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Research Article

Self-Medication among Pregnant Women in Effutu and Agona West Municipalities of the Central Region of Ghana

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Abstract

Self-medication in pregnancy is a health concern in Ghana. We assessed the practice among 136 pregnant women in Effutu and Agona West Municipalities using a facility-based, cross-sectional design and a mixed method approach of data collection. Data analysis used SPSS and manual content analysis. Results show that pregnant women of all backgrounds self-medicate, with prevalence of 69%, motivated by cheaper treatment cost (17%), minor ailments (29%) and positive outcomes (33%). Commonly used medications include antibiotics (23%), pain killers (20%) and herbal preparations (19%). Preventing self-medication in pregnancy therefore requires awareness creation and evidence based Social Behavioral Change Communication on associated dangers.

Keywords:
Self-Medication; Pregnant Women; Municipalities; Ghana.

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Introduction

Self-medication is a global phenomenon that has attracted lots of public and professional concerns[5], [6],[14],[16]. Approximately 80% of the world's population self-medicate in one form or the other using conventional and non-conventional medicines as the first source of health care (Sulaiman, Ahmad & Daud, 2008). The act of self-medication cuts across both developed and developing countries for various reasons. It is estimated that one third and half of the population in the US and UK respectively practice self-medication[3].

In Africa, Southern America and some parts of Asia, self-medication is the most common form of health seeking behaviors Oreagba et al. 2010[5],[9]. Recent studies have shown that self-medication is in a "crisis state" particularly in rural Africa due to the high prevalence of the practice[1]. In Nigeria and Ghana, self-medication is the commonest means by which people cope with diseases such that one in every two Ghanaians self-medicates in times of ill health[22]. Conventionally, pregnancy is not a state of ill health or disease. Yet, it still remains a health risk (Speidel, Rocca, Thompson & Harper, 2013). There are various medical and physiological challenges associated with it, making drug use unavoidable in pregnancy. Although harmful to mother and fetus, most pregnant women self-medicate with drugs which either do not provide adequate information on safety in pregnancy or are not endorsed for use by pregnant women[8],[23].

Research has further suggested that the renal function and metabolic pathway of fetus develop late in pregnancy and can result in placental transfer and drug accumulation in fetus, making the use of Over-the-Counter (OTC) medicines in pregnancy dangerous and deadly to fetus[15]. Self-medication among pregnant women has also been found to result in prolong period of invalid and premature death and affect pregnancy outcomes[19],[25]. Poor access to healthcare services, easy access to medicines on the open market and poor regulations on the marketing of medicines among others have been cited in literature as factors that influence self-medication among pregnant women (Blenkinsopp & Bradley, 1996)[7].

In Ghana, self-medication has attracted public and professional concerns in recent times due to the use and abuse of analgesics, antibiotics and aphrodisiacs.[12] There is easy access to non-prescribed medicines (traditional, scientific herbal and conventional medicines) and most Ghanaians use medications for treatment of their ailment without prescription[7]. Although reported by few community-based studies in Ghana that most Ghanaian women practice self-medication during pregnancy[4], data on factors associated with self-medication practice among pregnant women is lacking and the effect of the practice on the lives of pregnant women and fetus is also scanty. The authors therefore in this study assessed self-medication practices and views on self-medication among pregnant women in two Municipalities in the Central Region of Ghana, an environment where financial barriers to maternity services have been removed and where skilled attendants and health facilities are relatively available. Ghana has however fairly improved access to maternity service and antenatal care coverage has increased in the last five years. Over 80% of pregnant women visit the health facility at least once in the life of their pregnancies and 76% make at least four visits in the life of their pregnancy[13]. Yet, 45% out of the majority who visit health facilities do not seek antenatal care in the first trimester of pregnancy and 11% make their first visit to a health facility in the third trimester[13] and are therefore likely to self-medicate during these periods if required.

