

Antenatal Care Users, Health Care Providers' Perception and Experience on Antenatal Care Health Education: Qualitative Study at Five Public Health Centers, Addis Ababa, Ethiopia, 2020

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Abstract

Background: Providing antenatal care health education is one of the elements that promote the health of women by preventing pregnancy-related issues and assisting pregnant women to apprehend delivery preparedness and complications readiness plan. However, healthcare providers offer underprovided and too little information to women. Moreover, assessment of health care provider's health education interventions in antenatal care services has not yet been studied in Ethiopia. The aim of this study was to explore and describe perceptions and experiences of pregnant women and health care providers' health education during antenatal care.

Methods: A Qualitative phenomenological research design was used to explore the awareness and experience of pregnant women and health care providers of antenatal health education at deliberately selected health centers. Focused group discussions and key informant interviews were used to gather data using an interview guide from pregnant women and health care providers working at antenatal care from June 20-30, 2018 respectively.

Results: The qualitative findings have shown that the provision of antenatal care health education is insufficient. Especially there is health care provider misunderstand birth preparedness and complication readiness health education. Factors such as time, work overload, and personal perceptions of health care professionals, women's duty at home, and a growing number of clients influence the delivery of antenatal care health education.

Conclusions: In general antenatal care, health education provided by health professionals during antenatal care was inadequate and affected by various factors. Therefore, the researcher of this study recommends that policy makers and programmers to develop a strategy to strengthen health education in the antenatal care service that will contribute to health education is critical in the prevention of maternal mortality and morbidity related to pregnancy danger signs awareness problem.

Background

Health education is a magnificent instrument that assists to enhancing health in developing countries. However, it does not only train prevention and basic health information but also requires ideas that reshape every day habits of humans with unhealthy lifestyles patterns in developing countries. The impact of health education does no longer only have effective, but has an immediate effect on clients of such education; however with upcoming citizens will advantage from elevated and suitable cultivated ideas about health[1]. At present, health education is practically included in all health and strategic programs implemented at different levels of social life[2].

Many investigators have illustrated the development of health education was experiencing at the same time as the development of health care in the earliest periods of human way of life. The records and development of health education have their own developmental stages. Their periodicity relates to the development stages of the society[3].

In Ethiopia prior to 1954, very little has been done in the way of educating the public about healthy living. There was some public teaching through the radio and by means of leaflets. In 1954, the United States Operations Mission (UNOM) brought a trained health educator as an adviser to Ethiopia. Since there were no Ethiopian health educators to be trained, the health educator who was sent from UNOM pioneered the actual work of health education. After that, the health educator made a close study of the health problems and made in-roads into the Ministry of Public Health of the country, and began to make contact with the authorities of the school health service and with the high administrative body of the Ministry of Education[4].

At the time of the Alma Ata affirmation of primary Health care (PHC) in 1978, health education was once put as one of the aspects of PHC and it used to be recognized as an integral device to the success of health for all. Implementing this declaration, Ethiopia makes use of health education as the most essential functionality for the prevention of diseases and health merchandise. In view of this, the countrywide health coverage and Health Sector Development policy of Ethiopia have recognized health education instruction as a major aspect of health system offerings. However, the implementation of health education is now not as a primary aspect of service functionality[5]. The motivation of women by health professionals has a crucial contribution to making the use of maternal care services. Maternal health service delivery is one of the most important health measures to minimize maternal morbidity and mortality at a distinctive place where the overall health status of women is small. Besides, maternal health care provides opportunities for the delivery of health information and services that can greatly improve the health of women and their children[6].

ANC is described as the care delivered at some point of being pregnant by skilled health care workers in order to ensure the fantastic health stipulations for both the mother and baby. The elements of the care include risk identification, prevention and management of being pregnant associated or concurrent diseases, health education and health promotion[7].

It is necessary to make certain that all pregnant women, their companions and households must be conscious of signs and symptoms of issues and emergencies. They should also comprehend when seeking care from the expert attendant about danger signs: vaginal bleeding, convulsions, severe headache with blurred vision, severe abdominal pain, fast or challenge of breathing, fever, and swelling of fingers, face and legs[8].

ANC helps women maintain pregnancy regularly through best centered assistance through health care providers working at ANC clinics and individualized care with the intention of detecting and treating existing conditions or complications. More importantly, ANC seeks to prevent disease and complications related to pregnancy and make pregnant women geared up for birth through health education[9].

ANC is a very top option for health care providers to provide health education for pregnant mothers that prevent maternal morbidity and mortality. ANC is a service delivery unit that allows pregnant women to get hold of probably lifesaving information on threat signs and symptoms of obstetric problems. In addition to these, women can get health education on birth preparedness, iron and folate and nutrition,

family planning, breast feeding, and infant care that will promote maternal and child health, which is supported by the government[10].

