

Knowledge, attitude and practice towards COVID-19 among reproductive age women in Debre Tabor Town, Northwest, Ethiopia, 2020. A community based cross sectional study

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ABSTRACT

Background

Middle East Respiratory Syndrome Corona virus and a novel corona virus, Wuhan China have raised great public health concern globally. The virus is zoonotic which has a tendency to be transmitted between animal to human and human to human. The major route of transmission of COVID-19 is droplet and close contact and has an incubation period of 2-14 days. To date, no antiviral treatment or vaccine has been explicitly recommended for COVID-19.

Objective

The aim of this study was to assess knowledge, attitude and practice of COVID-19 among reproductive age women in Debre Tabor Town, North West Ethiopia, 2020.

Methods

This cross-sectional study was conducted from June 1 to June 25, 2020. A total of 660 women in Debre Tabor Town were included. The study participants were selected using simple random sampling technique from the study population. The collected data were checked for completeness. The data were entered and cleaned using EpiData version 4.2 then exported to SPSS version 23 for analysis. Descriptive statistics were used to describe the status of knowledge, attitude and practices.

Results

Six hundred sixty women participated in the study with a response rate of 100%. Among these, 48.8%, 52.1% and 30% of respondents had good knowledge, positive attitude and good practice about COVID-19 respectively. The mean age of the respondents was 31.3 (SD ±6.241) with a range of 15- 49 years.

Conclusion

The overall knowledge, attitude and practice in the study area is very low. COVID-19 risk communication and public education efforts should focus on building an appropriate level of knowledge while enhancing the adoption of recommended self-care practices with special emphasis on high-risk audience segments.

Keyword: knowledge, attitude, practice, COVID-19.

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INTRODUCTION

An emerging respiratory disease was abbreviated as COVID 19, after it has been first reported in December 2019 in Wuhan city of China[1]. The virus causing COVID-19 is a SARS-like coronavirus that had previously been reported in bats in China[2].

The virus is a zoonotic which has a tendency to be transmitted between animal to human and human to human. The World Health Organization (WHO) declared the novel coronavirus "2019-nCoV" outbreak as a global public health emergency, the sixth time in history[3].

Corona viruses are enveloped non-segmented positive sense RNA viruses belonging to the family Corona viridae and the order Nido virales and broadly distributed in humans and other mammals[4].

The World Health Organization (WHO) used the term 2019 novel coronavirus to refer to a corona virus that affected the lower respiratory tract of patients with pneumonia in Wuhan, China on 29 December, 2019[5].

COVID-19 is spread due to close person-to-person contact via coughing or sneezing, similar to the transmission of influenza and other respiratory pathogens[6].

The 2019-20 corona virus pandemic was confirmed to have spread to Africa on 14 February, 2020. The first confirmed case on the continent was in Egypt[7, 8] and the first confirmed case in sub-Saharan Africa was in Nigeria[9].

Globally on June 28, there were 10, 097, 334 corona virus cases and 501, 585 deaths, 5,473,348 cases recovered and 541, 248 cases and 10, 480 deaths in Africa and 5846 cases and 103 deaths in Ethiopia were reported[10].

By March,2020, the WHO detected community transmission in some African countries (including Ethiopia) and the risk to spreading corona virus is due in large part to deep challenges in practicing social distancing and frequent hand washing in settings of high population density and lack of running water, as well as the non-specific symptoms of COVID-19 that make it difficult to differentiate from endemic illnesses such as malaria and influenza[11].

Experts have worried about COVID-19 spreading to Africa, because many of the healthcare systems on the continent are inadequate, having problems such as lack of equipment, lack of funding, insufficient training of healthcare workers, and inefficient data transmission. It was feared that the pandemic could be difficult to keep under control in Africa, and could cause huge economic problems if it spread widely[12, 13].

According to currently available information regarding COVID-19, the WHO advises that essential precautions and actions should be implemented to minimize the risk of exportation or importation of the disease[14].

To date, no antiviral treatment or vaccine has been explicitly recommended for COVID-19. So, applying preventive measures to control COVID-19 infection is the most critical intervention.

In the study area there is no study have been conducted on this issue.

The findings of this study will help programme managers, stakeholders and health service providers to design appropriate intervention to increase practice of prevention of COVID-19. Therefore, the aim of this study was to assess knowledge, attitude and practice towards prevention of COVID-19 among childbearing age in Debre Tabor Town, North West Ethiopia.