In this study we assessed self-medication practices among pregnant women in Effutu and Agona West Municipalities in the Central Region of Ghana to inform public health policies and programs

interventions. Findings from this study indicated the use of herbal/traditional, natural remedies and conventional medicines for treating symptoms of headache, heartburns, nausea, lower abdominal pain and vaginal infections. These findings are similar to research findings from Tazania, Congo, Pakistan and Norway [17],[18],[20]. The findings also indicated that the decision to self-medicate is driven by desire for prompt relief from pregnancy related challenges and the desire to achieve positive pregnancy outcomes. Pressure from social relations, easiness of administration of medication and preference for herbal/traditional medicine in pregnancy were perceived to be some of the factors that also influenced self-medication among pregnant women in the study area.

Methodology and Method

Study Area

According to the 2017 Annual Report of the Municipal Health Directorates, Effutu and Agona West Municipalities are two out of the 20 districts in the Central Region of Ghana. Winneba and Agona-Swedru are their respective capital towns. Effutu Municipal has a total land area of 417.3 square kilometers and a population of 79,411. Agona West Municipal on the other hand has a land area of 447 square kilometers and a population of 138,553. Women in fertility age (15 – 49 years) in Effutu and Agona West are 18,265 and 38,465 respectively. Both Municipalities have a fertility rate of 3.2%. Administratively the two Municipalities are divided into sub-municipalities. Effutu Municipal has four sub-municipalities (that is, south east, south west Winneba, Essuekyir-Gyahadzeand, Kojo-Beedu North – Low cost sub-municipalities). Agona West Municipal is divided into five sub-municipalities. Namely: Swedru, Nyakrom, Nkum, Bobikuma and Abodom sub-municipalities. The health systems in both municipalities are organized at the municipal, sub-municipal and community levels. Effutu Municipal has 12 health facilities made up of public, mission-based, quasi-governmental and private facilities. Agona West Municipal on the other hand has 16 health facilities (public and private inclusive).

Recruitment of Participants

Recruitment of participants hinged on the study population, sample size and techniques. With these, the inclusion criteria were all pregnant women attending ANC clinics in the study area. The authors focused on pregnant women in both municipalities using a cross-sectional descriptive design and a mixed method approach (methodological triangulation) to collect data. A sample of 136 pregnant women selected from Antenatal Care (ANC) clinics in the two municipalities participated in the study. Three sampling stages were involved. The first sampling stage involved a random selection of sub-municipalities. At this stage, three sub-municipalities were selected from each of the two municipalities at random. The second stage involved random selection of health facilities from the sampled sub-municipalities. Six and five health facilities were randomly selected from the Effutu and Agona West Municipalities respectively at this stage. The third stage involved sampling of respondents from the identified health facilities in the Effutu and Agona West Municipalities. In doing this, purposive sampling was used to select 100 pregnant women in the third trimester of pregnancy for the quantitative part of the study. An additional 36 pregnant women of all gestations were also sampled for the qualitative part of the study to explore in-depth views on self-medication practices in pregnancy. The sampling ensured an equal number of respondents in both municipalities to prevent any bias. To qualify as a participant for both the quantitative and qualitative aspects of the study, a female must be 15 years and above and must be at least in her third trimester of pregnancy. All participants were selected from antenatal clinics of the participating health facilities.

Data Collection and Analysis

Data was collected using a pretested structured questionnaire and focus group discussion guide. The research instruments were developed by the authors based on extensive literature review and anecdotal evidence on the research topic. The questionnaires were tested among 10 pregnant women and the focus group discussion guide was tested among 5 pregnant women. The quantitative instrument was tested for content validity and reliability. The qualitative instrument was tested for content validity only. The Questionnaires were self-administered by the authors after respondents had consented to participate in

the study. Interviews were done in both English and in "fante" (the lingua franca of the people of Effutu and Agona West Municipalities). The quantitative data was collected in May, 2018.