The Ethiopian Demographic Health Survey reports that one in every four (24%) of women said that they had been informed of symptoms of pregnancy problems at some point in their ANC and in 2011, Ethiopian Demographic Health Survey one in every five women who acquired ANC said that they were knowledgeable about signs and symptoms of being pregnant issues during their ANC visit[11].

The study carried out in Gobena woreda, Oromia region of Ethiopia in 2014 indicated that solely 29.9% of the respondents had been organized for birth and its problems. The study concludes that only a small number of respondents have been organized for birth and its complications. Furthermore, a considerable number of women were not educated about birth preparedness and complication readiness[12].

The study carried out in Oromia region Gobena woreda on health professionals regarding birth preparedness and complication readiness plan awareness, about 44.4% sources of data were health care providers. In contrast, the study conducted in Uganda in 2015 suggests that 72% of health professionals have a great role in providing health information, media 15% and friends 12.5%[12, 13].

Health providers pointed out that time constraints did not allow them to provide sufficient information because other clients were waiting outside. Some services are wary of talking too much to women because they are not their cultural practice to do so. Most providers did not ask women about their needs because they were afraid that they would not be able to meet their needs, which would be unacceptable to them. Service users also suggested that very limited information is available, and only to women who are not members of their families[14].

Providing ANC health education is one of the elements that promote the health of women by preventing pregnancy-related issues and assisting pregnant women to apprehend delivery preparedness, and complications readiness plan. However, healthcare providers offer underprovided and too little information to women. Moreover, the assessment of healthcare providers health education interventions antenatal care service has not yet been studied in Ethiopia. The aim of this study was to explore and describe perceptions and experiences of pregnant women and healthcare providers' health education during ANC.

Methods

Study design

A qualitative phenomenological research design was used to investigate the perception and experience of pregnant women and health care providers of antenatal health care education at deliberately selected health centers. It is an intensely private type of research that openly recognizes and accepts the subjective views and prejudices of each participant and researcher[15]. A qualitative work is systematic and aims to understand the full scope of the phenomenon being investigated[16]. In the qualitative

process of this study, the researcher wanted to explore and explain the views of pregnant women and healthcare providers on health education during ANC. Focused group discussions and key informant interviews were used to gather data using an interview guide that was newly developed to collect data on their experience of antenatal care health education from pregnant women and health care providers working at ANC from June 20-30, 2018, and the interview guide attached as an additional material to this manuscript.

Key informant interviews is described as an exchange of information between a researcher and a respondent to make reasonable data by encouraging participants to freely discuss their lives and interview participants to generate facts about their thoughts, views, values, attitudes, and beliefs regarding their private experience[17, 18].

Focus group discussion is a qualitative data collection approach in which one or more researchers meet many participants as a group to discuss a specific research subject to generate ideas. The session is usually tape-recorded and note-recorded. There is a moderator in the focus group conversation that leads the discussion by posing open-ended questions that require an in-depth response rather than a simple word that leads to a yes or no answer[18].

Study Setting

The study was conducted in Addis Ababa, Ethiopia. Addis Ababa is one of the regions and the Federal capital city of Ethiopia, located at an altitude of 7,546 feet (2,300 m). It covers a total area of 54,000 hectares. Administratively, the city is divided into ten sub- cities and 116 woreda. According to the estimate of the Central Statistical Authority (CSA) (2007), 3,384,569 inhabitants live in the city. The city has 98 health centers, of which 94 are public and the rest are operated by NGOs, 52 hospitals (13 of which 6 are under the city administration and the other seven are under the Federal government, 35-private and 4 are NGOs) and 534 clinics, 34 of which are owned by NGOs (Addis Ababa city Administration report 2018). Only public health centers under the Addis Ababa City Administration are included in this study. The total estimated number of pregnant women estimated to exist in the city is 78,861 based on the usage of the conversion element of the 2008 Ethiopian calendar for target ANC

Study participants

The key informant interview participants and the focus group discussion included selected samples of pregnant women and health care providers from five targeted public health centers in Addis Ababa, one key informant and one focus group discussion from each of the five health centers namely (Kebena, Jalemeda, Woreda 13, Bole Woreda 17, and Arada Health Centre) included in the analysis.

Inclusion criteria key informant interview and Focused group discussion

The study populations were: i Focus group discussants pregnant women aged 18-49 who came to ANC and volunteered to share their perceptions and experiences in the study were included. ii key informants health care providers working at the antenatal care unit during the study period were enrolled.

