health (Razafindraibe 2013).

However, there are concerns about the safety of traditional medicine especially during pregnancy (Broussard et al. 2010). There may be undetected benefits and risks for pregnant patients on traditional medicine, for example, interactions with other medicines that are administered concurrently or adverse effects due to the actual treatment (Jonas 2005; Peltzer et al. 2009). The Traditional Health Practitioners Act (Act 22 of 2007) provides a regulatory framework to ensure the efficacy, safety and quality of the services traditional healers provide as well as their registration and training (Traditional Health Practitioners Act 22 of 2007). There are traditional herbal remedies used and given to pregnant women. Quotations cited to support the theme were: Participant 5 indicated that *"When the person comes and indicated that she is pregnant with first three months I will have to ask the bones ("ditaola") and ancestors ("badimo") which will guide me on how to treat this woman and which traditional medicine must I use to assist her so that she must not experience severe but only mild abdominal pains and the other traditional medicines will be for preventing things like abortion and abnormal vaginal discharge"*.

Participant 3 said *"I do treat women during pregnancy by taking a piece of cloth that cover the crocodile skin to tie around the abdomen this will prevent abortion. Isn't that you understand that the skin is too hard and you cannot pierce it therefore even with the pregnancy no one can penetrate it and cause abortion."*

Participant 8 said *"Pregnant women are advised not to tell anybody that they are pregnant during the first trimester because people can bewitch their pregnancy and experience abortion, therefore I give them a herb to prevent evil spirits to prevail in that pregnancy."*

Treatment with traditional medicine in the early stages of pregnancy is believed to prevent miscarriage and to ensure proper growth of the foetus and stability of the woman's health (Asowa-Omorodian 1997). The author was, further, of the opinion that it is used to "strengthen" the womb against witchcraft and to prevent childhood illnesses. Treatment at the later stages of pregnancy serves to ensure safe delivery with no complications after delivery (Asowa-Omorodian 1997; Nordeng 2014). Peltzer et al. (2009) spoke to traditional herbalists who revealed that pregnant women consulted them during their pregnancies for the following; lack of foetal movement; being past the due date of delivery; problems with foetal position and false labour; morning sickness, abdominal pain, constipation, heartburn; "*moya omdaka*" also referred to as the uterus being "full of wind" or "dirty"; sexually transmitted infections (STIs) and high blood pressure. The sub-themes that emerged under this theme were; traditional medicines used in 1st trimester, traditional medicines used in 2nd trimester and traditional medicines used in 3rd trimester. This is discussed below.

Sub-theme 1.1: Traditional Medicines Used in 1st Trimester

During the first trimester of pregnancy, hormones of woman's body are triggered to nourish the developing embryo, foetus to become a baby (Cooper et al. 2009). This stage is very critical because the baby body parts are developing. The physiological and emotional changes also occur in the body of the mother under the influence of the oestrogen and progesterone (De Kok and Van Der Walt 2004). In response to the effect of the hormones, the woman will experience pronounce pregnancy minor illnesses. This may be the results of nausea and vomiting from rapidly rising levels of oestrogen and

progesterone, which also breasts to be swollen, tender, tingly or sore. The frequent urination is due to pressure from the enlarging uterus on the bladder. The effects of hormone, further, causes blood vessels to dilate and blood pressure to drop, which might lead to lightheaded or dizziness (Cooper et al. 2009; De Kok and Van Der Walt 2004). The effect of progesterone relaxes the smooth muscles of gastric sphincter and causes regurgitation and slow movements which maybe manifested by experiencing heartburn and constipation. In this paper THPs perceived these normal physiological changes and minor disorder as illness of pregnancy. This was confirmed when participant 2 had to say *"Yaaa... because some women, tell everybody when they have missed a period. This is dangerous because they will be be-witched. That's why they will experience symptoms like abdominal discomfort, swelling of lower limbs, fatigue and dizziness"*. Participant 4 supported by saying *"The pregnant are advised not to tell anybody that they are pregnant especially during the first trimester because people can bewitch their pregnancy". He added by saying "If a woman come and complain about nausea and vomiting I always refer her to hospital to exclude pregnancy before I can start treating her with the traditional medicines to protect her pregnancy"*