METHODS AND MATERIALS

Study design and setting

This cross-sectional study was conducted from May 10 to June 25, 2018 among childbearing age in the community of Debre Tabor Town. Debre Tabor is the capital of South Gondar Administrative Zone of Amhara Region, Ethiopia. There were 14,614 childbearing age women in the community. The town has divided in to six small administrative units called kebeles. Women from in each kebeles were taken as study population.

Population

All childbearing age women who lives in Debre Tabor town Administration were considered as a source population. Childbearing age women resident in randomly selected kebeles of Debre Tabor town during the data collection period were considered study population.

Inclusion and exclusion criteria

We included all individuals who have lived a minimum of 6 months in Debre Tabor town. Exclusion criteria were individuals seriously ill women who cannot give response.

Sample size determination

Sample size was calculated using single population proportion formula and the required sample size for this study was determined using the following assumptions; desired precision (d) = 4%, Confidence level = 95% ($Z_{\alpha/2} = 1.96$ value) and 50% of the prevalence of KAP of COVID-19. Hence, the calculated sample size by considering 10% non-response rate was 660.

Sampling technique

To collect the data, initially the number of households with childbearing age women in each kebele were found from the kebele registration book. Then, the study households were selected through simple random sampling technique based on the proportion of the number of households in each kebeles and the first household was selected by using lottery method. In cases where two or more eligible women were found in one household only one is interviewed by using lottery method.

Data collection instrument and procedures

Data collection tool comprised of structured questionnaires that were prepared after thorough literature review and the local situation of the study area and purpose of the study were

considered to prepare the questionnaire. Questionnaires were prepared first in English then translated to Amharic which is the vernacular language of the respondents by language expert for ease of understanding of the respondents. Data were collected via face-to-face interview technique using structured questionnaires.

Twelve and two midwives who have BSc degree were selected and trained for data collection and supervision respectively. They had previous exposure in data collection. Data were collected on socio-demographic, knowledge, attitude and practice of towards of COVID-19. Questionnaires were pretested on 33(5%) of women of Woreta Town in South Gondar Zone before final data were collected. The investigators and research assistants were involved to incorporate changes in questionnaires after pretest. To guarantee internal validity, only completed questionnaires were adopted.

Stastical analysis

The collected data were checked manually for its completeness. The data were entered and cleaned using EpiData version 4.2 then exported to SPSS version 23 for analysis. Descriptive analysis was employed to summarize the data this study.

Guideline Statement

We assured that all methods were carried out after standardized guideline were reviewed and also by considering journal requirement regulations.

RESULTS

Socio-demographic characteristics

A total of 660 women participated in this study, yielding a response rate of 100%. The mean age of the respondents was 31.3(SD \pm 6.241) with a range of 15- 49 years. Almost three-fourth of respondents were Orthodox (74.1%) and 107(16.2%) of participants were Muslim. Among participants, 436(66.1%) were married and 129 (19.5%) were single (see Table 1).

Variable	Frequency(n=660)	Percent (%)
Age		
< 20 yrs	35	5.3
20-30 yrs	452	68.5
> 35 yrs	173	26.2
Ethnicity		
Amhara	548	83
Oromo	90	13.6
Tigrie	8	1.2
Others	14	2.1

Religion		
Orthodox	489	74.1
Muslim	107	16.2
Protestant	37	5.6
Catholic	27	4.1
Education		
Unable to read & write	197	29.8
Able to read & write	305	46.2
Primary (1-8)	68	10.3
Secondary (9-12)	57	8.6
Higher education	33	5
Occupation		
Gov't employee	441	66.8
Non-Gov't employee	180	27.3
Student	19	2.9
Merchant	20	3
Marital status		
Single	129	19.5
Married	436	66.1
Divorced	6	0.9
Widowed	89	13.5
Husband education		
Unable to read & write	158	23.9
Able to read & write	126	19.1
Primary (1-8)	166	25.2
Secondary (9-12)	136	20.6
Higher education	74	11.2
Husband occupation		
Gov't employee	279	42.3
Their own business	138	20.9
Private worker	162	24.5

Daily laborer	81	12.3
Family size		
< four	261	39.5
= > four	399	60.5
Had radio & TV		
Yes	601	91.1
No	59	8.9

Table 1: Socio-demographic characteristics of the participants (n = 660) in Debre Tabor Town, Northwest, Ethiopia, 2020.

