

Research Article

Knowledge and Practice of Pregnant Women on Timely Antenatal Care Registration: Case of Buea Health District, South West Region of Cameroon

Ngwa Reanna Sirri¹; Adamu Ndongho Ndifontaiyong²; NdeFon Peter³; Njunda Anna Longdoh^{1*}

¹Department of Public Health and Hygiene, Faculty of Health Sciences, University of Buea, Cameroon

²Research Unit of Microbiology and Antimicrobial Substances, Faculty of Science, University of Dschang, Cameroon

³Department of Medical Laboratory Sciences, Faculty of Health Sciences, University of Buea, Cameroon

*Corresponding author: Njunda Anna Longdoh

Department of Public Health and Hygiene, Faculty of Health Sciences, University of Buea, PO Box 12, Buea, Cameroon.

Tel: +237699938235/+237679861720

Email: ann_njunda@yahoo.com

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Abstract

Cameroon recorded 35% first trimester Antenatal Care registration (ANC) in 2012, and 24.9% in the Buea Health District (BHD) within the first sixteen weeks in 2016.

Objectives: To determine the knowledge and practice of pregnant women in the BHD on timely ANC registration, and to identify factors that influence timely ANC registration.

Methods: This was a Cross-sectional Health Facility/community based study where both quantitative and qualitative methods were used. Multistage sampling was used to select participants for quantitative study and purposive sampling for qualitative. Data was collected from 400 participants, and three Focus Group Discussions (FGDs) were conducted. SPSS was used for quantitative data analysis, while ATLAS-ti was used for qualitative data analysis.

Results: 62.2% of participants had moderate knowledge on timely ANC registration while 22.5% of them began ANC in the first trimester. Availability of finance, awareness, early confirmation of pregnancy, husband's involvement, excitement, and sickness favored timely registration. Unplanned pregnancy, feeling healthy, unawareness, being single, and experience among others were responsible for untimely registration.

Conclusion: Even though many women expressed awareness on timely ANC registration, very few women practice it; and factors other than knowledge influenced timely ANC registration.

Keywords: Knowledge; Practice; Timely antenatal care; Factors

Introduction

Beginning antenatal care in the first trimester and attending regularly have positive outcomes on both maternal and infant health [1]. Timely ANC registration ensures prevention, early diagnosis and treatment of pregnancy related medical conditions, and also provide opportunity for pregnancy related education [2-4].

Globally 303000 women loss their life from pregnancy related causes of which 302000 (99%) occurred in developing countries. Sub-Saharan Africa tops the list with 201000 cases (66%), with Cameroon among the top eighteen countries [2,5,6]. WHO in 2016 recommended that ANC visits be moved to eight visits, with the first being in the first trimester [7].

In Cameroon, 35% of pregnant women commence ANC visit in the first trimester [8]. Buea Health District (BHD) in 2016 reports 658 (24.9%) out of the 2639 pregnant women who came for ANC 1 to have registered before 16 weeks [9]. Related studies report 6% Timely ANC registration at the BHD in 2012 [10], and 15.5% in Fako Division in 2015 [11].

Though much has been documented as to when women register for ANC, in Cameroon a lot is still not known in regard to the knowledge of this women on timely ANC registration. Determining the proportion of pregnant women who are aware of the value of timely ANC initiation and actually practice it and identifying factors influencing ANC booking in the first trimester

is important in designing any efficient intervention strategy to enhance positive outcomes in this area. Determinants to Timely ANC registration can be at the level of the women, family, community, or health workers.

Good knowledge on the part of the women will enhance timely ANC registration since they would be aware of its benefits, therefore need to determine the level of awareness of the women in the BHD; and if they are aware why is it that only a few of them start their visit before 12 weeks of gestation? [9] The study will also guide policy makers to create policies that shall help improve ANC practice thereby contributing to the improvement of maternal and child health.

Materials and Methods

This was a hospital/Community based cross-sectional study where both quantitative and qualitative methods were used. It was conducted among pregnant women attending ANC in health facilities within the BHD within the 1st June 2017 to 3rd July 2017 in the South West Region of Cameroon.

A sample size of 384 was calculated from the Cochran formula [12]: $n = Z^2P(1-P)/e^2$; where n =sample size, Z=95% confidence level =1.96, P=Proportion which here is 50% (0.5) and e=5% degree of error = (0.05). Multistage sampling was used which constituted of stratified, simple random sampling, proportionate to size sampling, and time limited sampling to select participants. Purposive sampling was used for three Focus Group Discussions (FGDs) of eight to twelve persons each; at least eight pregnant women and two health care providers of ANC services for at least five years. Ethical clearance was obtained from the FHS Institutional Review Board (IRB) of the University of Buea. Semi structured interviewed administered questionnaires and FGDs were used for data collection. Antenatal cards were checked for those who could not recall information such as date of ANC registration, and gestational age upon registration. Consent was obtained from each participant. Field assistants were recruited and trained for data collection. Notes and tape recordings were taken for FGD with permission from participants.