Uncomfortable symptoms experienced during pregnancy often begin at the early stages of pregnancy and may disappear by the fourth or fifth month of pregnancy (Chou et al. 2008). The most common uncomfortable symptoms experienced during pregnancy are nausea and vomiting. Other pregnancy symptoms women may experience include back pain, leg cramps, and leg oedema (Fugh-Berman and Kronenberg 2002). Lack of physiological changes' knowledge by THPs, led them to view pregnant women as being ill and be treated with traditional medicine. Management of pregnancy during the first trimester by THPs were cited as;

Participant 6 said" *When the women are pregnant, they are threatened to abort, so roots are tied into small sheaths and boiled. The water is given to the woman to drink every morning.' The 'Roots of "Nembenembe" [name of a tree] are put into a tin, which is buried upside down to prevent abortion' 'At term, the tin is dug out and normal labour can proceed.'*

Participant 7 further said *"to prevent illnesses during pregnancy, we tie the little knots along the ring of grass are herb, Ndzenga (name of a tree) this will help her not to be sick during pregnancy.'* Whereas participant 3 pointed that *"to protect the woman from evil spirits....the string with "lešilahloko" [a herb] is tied on the waist of the woman as a protection. It is supposed to be removed when the woman starts to have contractions."*

Nausea and vomiting are uncomfortable and common complaints encountered in early pregnancy (Meltzer 2000). The quotations of THPs were concurring with what Meltzer (2000) cited as the treatment of nausea and vomiting in pregnancy has traditionally been supportive, with dietary modification for mild cases. Fischer-Rasmussen et al. (1990) cited that ginger root was studied for its effectiveness in reducing the symptoms of hyperemesis gravidarum. They further pointed that ginger (*Zingiber officinale*) is a medicinal herb that has been used since ancient times as an antiemetic. This was further supported by Pinn and Pallett (2002), Medical Research Council (2010), King and Murphy (2009) and Ensiyeh and Sakineh (2010), pointed that ginger is commonly used to treat morning sickness in pregnancy at a dose not exceeding 1g per day. Apparently, ginger acts directly on the gastrointestinal tract by increasing the tone and peristalsis in the gastrointestinal tract through anticholinergic and antiserotonin actions (King and Murphy 2009). In some literature ginger is contra-indicated for use by pregnant women because it also acts as an abortifacient (Abascal and Yarnell 2009).

Sub-theme 1.2: Traditional Medicines Used in 2nd Trimester

During the second trimester of pregnancy the uterus becomes heavier and expands to make room for the baby, the abdomen expands, the physical changes maybe more pronounced. The milk-producing glands become larger as stimulated by estrogen and progesterone (De Kok and Van Der Walt 2004) the baby accounts for some of the weight gain, but also do the placenta, amniotic fluid, larger breasts and uterus, extra fat stores, and increased blood and fluid volume (Cooper et al. 2009; De Kok and Van Der Walt 2004). During this trimester, THPs cited the management of pregnancy with the aim of protection, prevention of evil spirit, maintenance of pregnancy and promotion of health. This was

supported by the following quotes from the following participants;

Participant 5 *said "when the pregnant woman is about 4 to 5 months, she is given either "leta la phofu or mmpayakwena or sehlagasalentshwareletša" [herbs] these herbs are cooked and be drank in the morning and evening to protect the pregnancy."*

Participant 2 also *mentioned the same herbs, and further said "when she is drinking the treatment, she should be given a treatment wrapped in a (string) cloth to be worn on the waist to tighten the pregnancy and this must be untightened when the woman starts labour, these would prevent the occurrence of abortion."*