Others (ethnicity) = Gurage, Kimant

Knowledge about COVID-19

Half of the study participants (51.2%) had good knowledge about COVID-19. Regarding to clinical symptoms of COVID-19; three mostly mentioned by respondents were fever (27.4%), headache (21.4%) and dry cough (18.6%) respectively. Nearly, Ninety percent of the respondents (88.2%) said that the main route of transmission were respiratory droplet and close contact. More than half (61.5%) of respondents reported that the incubation period for the development of symptoms from the time of infection is 2-14 days (see Table 2).

Variable	Frequency (n=660)	Percent (%)
Do you have information (know) about COVID-19?		
Yes	660	100
No	0	0
If yes, Source of Information		
Mass media	130	19.7
Health professional	192	9.1
Social media	187	28.3
Others	151	22.9
What are causative agent of COVID-19?		
Virus	291	44.1
Bacteria	134	20.3
Protozoa	80	12.1
I don't know	155	23.5

What are the main route of transmission for COVID-19?		
Close contact & respiratory droplet	582	88.2
Water	20	3
Food	19	2.9
I don't know	39	5.9
How long is Incubation period of COVID-19?		
2-14 days	406	61.5
3-7 days	95	14.4
> 14 days	45	6.8
I don't know	114	17.3
Who are susceptible for COVID-19?		
Children and elderly	107	16.2
General population	343	52
Adult	55	8.3
People with pre-existing diseases	141	21.4
I don't know	14	2.1
What are the clinical Symptom of COVID-19?		
Fever	181	27.4
Dry cough	123	18.6
Headache	141	21.4
Stuff & runny nose	67	10.2
Difficulty of breathing	120	18.2
I don't know	28	4.2
Which measures taken after showing S/SX of COVID-19?		
Stay at home	269	40.8
Use facemask	206	31.4

Inform for health worker	141	21.4
Call to 8335	43	6.5
Who is more danger for death after confirmed COVID-19?		
Adults	18	2.7
Children	79	12
People with pre-existing disease	137	20.8
Age > 60years	146	22.1
Pregnant mother	124	18.8
Smokers	117	17.7
I don't know	39	5.9
People with S/SX can transmit COVID-19?		
Yes	163	24.7
No	237	35.9
I don't know	260	39.4
Mother with COVID-19 can transmit to fetus?		
Yes	240	36.4
No	195	29.5
I don't know	225	34.1
Mother with COVID-19 can breastfeed?		
Yes	206	31.2
No	220	33.3
I don't know	234	35.5
Overall knowledge		
Poor knowledge	338	51.2
Good knowledge	322	48.8

Table 2: knowledge about COVID-19 among childbearing age in Debre Tabor Town, Northwest, Ethiopia, 2020

Attitude about COVID-19

More than half of the respondents (60.7%) had believe that COVID -19 was as a result of ours sin. And also, more than three-fourth of the respondents (77.1%) had believe that COVID-19 is occurs when the weather condition is cold. Likewise, nearly half of participants (47.9%) had negative attitude; while 52.1% had positive attitude towards prevention practice of COVID-19 (see Table 3).

Variables	Frequency(n=660)	Percent (%)
Did you believe that COVID-19 comes due to ours sin?		
Yes	402	60.9
No	258	39.1
Did you believe that COVID-19 is a disease of white?		
Yes	439	66.5
No	221	33.5
Did you believe that eating uncommon animals a cause of COVID-19?		
Yes	161	24.4
No	499	75.6
Did you believe that COVID-19 occurs when the weather is cold?		
Yes	399	60.5
No	261	39.5
Did you believe that COVID-19 attack only elderly?		
Yes	509	77.1
No	151	22.9
Did you believe that apply prevention measure antagonize to religious practice?		
Yes	142	21.5
No	518	78.5

Overall attitude		
Negative attitude	256	38.8
Positive attitude	404	61.2

Table 3: Attitude about COVID-19 among childbearing age in Debre Tabor Town, Northwest, Ethiopia, 2020.

Prevention practice of COVID-19

The overall all prevalence of prevention practice of COVID-19 among participants were 493(74.7%) with 95% CI (71.2- 78.3). One- thirds (30%) of the respondents had good COVID-19 preventive practice. About 66.5% of respondents reported that they were washing their hands with water and soap or use sanitizer's. Nearly three-fourth (69.2%) respondents reported that they have avoided touching their eyes, nose, and mouth with unwashed hands. Only 68.8% of respondents reported that they practiced social distancing (see Table 4).