The focus group discussion guide was developed based on analysis from the quantitative data. Six groups of six respondents were created for the focus group discussion. Some respondents who earlier participated in the interviews and were also willing to be part of the focus group discussions were selected and briefed on the process. Consented participants were randomly assigned to groups and discussions were done in six sessions. Questions for discussion centered on the following themes: 1). Common pregnancy related medical and physiological conditions experienced during pregnancy. 2). Means adopted to treat these conditions. 3). Pregnant women's understanding of self-medication. 4). Common practices and medications used. 5). Factors responsible for self-medication. 6). Reasons for self-medication. 7) Challenges associated with self-medication if any (Please, see supplementary file for research instruments). Because all respondents speak fante, discussions were done in 'fante' and were moderated by the first author. Data was collected through field notes and audio recordings by two field assistants fluent in both English language and 'fante'. Follow-up questions were discussed one after the other until issues related to each question were exhausted and responses were taken in turns from participants. The qualitative data was collected in July, 2018.

For the data analysis, quantitative data was coded and entered into Statistical Package for Social Sciences (SPSS version 20.0). Questionnaires were checked for reliability (Cronbach's alpha value of 0.85). Descriptive statistics was used and data was presented in frequencies and percentages. The quantitative data was analyzed in June, 2018. The qualitative data was analyzed using content analysis. Audio data was transcribed by the second author immediately after the discussions and was added to the field notes. Transcribed data was read through severally by the first author and brief notes on useful information were made. Relevant information was identified from the notes and grouped into broad themes after a thorough discussion with co-author. The themes were further revised and arranged into categories and sub-categories and triangulated with the quantitative results. The main categories and subcategories were further compared with the typed script to ensure that none of the relevant information was missing.

Ethical Considerations

The study proposal was first presented at the Faculty of Science Education, University of Education, Winneba biweekly seminars for academic review. This seminar brings together lecturers and research fellows of the University to review research protocols and papers meant for publication. Comments to ensure ethical suitability for data collection and publication were raised to revise the proposal accordingly. Written permissions were obtained from the Effutu and Agona Municipal Health Directorates as well as the facilities used for data collection. All respondents used in the study voluntarily consented to participate and for publication of results.

Results

(Table 1) presents the demographic characteristics of respondents. With a response rate of 100% and a mean age of 29±5, exactly 36.8% and 34.6% of the respondents were between the ages of 26 and 30 years and were in the third trimester respectively. The majority (77.9%) of respondents were married with at least 3 children and predominantly (86%) Christians. Table 1

Table 1. Demographic characteristics of respondents (N = 136)

Demographic Characteristics	Frequency	Percentage (%)
Age		
Mean age	**29±5**	
15-20	12	8.8
21-25	24	17.6

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Table 1 (continued)

Demographic Characteristics	Frequency	Percentage (%)
26-30	50	36.8
31-35	23	16.9
36-40	19	14
41-50	6	4.4
46+	2	1.5
Total	**136**	**100**
Religion		
Christian	117	86
Muslim	16	11.8
Others	3	2.2
Total	**136**	**100**
Education		
Tertiary	31	22.8
Secondary	47	34.6
Basic	52	38.2
No education	6	4.4
Total	**136**	**100**
Marital status		
Married	106	77.9
Single	22	16.2
Divorced	5	3.7
Widowed	3	2.2
Total	**136**	**100**
Occupation		
Student	20	14.8
Self-employment	85	62.5
Paid employment	24	17.6
Unemployed	7	5.1
Total	**136**	**100**
Age of Pregnancy		
4-6 months	15	11

Table 1 (continued)

Demographic Characteristics	Frequency	Percentage (%)
7 months	47	34.6
8 months	47	34.6
9 months	27	19.8
Total	**136**	**100**
Parity		
primiparous	40	29.4
1	30	22.1
2	28	20.6
3+	38	27.9
Total	**136**	**100**

Source: Constructed by authors using field data

Self-medication appeared to have been a common practice among pregnant women of all background characteristics in the study area. More than 88% of the respondents indicated that they attend ANC regularly. Yet, the results indicate that more than half (69%) of the respondents self-medicate for various reasons. Headache (37%) emerged as the commonest symptom treated by self-medication. Medicines commonly used included antibiotics (23%), pain killers (20%) and herbal preparations (19%). Among the 67 respondents who indicated practicing self-medication, 33% mentioned that they were relieved of the symptoms. Table 2.