During this trimester, the woman would also experience Braxton Hicks contractions, the uterus might start contracting to build strength. Other women may experience nasal and gum problems, as during pregnancy there is increased circulation, more blood flows through body's mucous membranes. Increased blood circulation can soften the gums, which might cause minor bleeding when brushing or floss teeth (Cooper et al. 2009; De Kok and Van Der Walt 2004). Most THPs pointed that pregnant women will present with labour like pain before the full-term. The physiological changes of Braxton Hicks contractions were viewed early labour. To manage the following quotes were cited;

Participant 7 indicated that *"To treat a pregnant woman from 6 months is difficult as is a crucial time where she can have problems as people now realise that she is pregnant. I protect her pregnancy so that people who don't like her should be unable to penetrated her pregnancy and the crocodile skin that she will be given to tie around her abdomen will protect the women's pregnancy until delivery." My aim of giving her the treatment is to protect the baby; she must not lose this baby."* In the former Transkei the Mpondo women, were given a decoction of the roots of *Agapanthus africanus* and *typhasp* to drink from the fourth or fifth month of pregnancy while the Xhosa would take it in the last two months of pregnancy to ensure an easy childbirth, and also to ensure that the placenta will be delivered without difficulty (Kaido et al. 1997). Nordeng (2014) pointed that at Mali *"Suregada boiviniana"* was used to help to evacuate the placenta.

Sub-theme 1.3: Traditional Medicines Used in 3rd Trimester

The third trimester of pregnancy can be physically and emotionally challenging. The baby's size and position might make it hard for the woman gets comfortable (Cooper et al. 2009; De Kok and Van Der Walt 2004). The THPs cited that they continued with most of the traditional medicine that were given from the first trimester. Treatment at the later stages of pregnancy served to ensure safe delivery with no complications after delivery. Some of the THPs management during this trimester were cited as;

Participant 1said "wh*en the pregnant woman's breasts are discharging colostrum "matutu" white stuff, the treatment to be given is "dilotšabanyana [herb] is ground and burned. Two small incisions are made and this herb rubbed on the breast to prepare the mother for effective breastfeeding."*

In preparation for labour, participant 7 said *"I give a slippery herb called "isikhukhukhu" for a mother to drink during the third trimester, that is, the foetus will loosen from the mother's flesh and the hips open up this will make the baby to slip out during delivery."* He further said, *"You know.....the woman must continue to engage in sexual relations especially during the third trimester as this will widen the outlet and pelvic muscles will be ready for birthing."*

Participant 6 said, *"I heard that in Zimbabwe, during the last trimester they take the donkey's placenta, it is soaked in boiled water and given to the woman to drink. The woman should leave the cup to drop on its own so that the baby can be delivered naturally without assistance."*

Traditionally during pregnancy, herbs and minerals are often used as a tonic to clean the womb, to ease delivery, to induce labour, and to protect the child from evil and have a healthy child, as well as for pain, sickness or discomfort (Abrahams et al. 2009). This is said to give the pregnant women a sense of security (Kaido et al. 1997). In former Transkei, a decoction of the roots of *Agapanthus africanus* and *typhasp* is taken from the third trimester to ensure an easy childbirth, to ensure that the child does not develop bowel trouble; and also to ensure that the placenta will be delivered without difficulty (Abrahams et al. 2009). Raspberry (*Rubusidaeus*) leaves can be taken during pregnancy in the form of a tea and serve to strengthen the uterus

(Brandt and Muller 1995; Barnes 2007). This is said to be only safe to use in the last trimester of pregnancy (Barnes 2003; Holst et al. 2007). It is believed to also prevent miscarriage as well as to aid in labour by making it easier (Nordeng 2014; Jean-Jacques 2010; Wilkinson 2000). The other herb used during the third trimester is *"Imbelikisane"* is usually given to women in the last month of pregnancy to ease labour (Abrahams et al. 2002). THPs used traditional medicine to manage and protect pregnancy during all trimesters.