Questionnaires were cross checked daily for completeness, and coded. Data was coded in a Laptop where only the investigator had the access code. Flash drive was used to back-up the data. Data was keyed in using Epi Info version 7. The audiotapes and notes from FGDs were coded, transcript, and secured in a data base. Research questionnaires, work books, and other study materials are stored safely and securely in a locked cupboard. The Fischer’s test and Chi-square (χ^2) tests were used to identify statistical differences between groups. A p-value of less than 0.05 was considered statistically significant. SPSS version 20.0 was used for quantitative data analyses. Data from FGDs were grouped thematically and analyzed using ATLAS-ti version 6.1.

Results

Four hundred pregnant women were enrolled for the study with age ranged of 15 to 42 years and mean age of 27.41±5.05 years. Participants who had attained higher education were 120(30.0%), while 2(0.5%) had no formal education; 264 (66.0%) were married women and 2(0.5%) divorced. Those who had put to birth at least once or twice were 210(52.5%), 87(21.8%) had delivered more than twice, while 103(25.8%) had never put to birth before. Fifty-four percent (54.0%) of participants had a source of income, while 99.7% of the partner of those who were married or cohabiting had a source of income. The partner

of most [385(96.2%)] participants provided them with support for ANC services.

Knowledge on Timely Antenatal Care Registration

Knowledge on timely ANC registration was classified as low, moderate or high depending on their response to five questions evaluating their knowledge. A large proportion (62.2%) of the participants were moderately informed on timely ANC registration (Figure 1).

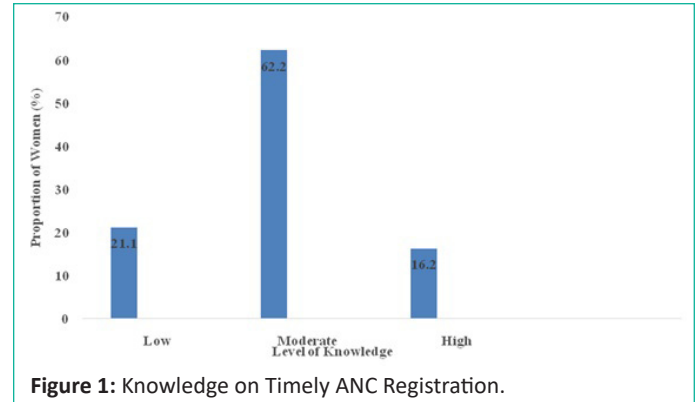


Figure 1: Knowledge on Timely ANC Registration.

Knowledge on Timely ANC Registration per Trimester of Registration

Majority [74(82.2%)] of those who registered in the first trimester were of the opinion that women are to enroll for ANC immediately informed of their pregnancy status. Knowledge on recommended gestational age to register was statistically significantly associated with trimester of registration (p=0.008).

Practice on Timely ANC in the BHD

Cumulatively, 52.5% registered within the 1st and 16th week.

Mean gestational age for ANC registration was 16.8±5.8 weeks, statistically significantly associated with trimester of registration (p<0.001). For participants who registered in the first trimester, most (73.3%) were married; 43.3% were educated to the level of higher education and 10.0% with a minimum of primary education; Sixty (66.7%) fall within the 26 to 35 years age group. None of those between 36 to 42 years age group registered in the third trimester. Age group was statistically significantly related to trimester of registration (p=0.005). Thirty-two (35.6%) respondents who enrolled for ANC in the first trimester were those that were employed and 44.3% of these received both monetary support and encouragement from their partners; while more [76(27.8%) and 15(40.4%)] of those in the second and third trimester respectively were housewife. Partners of 44(53.7%) women who enrolled in the first trimester were employed.

Table 1: Practice on timely ANC registration.

Pregnancy age upon registration for ANC	Frequency (No)	Percentage (%)
1-12 weeks	90	22.5
13-16 weeks	120	30.0
17-24 weeks	153	38.3
>24 weeks	37	9.3
Total	400	100.0

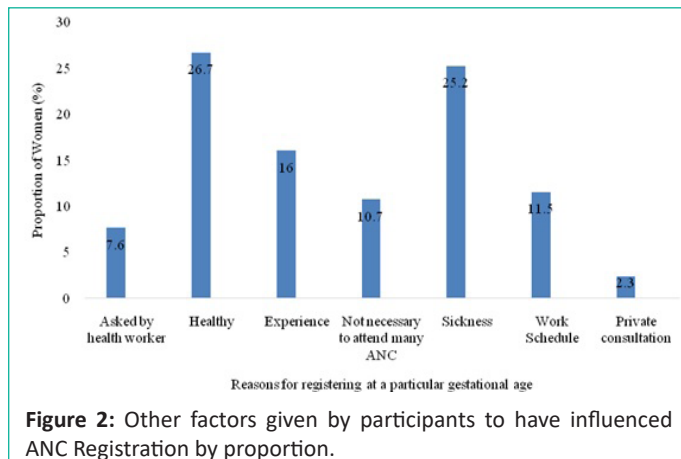
The highest proportion (73.3%) of respondents who registered in the first trimester were moderately informed on timely ANC registration, while the proportion (24.3%) of those with high knowledge who registered in the third trimester were more

than that for the second (15.8%) and first trimester (14.4%).