Recruitment procedure of study participants

The purposive sampling technique was used to select study participants from five public health centers that were conveniently chosen from all public health centers located in Addis Ababa. Sampling for FGDs was homogeneous for all pregnant women with a common distinctiveness to discuss their perceptions and experiences and met the inclusion criteria and agreed to participate in the study. Discussions often took place in health centers selected by the participants themselves. Key informant interviews with health care professionals who worked at the ANC clinic during the study period and agreed to participate in the research were included.

Operational definition

Health education is described as any aggregate of getting to know experiences designed to assist individuals and communities improve their health by increasing their expertise or influencing their attitudes[8]. In this research, health education is the learning experience of pregnant women during ANC visits and the intention to provide health education by health care providers during the current pregnancy of women who came to ANC during the data collection period.

Antenatal care: is described as Routine health control of suspected healthy pregnant women without symptoms (screening) in order to diagnose diseases or complicate obstetric conditions without symptoms and to provide information on lifestyle, pregnancy and delivery[19].In this study, all antenatal care included all services given during antenatal care, but more emphasis was given to the health education provided to pregnant women.

ANC health education: Awareness-based learning programs, along with (representatives of) the target population, include some form of communication designed to enhance health awareness, including enhancing information and developing life skills that are beneficial to individuals and groups community health[20]. In this study, the intention to provide health education is creating awareness by healthcare providers during the current pregnancy of women.

Data collection tools and procedures

Data were collected using newly a developed and reviewed by expert interviewer guide, which was first developed in English, then translated into Amharic, and then translated back into English. This has been done to reduce any confusion regarding the meaning of the terms in the questions. One day of training on the overall objective and procedures of the study, moderating skills on data collection techniques with role-play, and a one-day field practice in the nearest one health center were done for data collectors and supervisors by principal investigator. Informed written consent for the study was obtained from all eligible participants who agreed to participate before we began collecting the data.

The interview guide included two parts. Part one was the FGD guide questions for pregnant women and part two was key informant interview guide questions for health care providers working at the antenatal care unit. The interview guides included 12-13 broad questions with the suggested probes. Two females a master degree in public health and previous experience of facilitating FGD and key informant interview guide were gathered the data.

Data Analysis

The reported data were transcribed and the field notes were checked on a regular basis. Word by word transcripts were made by interviewers and the chief investigator. Both focus group interviews and key informant interviews were held in Amharic. The transcribed data were transcribed in English. The data were uploaded to the ATLAS.ti8 analysis software. First, open codes were developed by reading the transcripts line by line; then, Words with similar meanings were grouped into categories. Selective coding was carried out in the next steps and the appropriate codes were further classified as themes. Prominent themes were then further divided into sub-themes. In addition, direct quotes and perspectives from participants were stated without editing in order to avoid losing the contextual meaning of the problem.

Results

Participants

A total of 5 key informant interviews with health care providers and 5 focused group discussions with pregnant women were conducted in five purposely selected public health centers.

Table 1
Demographic characteristics of pregnant women who were involved in focus group discussion, Addis Ababa, 2018 n = 45

Socio demographic		Frequency	Percentage
Age ranges	20–24	4	8.9
	25–29	25	55.6
	30–34	6	13.3
	35–39	10	22.2
Educational status	Unable to read and write	22	48.9
	Primary	13	28.9
	Secondary	8	17.8
	university	2	4.4
Marital status	Married	45	100

The findings of the study were organized into themes and categories. The most common modes of organizing the qualitative data are category, themes and concept. These terms are sometimes used interchangeably. However, they do convey different levels of generality and /or abstraction. Categories are to do the basic properties, while themes are unifying links running through a wider span[21]. Comparisons were made on responses among the five focus group discussions and five key informant interviews groups on each question asked.

The researcher developed categories that were emergent from the analysis within the categories. Finally, a theme was developed from the scrutiny of the categories as shown in Table 3. A total of five themes and seven categories emerged from the data analysis. The themes and categories are discussed individually at the beginning of the section.

Table 2
Themes organized from qualitative analysis Addis Ababa, 2018 n = 50

Themes	Categories
ANC Health Education	Offering ANC health education
	ANC health education Topics
	Benefits of Health education
	Source of ANC Health Education
	Challenges of ANC Health education
BPCR Health Education	
Pregnancy Related Danger Sign Health Education	
Health professional Approach to ANC Health Education	Way of ANC Health education Delivery
	Health Education Course
Recommendation for better health education	

Anc Health Education

Participants in this study reported that the ANC health education was not delivered to all pregnant mothers uniformly. All topics of health education were not addressed; it has challenges, the source also differs. Even health care providers witnessed some of the pregnant mothers who did not receive ANC health education. Health care providers did not provide adequate health education. This idea supported from study participants as stated below:

This is my first pregnancy. I do not have any health education when I came to my follow-up. In this facility, I took my card from card room then health care provider ordered ultrasound, and urine after receiving lab results, they told me my pregnancy is healthy and they gave me iron. When we come to health facility, we need to know what we do not know and the safety what we need to have but I do not get health education (FGD P2 1:1 186–611)

Other participants of FGD participants also explained:

I have got health education during my second pregnancy. Now it is my fifth pregnancy. At that time health professional taught me about not to eat raw meat, salad, tomato, screening for diabetes mellitus, hypertension and health education was given while we were in group at waiting room. But now health professional did not provide health education as the previous time. In my opinion they have workload 60–70 pregnant women seen sometimes when we seat, we were more than this (FGD P 4 1:3 126).