However, the pharmacological action as well as the pharmacokinetics of medicines (traditional) is influenced by the physiological changes occurring in the woman's body during the course of the pregnancy (Gibbon 2008; Hansen et al. 2002). These changes include; increased plasma volume in the later stage of pregnancy resulting in a greater volume of distribution of a number of medicines; changes in the binding of medicines due to alterations in plasma protein; changes in elimination and hepatic metabolism and increased renal elimination as well as effects on the rate and extent of absorption of the medicine due to alterations in gastrointestinal function (Gibbon 2008). This may have negative effect on pregnancy outcome.

CONCLUSION

The risk of harm caused by traditional medicine exists throughout the entire pregnancy and is not just limited to the first trimester. Attention should be paid to the potentially harmful effects of any traditional medicine that is given to a pregnant mother. Collaborating with THPs on the safe use of traditional medicine in pregnancy may promote safer pregnancies and better health outcomes for mothers and their unborn babies in Capricorn district.

RECOMMENDATIONS

Safety and good maternal health care is crucial to contribute to the achievement of Millennium Development Goals number 4 and 5, namely, to reduce child mortality and to improve maternal health. Midwives and THPs should be involved in Health awareness on maternal care issues. Maternal health education and promotion interventions should focus on safe utilisation of traditional medicine during pregnancy. Contextual health information sessions by health professionals should be held with the THPs, to empower them on the potential risk to the foetus when the mother is given traditional medicine while pregnant. Pregnant women should be discouraged from self-medication and taking the traditional medicine.

REFERENCES

Abascal K, Yarnell E 2009. Clinical uses of Zingiberofficinale (Ginger). *Alternative and Complementary Therapies,* 231-237.

Abrahams N, Jewkes R, Mvo Z 2002. Indigenous Healing Practices and Self-medication Amongst Pregnant Women in Cape Town, South Africa. African Journal of Reproductive Health, 6(2): 79-80. From <http://www.tspace.library.utoronto.ca/html/1807/21336/rh02024.html1> (Retrieved on 20 August 2013).

Asowa-Omorodion FI 1997. Women's perceptions of the complications of pregnancy and childbirth in two Esan communities, Edo state, Nigeria. *Social Science and Medicine,* 44(12): 1817-1824.

Babbie E, Mouton J 2009. *The Practice of Social Research*. Cape Town: Oxford University Press, South Africa

Barnes J 2003. Pharmacovigilance of herbal medicines: A United Kingdom perspective. *Drug Safety,* 26(12): 829-851.

Bodeker G, Neumann C, Ong CK, Burdford G 2007. Training. In: G Bodeker, G Burford (Eds.): *Traditional, Complementary and Alternative Medicine: Policy and Public Health Perspectives.* London: Imperial College Press, pp. 61-82.

Bodeker G, Burford G 2007. *Traditional, Complementary and Alternative Medicine: Policy and Public Health Perspectives.* London: Imperial College Press.

Botma Y, Greeff M, Mulaudzi FM, Wright SCD 2011. *Research in Health Sciences*. Cape Town: Heinemann.

Bussmann RW, Glenn A 2010. Medicinal plants used in Northern Peru for reproductive problems and female health. *Journal of Ethnobiology and Ethnomedicine*, 6: 30: doi:10.1186/1746-4269-6-30.

Brandt HD, Muller GJ 1995. Traditional medicines and acute poisoning. *Journal of Continuing Medical Education*, 13(9): 1053-1060.

Broussard CS, Louik C, Honein MA, Mitchell AA 2010. Herbal use before and during pregnancy. *American Journal of Obstetrics and Gynaecology,* 202(5): 443.e1-6. doi: 10.1016/j.ajog.2009.10.865.