Factors Influencing Timely ANC Registration

Authorization from guardian was a determining factor for 14.2% participants, 2.5% were scared they might be diagnosed of HIV, 2.2% did not want people to know that they were pregnant, while 4.5% were influenced by problems with previous pregnancies.

Also gestational age at which a woman was informed of her pregnancy, finance, perception of the right time to register were significantly associated to trimester of registration ($p < 0.001$). Other reasons from 32.8% of participants were as given below (Figure 2).



From the FGDs other factors that influence timely ANC registration positively were: Ill health, awareness, excitement, availability of finances, previous obstetrical problem, having husband's support, and fear. Those influencing negatively included: Financial constraints, fear, unawareness, health facility factors, feeling Healthy, having experience, shame, not having husband's support, unplanned or unwanted pregnancy, work schedule, feeling lazy, and uncertainty whether or not to keep the pregnancy.

Discussion

Most women were moderately informed on timely ANC registration. Cumulatively 78.4% of respondents were informed. The proportion (50.7%) of respondent who were aware that they were required to register in the first trimester was lower than the findings in the Niger Delta [1]. Mothers who were aware of the right timing to be the first trimester were more likely to commence ANC timely than those who did not, similar to the findings for North West Ethiopia by Gudayu *et al*, [13].

Knowledge on opinion for the right time for ANC registration was statistically significantly related to trimester of registration, consistent with that of North West Ethiopia by Gudayu *et al*, [13]. Majority of the women were knowledgeable on the benefits of timely ANC registration, contrary to the findings of East London by Hatherall *et al*, [14].

The proportion of participants who enrolled for ANC in the first trimester was far less than that reported for Cameroon [8], probably because the study population for Cameroon was from a reference hospital with standards for best practice; but higher than that reported for BHD [11]. Although a large proportion (50.7%) of participants were aware of when they were to register for ANC, only 22.5% of them actually registered in the first trimester. Majority (73.3%) of participants who registered in the first trimester were moderately knowledgeable on timely

ANC registration, while the proportion of those with low knowledge who registered in the first trimester was smaller than in all the other trimesters, confirming that being informed enhances timely ANC registration; in line with the findings in North West Ethiopia [13] and South Ethiopia [15]. Marital status was found to be significantly associated with timely antenatal care registration as married women were more likely to begin ANC in the first trimester, while single women and divorced women mostly began above 12 weeks. Parity was not significantly associated ($p = 0.711$) to timely ANC registration similar to findings in other Sub-Saharan African countries [16]. Mean (\pm SD) age of participants was 27.41 ± 5.05 years, slightly higher than that reported for women in Southern Ethiopia [15]. This is probably because the age group of the respondents ranges right up to forty-two years while in Ethiopia it was thirty-four years. The gestational age at which participant was informed of her pregnancy, the perception of the woman on the right time to begin ANC, and availability of finances to begin ANC were all statistically significantly associated to trimester of ANC registration; in line with the findings in South Africa [17], North West Ethiopia [13] and South Ethiopia [15] respectively. Participants required the permission of their guardian (husband) before they could register for antenatal consistent with findings of Ghana, Kenya and Malawi [18]. Fear of being diagnosed of HIV was expressed by some participants, similar to the findings of South Africa [17]. Not wanting people to know about their pregnancy was expressed by 2.5% of respondents due to fear of witchcraft or guardian consistent with the findings of Ghana, Kenya, and Malawi [18].

Problems with previous pregnancies caused some women to register in the first trimester, while to other women it made them to begin late most probably due to uncertainty if pregnancy will last, consistent with findings in Ghana, Kenya, and Malawi [18].

Other reasons included being experienced and being healthy which resulted to late enrolment for ANC, time given by health worker to begin, being consulted privately at home, not seeing the importance of attending many ANC similar to findings in North Nigeria [19], unplanned or unwanted pregnancy in line with findings in South Ethiopia [15], not sure to keep pregnancy as was also reported for East London [14], poor attitude of health care provider of ANC, and work schedule. Also sickness made some to book for ANC early; similar to reports for Mutengue [20] and East London [14], as well as excitement, and having husband's support.

Conclusion

Approximately 62.2% of the participants were moderately informed on timely ANC registration and 16.2% highly informed. Few (22.5%) participants registered for antenatal care in the first trimester. Availability of finance, perception of first trimester as right, early awareness of pregnancy, previous obstetrical problems, excitement, ill-health, and being married promote early ANC registration; while financial constraints, being uninformed, not being sick, experience, being single, individual perceptions of early ANC not necessary, unfriendly service providers, unplanned pregnancy, and not having husband's support were responsible for late ANC registration.

Author Statements

Author Contributions

Conception and design of the study: N. R. S., and A. N. N.

Investigation and acquisition of data: N. R. S., and A. N. N.

Analysis, interpretation of data and manuscript writing: N. R. S., and A. N. N.

Review and edition of the final version of the article: all authors.

Data Availability

The data used to support the findings of this study are available from the corresponding author and can be consulted upon request.

Conflicts of Interest

Authors have declared that no competing interests exist.

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