Table 2. Self-medication practices of pregnant women. (N= 100)

Description	Frequency	Percentage (%)
Ever self-medicated		
Yes	69	69
No.	31	31
Total	100	100
ANC Visits		
Once every month	88	88
First time	12	12
Total	100	100
Reasons		
Reduced cost of treatment	17	25.4
Simple disease condition	29	43.3
Previous experience	14	20.9
Long waiting time	7	10.4

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Table 2 (continued)

Description	Frequency	Percentage (%)
Total	67	100
Symptoms		
Headache	37	55.2
Cold and flu	2	3
Lower abdominal pains	12	17.9
Vagina infection	2	3
Malaria	6	9
Body pains	8	11.9
Total	67	100
No. of sick days		
1-2	30	44.8
2-4	23	34.3
5-6	14	20.9
Total	67	100
Medicines commonly used		
Antibiotics	23	34.3
Pain killers	20	29.9
Antacids	5	7.5
Herbal medicines	19	28.4
Total	67	100
Relief from sickness		
Yes	33	49.3
No	34	50.7
Total	67	100
Side effect		
Yes	0	0
No	67	100
Total	67	100

Source: constructed by authors using field data

(Table 3) presents the results of the focus group discussions. Six main categories and several sub-categories emerged from the discussions.

Table 3. Results of focus group discussions in Effutu and Agona West Municipalities (N=36)

Main categories	Sub-categories
Notions about Self-medication	Ideas about self-medication Perceived dangers
Medications	Conventional medicines Non-conventional medicines Preferences
Pregnant Women's preferences	Easiness of administration Limited drug reaction Pregnancy induced side effect Unavoidable nature of the medication Anecdotes
Drivers of self-medication	Quick respite from pregnancy related conditions Desire for prompt and easy labor Desire for strong healthy baby
Available means	Consultation with healthcare Professional Consultation with TBAs Self-care
Perceived personal factors of self-medication	Previous experience Paternal and maternal education Choice Pressure from social relations perceived severity of the condition concurrence between visit and sickness long waiting time poor interpersonal care perceived cost of maternity services

Source: constructed by authors using field data

Notions about Self-Medication

Two sub-categories (ideas about self-medication and perceived dangers) emerged under this category. Responses from the discussions indicated that most pregnant women had a broad understanding of self-medication and its associated risk. However, few of the women were ignorant of the concept. Some pregnant women explained self-medication and said:

This time around people use weedicide/herbicides on the plants, these chemicals have side effects of which we don't know so self-medication especially with the herbal medicines can have serious side effects on us.

taking drugs prescribed by a TBA is not self-medication because they also give medicines based on the knowledge they have about medications. Please, see appendix I for additional illustrative quotes

Medications

This category had conventional medicines, non-conventional medicines and preferences as sub-categories. Some of the respondents named modern scientific (conventional) medicines such as Analgesics, Antibiotics, antacid, Antiemetics and Multi-vitamins as medicines they self-medicate with. These medicines were either OTC medicines or left over medicines prescribed by doctors and midwives. Others mentioned the use of herbal medicines and natural remedies such as roots and leaves of trees, fruits, vegetables, spices, baked clay (known as "shile" in Akan) and other herbal medicines prescribed by TBAs. Both medicines were used to treat symptoms such as headache, nausea, dizziness, numbness of lower limbs, lower abdominal pains, candida infection or vaginal infections and vomiting. Common routes of administration of herbal medicines were anal (through enema) and oral administration. Some pregnant women shared their experiences and said:

I use paracetamol for my abdominal pains.

I do not take any drugs for minor ailments..... I will wait for my visit time.