Key informants of this study also supported the idea as stated below:-

In my opinion, we do not provide adequate and well-structured health education. Even some of us considered providing Health Education is not our responsibility. We do not allocate time for Health Education while we take history and doing physical examination as the same time, we offer Health Education whenever necessary. In my observation Health Education is not considered important by health professional, to some extent Health Education is given at community by health extension(FGD P5 3:8 657–1130).

Other participant of FGD participants also explained:

The health education given during ANC not sufficient, within nine months of pregnancy a pregnant mother come to ANC visit is 4 times. The health education is given in the first visit is with less time and they did not provide health education for the subsequent visits, so it is good to give health education in each visit with sufficient time(FGD P 1 4:5 1400–1750).

ANC health education topics

Regarding ANC health education topics, both study participants explained all topics of ANC health education not addressed during ANC visits. Most of the topic addressed during ANC health education was nutrition, this also because of the complaint raised from the pregnant women related to pregnancy induced anorexia; HIV, danger sign most of the time bleeding, personal hygiene, and about iron.

One participant focus group discussion explained as follow:

Health education is given during the first visit about HIV, nutrition and taking Iron. When you come to the next visits, they do not provide health education but they asked my husband was informed to HIV screening. If you do not have problem with you, just they send to home (FGD P5 1:4 314–588).

Key informant participant reiterated;

During ANC pregnant women have health education about nutrition, hygiene, clothing, how to keep them healthy, danger signs different diagnosis, any new thing, for example now in our health centre. We provide maternal service for 24 hours we informed to them this information (key informant P1 1:6 521–521).

Benefits of ANC health education

All pregnant women and health care providers participated in this study, both perceived ANC health education has benefits both the mother and the baby. This idea supported from study participants as followed:

Yes, it has benefits. When the baby movement decreased, we need to come (FGD 2 4:1 1365–1438).

To know everything before; for example, blood group, reproductive health, about HIV diagnose is for me and my husband they help me to diagnose my husband HIV. How husbands help their wives at home, how to prevent communicable disease (FGD 4 1:3 300–536).

The idea also supported by health care professionals working at ANC clinic as explained below:

Yes, for example a woman who do not have ANC follow up came to the health centre after three and four days with a complain of absence of foetal movement. Although a woman who has ANC follow-up come to health centre whenever they have any new unpleasant feelings, so their difference is this much. In addition to this, a pregnant a woman with severe headache may stay at home if she does not have ANC follow-up or they may buy anti-pain from pharmacy but women who have ANC follow-up come health facility (Key informant P 3 342–847).

Yes, from those mothers who have got health education some women who came to here when they had bleeding. They are treated without complications. Only bleeding cases I knew. Sometimes women transfer from other health facilities with complication when we asked them nobody tells about the case during their ANC (Key informant P 3:9 479–794).

Source Of Health Education

Pregnant mother explained their source of information was different. Different participants of the study explained as followed:

Important information from elder mothers; for example, I do not know how pregnant mother unable to lift heavy weigh (FGD P2 2:1 35–153).

I heard, giving birth at health institution helps a baby and mother healthy. I have got this information from media (FGD P 2 2:1 1161 – 346).

I came today without my appointment because yesterday my baby movement was decreased that is why I came to day to have ultrasound, and diagnosis diabetes mellitus I suspected my baby movement is decreased because of this. Nobody gives me health education I have access to internet and able to Google, so I have information about my pregnancy (FGD 2 2:1 354–700).

Headache, convulsion, vaginal discharge with bad odour, I saw this information from poster posted, but I do not have this information during ANC visits (FGD P2 3:1 155–309).

Taking Iron, drinking water and eating food, and walk (this information from health facility (FGD P3 1:2 274–370).

Checking our health, we have follow-up, about Nutrition, I have got this information from the community (FGD P 3 1:2 266).

I had the information from my neighbor I do not learn from health professional I do not know (FGD P4 2:3 836–931).

I do not have education, I prepared from my previous experience (FGD P 5 3:4 314:380).

I knew it from my family (FGD1 2:5 878:904).