Chou FH, Avant KC, Kuo SH, Fetzer SJ 2008. Relationships between nausea and vomiting, perceived stress, social support, pregnancy planning, and psychosocial adaptation in a sample of mothers: A questionnaire survey. *International Journal of Nursing Studies*, 45(8): 1185-1191.

Cooper MA, Frazer, MD, Nolte AGW 2009. *Myles Textbook for Midwives.* United States of America: Churchill Living Stone Elsevier.

Cuzzolin L, Franani Pesenti F, Verlato G, Joppi M, Baldelli P, Benoni G 2010. Use of herbal products

among 392 Italian pregnant women: Focus on pregnancy outcome. *Pharmacoepidemiology Drug Safety*, 19: 1151-1158.

Cresswell JW 2009. *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. Thousand Oaks: Sage.

De Kock J, Van Der Walt C 2004. *Maternal and Newborn Care: A Complete Guide for Midwives and Other Health Professionals.* Cape Town: Juta and Company Limited.

Democratic Nursing Organisation of South Africa (DENOSA) 1998. *Position Statement.* Pretoria: DENOSA.

de Vos AS, Strydom H, Fouché C, Delport C 2006. *Research at Grassroots for the Social Sciences and Human Service Professions.* Pretoria: JL Van Schaik.

Ensiyeh J, Sakineh MAC 2010. Comparing ginger and vitamin B6 for the treatment of nausea and vomiting in pregnancy: Next term a randomised controlled trial. *Midwifery*, 25(6): 237-251.

Fischer-Rasmussen W, Kjaer SK, Dahl C, Asping U 1990. Ginger treatment of hyperemesis gravidarum. *European Journal of Obstetrics and Gynaecology and Reproductive Biology,* 38: 19-24.

Forster DA, Denning A, Wills G, Bolger M, McCarthy E 2006. Herbal medicine use during pregnancy in a group of Australian women. *BioMedi C Pregnancy and Childbirth*, 6(21). doi:10.1186/1471-2393-6-21.

Fugh-Berman A, Kronenberg F 2003. Complementary and Alternative Medicine (CAM) in Reproductive-Age Women: A Review of Randomised Controlled Trials, 17: 137-152. From <http://www. fughberman. com/files/Reprotox2002.pdf> (Retrieved on 21 April 2014).

Gibbon CJ 2008. *South African Medicines Formulary*. Cape Town: Health and Medical Publishing Group of the South African Medical Association, pp. 1-29.

Gross H, Bee PE 2004. Perceptions of effective advice in pregnancy: The case of activity. *Clinical Effectiveness in Nursing,* 8(3-4): 161-169.

Hansen WF, Peacock AE, Yankowitz J 2002. Safe prescribing practices in pregnancy and lactation*. Journal of Midwifery and Women's Health*, 47(6): 409-421.

Holst L, Wright D, Nordeng H, Haavik S 2009. Use of herbal preparations during pregnancy: Focus group discussions among expectant mothers attending a hospital antenatal clinic in Norwich, UK. *Complementary Therapies in Clinical Practice,* 15(4): 225-229.

Holst L, Haavik S, Nordeng H 2009. Raspberry leaf-Should it be recommended to pregnant women? *Complementary Therapies in Clinical Practice*, 15(4): 204-208.

Holst L, Wright D, Haavik S, Nordeng H 2009. The use and user of herbal medicines during pregnancy. *Journal of Alternative and Complementary Medicine,* 15: 787-792.

Kaido TL, Veale DJH, Harlik I, Rama DBK 1997. Preliminary screening of plants used in South Africa as traditional herbal remedies during pregnancy and labour. *Journal of Ethnopharmacology,* 55(3): 185-191.

King TI, Murphy PA 2009. Evidence-based approaches to managing nausea and vomiting in early pregnancy. *Journal of Midwifery and Women's Health*, 54(6): 430-444.