I use leftover medicines…… but I go to hospital if the condition is getting worse. Please, see appendix I for additional illustrative quotes.

Pregnant Women's Preferences

This category had Easiness of administration,

Limited drug reaction, Pregnancy induced side effect, Unavoidable nature of the medication and Anecdotes as sub-categories. Most of the respondents indicated preference for herbal medicines to conventional ones. These pregnant women pointed out that they use conventional medicines because that is what the treatment protocol of hospitals provides and that the pregnancy makes them experience lots of side effects when they use conventional medicines. Others also said they are able to tolerate herbal and other traditional preparations compared to the conventional ones. A significant number of them mentioned that they will choose herbal medicines over the conventional ones when given the opportunity. Reasons such as easiness of administration and no pregnancy induced side effect were given to support their preference for herbal medicine. Some respondents had these to share:

I like herbal medicines …. but when it comes to the conventional medicines you don't have a choice because as long as you are pregnant you are made to take them….taking herbal medicines through enema is never a problem for me, even for hundred times…. but taking conventional medicines orally is something I dislike. Please see appendix I for additional illustrative quotes.

Drivers of Self-Medication

This category presents information on the intense longings of pregnant women for relief from the challenges of pregnancy that motivate or drive them to look for and accept remedies that will reduce the discomfort associated with pregnancy and also get good birth outcomes. The sub-categories include quick respite from pregnancy related conditions, desire for prompt and easy labor and desire for a strong and a healthy baby. Most pregnant women indicated that they self-medicate because of the deep desire to gain relief from the uncomfortable conditions they experience. Others mentioned that they use traditional or herbal preparations and explained that they do so in order to have healthy babies and quick delivery. Some women had these to say:

Pregnancy is not an easy task…… the kind of discomfort we feel most times make us look for relief…… in my last pregnancy, I experienced prolong lower abdominal pains (a condition known as " bodze " in the " fante " language) and was admitted at the hospital but the medication didn't relieve me of the condition at all….my mother got me traditional medicine days after I was discharged from the hospital and that sickness left me....

I prefer the herbal medicines because I was told that, it makes the baby healthier and stronger.....I even learnt that some of the herbal medicines make the baby hairy. Please, see appendix I for additional illustrative quotes.

Available Means

This category presents the means available to pregnant women to seek relief from pregnancy related conditions. Sub-categories that emerged include consultation with healthcare professionals, Self-care and consultation with TBAs. Pregnant women indicated three main avenues (ANC visit, self-medication and use of TBAs) by which they seek relief in times of sickness and discomfort. Their choice however depended on the age of the pregnancy, their perception about the disease condition and the severity of the condition. Some respondents had these to say:

I visit the TBA in the first trimester and go for ANC when I am in the second trimester.

I take drugs that I know much about if the ailment is minor and my appointment with the midwife is not due.

I experienced severe lower abdominal pains (known as "bodze" in 'fante') and my mother told me that hospital medicines could not treat it.....she took me to an old lady and I was given some traditional medicine to treat it.... and I was relieved of the condition. Please see appendix I for additional illustrative quotes.

Perceived Personal Factors of Self-Medication

This category presents factors that are perceived by pregnant women to dispose them to self-medication. This category has previous experience, occupation, Choice, Pressure from social relations, perceived severity of the condition, concurrence between visit and sickness, long waiting time, poor interpersonal care and perceived cost of maternity services. According to pregnant women these are the factors that

predispose them to either self-medicate or seek professional care. Some pregnant women had these to share:

mothers-in-law are more influential in making us use herbal medicines especially if they are expecting their first grandchild from you. After delivery I intended to do exclusive breastfeeding for 6 month .... My mother agreed but my mother-in-law never accepted it.

I will listen to my mother and grandmother..... will do what they say because they have good experience when it comes to pregnancy.

my husband always warns me about self-medication and always advices me to seek medical help from the hospital. Please see appendix I for additional illustrative quotes.