Challenges to deliver health education

The study participants reported that there are different challenges to provide ANC health education such as time shortage, work load; women responsibility at home, health care providers' attitude and professional who assigned at ANC have effect to deliver quality and adequate health education during ANC visits of pregnant women. Both health care providers and pregnant women pointed out that the time constraint did not allow health care providers to provide sufficient information.

Participants who participated reiterated as follows:

In my opinion, the reason why they do not give health education because of workload they do not have enough time (FGD P4 1:3 545–964).

Yes, they tried to give health education, but it is not sufficient because they do not have enough time to provide detail and all the necessary contents of health education related to ANC (FGD P 1 3:3 1447–1639).

We do not need to judge the problem is only for them, we have also problems; we females are so busy. We do not make practical what health professionals recommended to us. For example, I have bleeding, my physician ordered me to have rest, but did not make it practical I had work to home. Even health workers provide health education we do not need to educate, because we need to go to home as soon as possible (FGD P4 4:3 660–1081).

Health workers are bored; they assume providing health education is not a must. When I looked them, somebody forced them to provide service, they do not have interest, this is because of workload, so it is good to have/assign someone for health education, and even the number of pregnant women for the service would be increased (FGD P 4 5:3:5:992–1319).

The preceding ideas are also supported by health professionals working at ANC as stated below:

There are additional topics but we do not have enough time. Even pregnant women themselves limit the time they want to go home immediately. When they come from home, they planned come back home immediately. There are also problems from health professional and mother's (Key informant P1 2:6 496–767).

We give health education individually. In the previous time, we have schedule twice a week to provide health education in group; now the number of clients increased we also started caesarean section, so we are so busy because of work load we cannot give health education (Key informant P1 3:6 419–894).

Because pregnant women became anxious, not understood easily; if we give the health education properly with sufficient time, they may understand well. What we educate at their first visit; they will forget

when they come to second visit. They listen as it is new for them. If we have time that was good to teach again and again (Key informant P 1 6:7 634–977).

One of the key informant participants explained that physicians are not providing health education as stated below:

The weakness what I see physician are bored to provide health education, when pregnant women are cared/ seen by physician in the first visit, they did not get health education. When I got them at second visit, women seen by physician did not receive health education at their first visits (Key informant 3:6 900–1133).

Birth Preparedness Readiness Health Education

In this study most participants explained health education on birth preparedness and complication readiness contents of education completely different from WHO recommendation. Most contents are traditional sayings and the source of information also family, previous experience and neighbors, and friends. Health professional working at ANC not addressed health education on Birth Preparedness and Complication Readiness (BPCR). In addition to this the focus group discussions, the key informant interview with health professional working at ANC health care providers have misunderstanding about BPCR, where, by whom and when to provide BPCR. Key informant interview revealed that professionals working at ANC assumed that midwives should give BPCR health education at labour and delivery room.

Focus group discussion participants mentioned the contents of health education on BPCR as follow:

Clothes to wrap the baby, modes, I knew these from elder mothers (FGD P 2 2:1 1190–1274).

Modes, pyjama, walk short distance and wash my body (from my experience) FGD P 2 2:1 1345–1419).

This is my second visit but I do not have Education on birth preparedness and complication readiness (FGD P 1 2:1 1427–1530).

No education about birth preparedness and complication readiness. Now I am 8 months, one of my friends shared information about labour sign, food preparation what she was informed during her previous ANC visits (FGD P 2 2:1 1540–1754).

During our labour time we need to have clothes to wrap up the baby, and modes. I heard this from community (FGD P 3 1:3 943–1051).

This is my fourth visit; it might not be the time to teach me about birth preparedness and complication readiness. Now, I am 8 months' pregnancy (FGD P 3 1:2 1052–1199).

Food preparation and clothes (FGD P 4 2:3 756–787); I had the information from my neighbor I do not learn from health professional; I do not know (FGD P 4 2:3 836–931).

I did not hear about birth preparedness and complication readiness when I came to health facility but I know after the baby born, I need to prepare clothes to wrap-up the baby and modes. I knew this from my family experience and elders (FGD P1 2 1:2 952–1192).

This idea also supported by health worker working at ANC clinic explained as follows:

This is most of the time given by midwives working at delivery room, as you said it is good to give at ANC (Key informant P1 4:7 37–222).

I and my friends never educate about a topic birth preparedness and complication readiness at ANC clinic. But when we educate about danger sign, I mentioned some of birth preparedness and complication readiness contents. I did not provide health education as a topic of birth preparedness and complication readiness at ANC clinic, but when pregnant women came to delivery room midwives who are working there, educate the mother about birth preparedness and complication readiness (Key informant P5 3:8 41–524).