Malan DF, Neuba DF 2011. Traditional practices and medicinal plants use during pregnancy by Anyi-Ndenye women (Eastern Cote d'Ivoire). *African Journal of Reproductive Health*, 15: 85-93.

Makunga NP, Philander LE, Smith M 2008. Current perspectives on an emerging formal natural products sector in South Africa. *Journal of Ethnopharmacology*, 119(3): 365-375.

Medical Research Council 2005. Global Experiences of Traditional Medicine. CSIR Department of Health 19-35. From <http://www.amazonaws.com/zanran_storage/www.sahealthinfo.org/ContentPages/3424431.df> (Retrieved on 24 June 2014).

Meltzer DI 2000. Complementary therapies for nausea and vomiting in early pregnancy. *Family Practice,* 17: 570-573.

Moussally K, Oraichi D Bérard A 2009. Herbal products use during pregnancy: Prevalence and predictors. *Pharmacoepidemiology Drug Safety,* 18(6): 154-161.

Neuman WL 2011. *Social Research Methods: Qualitative and Quantitative Approaches*. 6th Edition. Boston: Pearson Education. Inc.

Nordeng H, Al-Zayadi W, Diallo D, Ballo N, Paulsen B 2014. Traditional Medicine Practitioners' Knowledge and Views on Treatment of Pregnant Women in Three Regions of Mali. Journal of Ethnobiology and Ethnomedicine, 9: 67. From <http://www. ethnobiomed. com/content/9/1/67> (Retrieved on 26 November 2014).

Nordeng H, Haven GC 2005. Impact of socio-demographic factors, knowledge and attitudes onthe use of herbal drugs in pregnancy. *Acta Obstetricia et Gynecologica Scandinavica*, 84(1): 26-33.

Peltzer K, Phaswana-Mafuyana N, Treger L 2009. Use of traditional and complementary health practices in prenatal delivery and postnatal care in the context of HIV transmission from mother to child (PMTCT) in the Eastern Cape, South Africa. *African Journal of Traditional, Complementary and Alternative Medicine,* 6(2): 155-162.

Razafindraibe M, Kuhlman AR, Rabarison H, Rakotoarimanana V, Rajeriarison C, Rakotoarivelo N, Randrianarivony T, Rakotoarivony F, Ludovic R, Randrianasolo A, Bussmann RW 2013. Medicinal plants used by women from Agnalazaha littoral forest (Southeastern Madagascar. *Journal of Ethnobiology and Ethnomedicine*, 9: 73. doi: 10.1186/1746-4269-9-73.

Pinn G, Pallett L 2002. Herbal medicine in pregnancy. *Complementary Therapy in Nursing and Midwifery,* 8(2): 77-80.

Smith-Hall C, Overgaard Larsen H, Pouliot M 2012. People, plants and health: A conceptual framework for assessing changes in medicinal plant consumption**.** *Journal of Ethnobiology and Ethnomedicine,* 8: 43.

Steenkamp V 2003. Traditional remedies used by South African women for gynaecological complaints. *Journal of Ethnopharmacology,* 86: 97-108.

Traditional Health Practitioners Act 22 of 2007. From <http://www.ecdoh.gov.za/uploads/files/270509 145758.pdf> (Retrieved on 16 July 2014).

Vyagusa DB, Mubyazi GM, Masatu M 2013. Involving traditional birth attendants in emergency obstetric care in Tanzania: Policy implications of a study of their knowledge and practices in Kigoma Rural District**.** *International Journal for Equity in Health*, 12: 83. doi: 10.1186/1475-9276-12-83

Wayland C 2011. Gendering local knowledge: Medicinal plant use and primary healthcare in the Amazon. *Medical Anthropology Quarterly*, 15(2): 171-188.

World Health Organization 2002 .Traditional Medicines Strategy 2002-2005. Geneva, Switzerland: WHO. From <http://whqlibdoc.who.int/hq/2002/who_edm_trm_2002.1.pdf> (Retrieved on 19 July 2014).