Discussion

Early antenatal care seeking behavior provides pregnant women with the needed care and prescriptions of nutritional supplements as well as safe medications necessary for health of the woman and fetus[21]. The majority of pregnant women in this study made a visit to ANC clinics once every month. Yet, prevalence of self-medication was very high which is consistent with finding from Wa Municipality in the Upper West Region of Ghana[2]. A small number of pregnant women in their third trimester have had only one visit indicating poor care seeking behavior among some of the pregnant women. Delays in seeking care among these pregnant women may be explained by views held by other pregnant women in the study that a pregnant woman does not need antenatal care in the first trimester and that the use of traditional medicine is rather required in the first trimester of pregnancy. This finding also supports report that 45% of pregnant women do not make any visit in the first trimester of pregnancy in Ghana[13].

Despite heightened public education on dangers of self-medication, irrational use of medicine is common in Ghana. The result of this study shows that pregnant women have a broad understanding of self-medication and dangers associated with it. However, it appears that awareness creation alone cannot reduce the practice. Self-medication was prominent among respondents in this study and the driving force behind the practice was the intense desire of pregnant women to get relief from the discomfort and challenges associated with pregnancy as well as the desire to attain good outcomes in pregnancy. The fairly loose regulations on the sale of pharmaceutical products and the proliferation of herbal/traditional medicines on the Ghanaian market make it easy for people to access different types of medicines. Pregnant women interviewed mentioned that they self-medicate with conventional and herbal/traditional medicines. The use of traditional medicine (leaves, roots and Rhizomes, flowering heads) has been with Ghanaians for centuries and people seemed to be comfortable using them as they are perceived to be natural products for health care.

Anecdotal evidence shows that most people in Ghana trust the efficacy of these medicines for treating conditions they perceived could not be treated by modern medicines. Traditional medicines are mostly administered through anal and oral routes as well as fumigation. Respondents in this study indicated preferences for traditional/herbal medicines, maintaining that it is easy to administer and has limited pregnancy related side effects. This result is consistent with findings from Norway, UK, Canada and Nigeria[10],[11],[18],[24]. It also confirms findings of previous studies that self-medication is influenced by both macro and micro factors[1],[7].

Authors' Contributions

The study was enriched by the willingness and active participation of pregnant women interviewed as well as the immense authors' contributions. The first author (Jacqueline Nkrumah) conceptualized the study, provided guidance to the field work and analyzed the data. The second author (Fred Yao Gbagbo) supervised the field work, and drafted the initial report. Both authors have all approved the final submission.

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Conclusion and Implications

The study assessed self-medication among pregnant women in two Municipalities in Ghana. Considering the high prevalence of self-medication in the study area and default rate of Antenatal Care visit, sustained education may caution against self-medication in pregnancy. The reality however is such that knowledge does not necessarily translate into behavioral change. What is therefore required is a step up in evidence based behavioral change communication strategies focusing more on the consequences of self-medication to the pregnant woman, her unborn baby or both. Policy makers and pharmaceutical companies may also explore the possibility of administering medication to pregnant women through other means in addition to oral administration. Although the socio-economic drivers to self-medication in pregnancy may be difficult to change, positive pressure from social relations and focused antenatal care using community based volunteers will help reduce the incidence of self-medication in pregnancy significantly for good pregnancy outcomes.

It must be noted that the names of herbal medicines used and their effects on the pregnant women and fetus were not investigated in this study for which reason, further studies in Ghana may be required to explore this phenomenon as well. Results of the study identified pressure from social relations, previous experience, choice, severity of the condition, poor interpersonal skills of trained attendants as perceived factors of self-medication among pregnant women. A further study to consider the extent of influence of these factors and their significance in influencing self-medication may also be of public help importance to inform public health policy and program development.

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Competing Interests

The authors declare that they have no competing interests but rather to contribute to knowledge in this area of study and also provide empirical evidence to curb self-medication in pregnancy for an improved maternal health.

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