Pregnancy Related Danger Signs Health Education

This study showed pregnancy related danger signs health education given to some mothers but not addressed most contents of danger signs. Most of them were bleeding, abdominal pain, and headache. The FGD discussions showed there were mothers who were not received danger signs and faced problem because of lack of awareness. And some pregnant mother explained it is posted in the health centre and given written in paper.

One of the FGDs participants' from Jalemeda health center explained as follow:

It is posted in the place in front of delivery room. It is about bad smell vaginal discharge, blurred vision, oedema of feet and face and hand, that also stated when we faced these problems need to come health facilities but this is only for those able to read, as to me I can read and write in Amharic and English but most women in our country unable to read and write, how can this help those women. For example, when you go rural areas, there are health extension professionals, they provide education door-to-door may be impossible to Addis Ababa, because it is big city, when we came here we do not have such information, when I went to family guidance with my friend I heard health professional provide Health education (FGD P2 1:1 1057–1816).

Other participants of FGDs put in plain words as follow:

In my experience, I came to the facility when my foetal movement is absent for about five days when I told to the health worker she appointed me to come after 15 days, I said to her how could it be, then she ordered ultrasound the result shows the baby was died at six month and she referred me to Yekatit Hospital. When I went there, they also appointed me after 15 days. If I knew before, I would come early

when the baby movement is decreased, in my previous visit nobody told me as it is danger sign (FGD P4 3:3 834–1347).

As my friend said, I knew a pregnant woman faced problem having twins, she had followed-up at private clinic at that time she gained 10 kg weight within a week her physician not communicate/respond about this increased weight gain. He appointed her after a week but she developed sudden severe headache and her mom made a phone call to the nurse she knew and the nurse recommended to take her child to Ghandi Memorial Hospital. She had emergency caesarean section at seven months of pregnancy. If she has the information from her physician and when she went for her ANC visit, if the doctor gives attention for the abnormal weight gain, the pregnancy may continue. She did not give immature baby (FGD P 5 2:4 42–748).

One focus group participant reiterated:

For example, there was my neighbour who was pregnant for the first time and her face and hands and feet were oedematous but she did not know these are danger sign while she is attending her antenatal visit in a known private maternity care unit. And her neighbour is a nurse; she advised her to go to her physician. She went to her physician and he told this oedema is not a problem. She told to the nurse and the nurse took her to Ghandi Memorial Hospital and her blood pressure was increased it was 140/100 and urine was ordered and protein was found and she took this result to him but also not responding, still he considers the problem not this much serious. One night she had severe headache and ear pain and she went to the maternity unit she found another physician and he did emergency caesarean section; God saved her life. If her physician educates her danger signs it is good most pregnant women believe health workers. Even she is well educated browse information related to pregnancy from internet but she did not take things as serious as she heard from the physician (FGD P 5 1:11159 – 2242).

In the contrary, one of the key informant participants explained as follows:

Most of the time, the topic that I delivered to clients is about danger sign, the other topics based on history and physical examination of the pregnant women, even some times when there is client overload, we do not provide Health Education (FGD P 5 2:8 174–421).

Ways of providing health education

Health professionals working at ANC provide health information related to pregnancy danger signs with poster, printed-paper and some health centre provided plan/schedule to health education.

Health education is given but it has to be better than this, they posted posters but we did not give attention even some of us unable to read (FGD P1 4:4 203–494).

We also provide the information with pieces of paper, if there is a new thing, we teach them, but I do not think it is sufficient (Key informant P 3 4:6 328–461).

I did not know most of health professional deeply, I knew superficially. People have different interest some may have interest to give Health Education some may not have the (Key informant P 4 7:7 828–1013).

Even if they do not provide adequate health education, they provide some information when they do physical examination. They say something important for you. When measuring your weight, they advise you to increase weight (FGD P3 2:2 1230–1388).

The above idea also supported by health professional working at ANC as follows:

There are four visits, when she comes for the first visit. For their first visit, we educate more; or it is good to teach at first visit more and more. We are not providing health education consistently; we do not have uniform delivery system (Key informant P4 3:7 592–883).

Most of the time I provide health education during the first visit, especially when it is first pregnancy, and fourth visit but the number of pregnant women you saw at first visit decreased because some of the mother may give birth at home or any other place. There are also women who preferred to give birth at home (Key informant P 5 2:8 491–814).

Now FANC has four visits; we teach them at each visit but more information is provided at the first visit (Key informant P2 2:10 850–953).

The standard to provide health education for first visit is 30–40 minutes but we may give maximally 5 minutes, we did not give Health Education for each visit but 1st and 4th visits (Key informant P2 3:10 127–311).

Health education course

Every health care provider in Ethiopia has health education as a common course. Key informants of the study explained that they received health education course and other course that benefits to deliver the service. However, most had forgotten and some of key informants cannot follow the principles because of client overload.

Yes, it helps me to educate scientifically and following Health Education principles (Key informant p3 1:6 693–778).

Yes, but I do not remember everything. When I learned at school, I remembered my teacher Health Education is a tool for our country health policy that is prevention (Key informant P1 1:8 554–729).

Yes, it helps me, when I see from public health perspectives, but I do not say I used it 100%, because of the time limitation we have not following steps, no preparation of teaching material, what we do shortening of waiting time for the service for the mothers not to wait long time (Key informant P2 2:10 372–623).

Recommendation To Improve Anc Health Education

Both focus group discussants and key informant interviewees participants recommended when, who and way of providing ANC health education.

In this category, both groups suggested that health extension worker and any other person having the skill and knowledge of health education will provide better health education than the one work in ANC room.

Health extension professional encouraging mothers' door to door to come ANC visit (Key informant P3 6:6 637–721).

They have got the information from health extension professionals; she tells them what they are going to do during her home visit (Key informant P3 637–721).

I knew this information from health extension professional when I became absent from this visit the health extension professional in my village asked me the time of pregnancy and I told to her it was 4 months. She recommends me to go to this facility (FGD P1 2:5 248–502).

Some study participants suggested there should be somebody assigned only to provide ANC health education as stated below:

There should be somebody who providing health education. In addition to health professional providing care at the antenatal clinic. Because professionals working at ANC clinic if they provide health education most women waiting long times to get the service outside (FGD P4 5:3 719–984).

It is good to have professional who provide health education other than those who provide care (FGD P 4 5:3 614–711).

There is also suggestion to limit the number of clients who will be seen per day as shown below:

Most of the time many women can be seen in a day. So, it is good to minimise the number of women that can be managed within their capacity and treat mother properly not simply counting number of women who are visiting the clinic (FGD P2 4: 5 1551;117).

The above idea also supported by: one of the study participants as stated below:

Health workers are bored; they assume providing health education is not must. When I looked them somebody forced them to provide service, they do not have interest, this is because of work load, so it is good to have/assign someone for Health Education, even the number of pregnant women for the service would be increased (FGD p4 5:3 992–1319).

Some of the participants also suggested increasing the time and when to provide ANC health education as follows:

It is good to increase the time and make the information clear (FGD P1 6:5 372–436).

It is good to provide the health education in group before we enter-to the room while we are at the waiting place (FGD P1 6:5 444–561).

One participant explained:

It is good to provide continuous health education at each visit(FGD P1 6:5 569–634).

There is also an idea professional to exchange of experience as stated below:

It is good health professional working in different place and sharing experience about how to provide services to pregnant mother even their discipline, if one health professional disrespects a woman, the other woman is not interested to have service from that health worker. When we sit together, we discuss about the health workers care, if one of us face problem with health worker the rest of us assumed will face that problem (FGD P1 6:5 642–1074).

The above recommendations direct stakeholders to use methods to improve the practice ANC health education and used as an input to develop ANC health education strategy.

Discussion

The experience and perception of study participants showed that ANC health education not addressed adequately and uniformly to all pregnant women. However, different health practitioners appointed to provide ANC services to pregnant women, such as nursing staff, midwives, doctors, and health officers with varying degrees of knowledge and expertise for maternal care[22]. Similar to this finding study shows health care providers could not perform routine care properly, which may be partly because of lack of experience, resources and instruction, lack of competence for health professionals or not trained to provide health education on diet, physical activity, and danger signs for health care seeking during pregnancy and postpartum period[14]. Although, prenatal care must provide assistance and direction to the mother and her spouse and household. The health care professional is responsible to endorse activities such as preventing disease; offering curative service; promoting health; interconnecting with other services. The latter include expert care and antenatal education; teach the mother both facts and skills concerning her own health care; become supportive provider who is friendly and enthusiastic to attend to woman's needs and assist with any concerns she or her family about the pregnancy, birth, and post-delivery period[23].

Regarding ANC health education topics, both study participants explained all topics of ANC health education not addressed during ANC visits. Most of the topic addressed during ANC health education was nutrition. This might because of the complaint raised from the pregnant women related to pregnancy induced anorexia; and also health education on HIV, danger sign, personal hygiene, and about iron.

Another study conducted in Pakistan similar idea with this finding shows IEC mostly focused on diet and nutrition in private (86%) and (53%) public, advice on family planning after delivery was discussed with 13% versus 7% in public and private setting. In both settings, antenatal clients were not received information and education communication according to WHO guidelines. And the study accomplishes on the Quality and quantity of IEC during ANC was very poor in both the public and private sector city hospitals of Pakistan[23].

Study participants agreed Antenatal care health education has benefits for both the mother and the baby. This is supported by literatures skilled care given to mothers throughout pregnancy will minimise threat of maternal morbidity and mortality. Women who are seeking out early care are more possibly to be on nutritional supplements for a longer period so that anemia will be prevented. In addition, the provision of avoidance HIV transmit from mother to child and antiretroviral treatment to HIV positive women will be delivered [24]. Furthermore, ANC offers women and their families with appropriate information and recommendation for a healthy pregnancy, safe childbirth, and postnatal recovery, including care of the newborn, promotion of early, exclusive breastfeeding, and assistance with deciding on future pregnancies in order to increase pregnancy consequences. An actual ANC package relies up on ready health care providers in a functioning health system with referral services and sufficient supplies and laboratory support[25].

As identified in this study the source of health education is different, most of the time elders are the main source of information. The study conducted in Uganda also shows source of health education also different as stated in this study those health professionals have a great role in providing health information about 72%, media 15% and friends 12.5%[26]. Another study shows most of the sources of information were elders[27].

The study participants reported that there are different factors affecting ANC health education this also supported by reviewed literature. There are time, staff shortage, staff training, community insight, culture, coming late to antenatal care, not giving attention; staff attitudes, supervision and incentives are some of the challenges affecting effective health education during ANC. Staffing levels can be also have an effect on the provision of excellent ANC care. Inadequate staffing of the health workers offering ANC as compared to pregnant women needing the services can affect the skills because health workers will work with the purpose of finishing the workload[28].

According to the finding of this study health education on birth preparedness is inadequate. Similar idea explained about preparation for birth and readiness for complications is inadequate and most of the sources of information were elders[27]. The findings of this study resonates with a systematic review and meta-analysis in Ethiopia on birth preparedness and complication readiness among pregnant women; over all pooled result shows only 32% of the pregnant women were prepared for birth and its complications in spite of various health programmes for antenatal women, and training of health care providers[29].

This study showed pregnancy related danger signs health education given to mothers was inadequate and also most contents of danger signs not addressed. Another study finding shows that there is low awareness of obstetric danger signs which leads to first and second delays in seeking health care during obstetric emergencies and the researchers recommend intensification of ANC health education on obstetric danger signs to all pregnant women irrespective of their demographic characteristics[30].

The findings of this research conform to the study conducted in Tanzania on knowledge of danger sign that shows the majority had low knowledge of pregnancy danger signs and the study recommended improving health education intervention[31]. Another study conducted in three countries, namely, Burkina Faso, Ghana and Tanzania on counseling on women's awareness of pregnancy danger signs in selected rural health facilities conclude that counseling practice is poor and not very efficient and effects of ANC education remain largely unknown[32].

The FGDs participants suggest it will be better to provide health education home to home by health extension program. In addition to that it better to provide health education in Group. Similar idea is found in other studies show health extension program increased maternal and child accessibility to health care[33]. Therefore, health extension workers need to be equipped to provide appropriate health education on pregnancy and childbirth issues. Group health education can save time, and can allow sharing experience among clients of ANC education. Group-based health education confers greater effectiveness than individual intervention. Encouraging group-based education: intervention is cheaper, less labour-intensive[34].

Conclusion

In general ANC, health education provided by health professionals during antenatal care was inadequate and affected by various factors. Therefore, the researcher of this study recommends that policy makers and programmers develop a strategy to strengthen health education in the ANC service that will contribute health education is critical in the prevention of maternal mortality and morbidity related to pregnancy danger signs awareness problem.

Abbreviations

ANC: Antenatal care; BPCR: Birth Preparedness and Complication Readiness, CSA: Central Statistic Authority; FGD: Focused Group Discussion; HIV: Human Immunodeficiency Virus; KII: Key Informant Interview; PHC: Primary Health Care

Declarations

Ethics approval and consent to participate: This study was approved by the Ethics and Research Committee of the Department of Health Studies of the University of South Africa with reference number HSHDC593/2017. A written consent document was obtained from the Addis Ababa Regional Office of the

State Health and Ethics Administration in the respective health centers where the study was carried out with reference number R/O/H/B 663. Verbal informed consent was obtained from the study were age above 18 years. This verbal consent method ensuring participant permission, it was approved by the University of South Africa IBR and Kotebe Metropolitan University, Menelik II Medical and Health Science College Research Review Committee. Confidentiality and anonymity were ensured throughout and execution of the study.

Consent for publication: All participants have given their informed verbal consent to participate in the research and to publish it.

Availability of data and material: Datasets produced and/or analysed during the current study are not available publicly. They could be available from the corresponding source on an acceptable query.

Competing interest: The authors declare that they have no competing interest.

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Author contribution: FW worked out the study and wrote the first draft of the manuscript. ML contributed to data collection, transcription and analysis. Both authors read and approved the final version of the manuscript.

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