Variable	Frequency(n=660)	Percent (%)
Did you have practiced prevention of COVID-19 methods?		
Yes	493	74.7
No	167	25.3
Did you repeated hand wash with water & soap or use sanitizer?		
Yes	328	66.5
No	165	33.5
Avoid to touch eye, nose & mouth with unwashed hands?		
Yes	341	69.2
No	152	30.8
Cover your mouse & nose when you are coughing & sneezing?		
Yes	365	74
No	165	26
Uses facemask when you are outside home?		

Yes	339	68.8
No	154	31.2
If yes; after using facemask where to avoid it?		
Anywhere	142	28.8
Garbage	351	71.2
Are stayed at home?		
Yes	376	76.3
No	117	23.7
Social distance		
Yes	351	71.2
No	142	28.8
Overall practice		
Poor	345	70
Good	148	30

Table 4: Prevention practice of COVID-19 among childbearing age in Debre Tabor Town, Northwest Ethiopia, 2020.

Major reasons for not practice of prevention of COVID-19 claimed by the study participants were 88(52.7) of negligence, 33(19.8%) of hopeless, 32(19.2%) of believe in God and 14(8.4%) of can't afford it.

DISCUSSION

To the best of our understanding, this is the first study investigating prevention practice towards COVID-19 among childbearing age women in Ethiopia. This study was conducted to fill the gap in the literature and providing a reference on KAP among childbearing age women.

In our finding, all of the respondents had heard about Novel coronavirus at the time of the study. It is lower than a study conducted in Pakistan in which more than 90% of medical students had heard about the disease [15]Furthermore, this finding is lower than a study conducted in Nepal in which 91.6 % of population aware all the clinical features of Coronavirus [16]. The underlying reason for these differences could be the period, study participants and place in which the studies were conducted.

And also comparable a survey study conducted in three African countries (Nigeria, South Africa and Kenya) showed that greater than 94% of the population were heard the coronavirus [17].

We found that nearly half of the participant (48.8%) had good knowledge about COVID-19 related issues, which is lower than the study done in china and Iran[18, 19]. The underlying reason

for these differences could be the period, study participants and place in which the studies were conducted. All of the participant was heard about the novel coronavirus disease and social medias was the main source of the information, which is similar with the study done India and Ethiopia [20, 21]

The more than half of the participants also held a good attitude towards the COVID-19 pandemics; which is similar the study done in china[22].

This study showed that overall prevalence of prevention practice of COVID-19 in the study area were 493(74.7%) with 95% of CI (71.2 - 78.3%) which is lower than the study done a population-based survey in Iran and Ethiopia [19, 23]. The possible reason for this difference might be due to the shortage of infrastructure and inadequate trained provider show that the frontline prevention methods COVID-19. This suggests further implementation and encouragement from the government is required for the application of good practice towards COVID-19 and its prevention methods.

Out of 660 participants, we found that almost one-thirds of the participant (30%) had good practice about COVID-19 prevention. This finding was lower than the studies done a population-based survey and among health worker in Iran and Ethiopia respectively [19, 23]. The underlying reason for these differences could be the period, study participants and place in which the studies were conducted.

The self-reported prevention practice towards COVID-19 was good in that 66.5% of the participants wash their hands with water and soap or use sanitizer's, 69.2% avoid touching their eyes, nose, and mouth with unwashed hands, 74% cover your mouth and nose when you are coughing & sneezing, 68.8% use facemask outside home, 76.3% stay at home and 72.9% practice social distancing; which is lower than the study done in china and Saudi Arabia[24, 25]. The possible result could be due to it may limited the dissemination of information regarding too through different means which helped them to practice preventive measures than those countries [26].

CLINICAL IMPLICATIONS

It is hypothesized that the finding used as a base line data for policy makers, practitioners.

RESEARCH IMPLICATIONS

The finding of this study could be used for researchers as a base line data to investigate additional information including objective data and also point researchers to focus on this area especially in resource poor countries.

LIMITATION

First, questions related to knowledge, attitude and practices are not validated and the findings were not well discussed in the related literature. Moreover, this study relied on self-reported practices. In this urgent time of dealing with pandemic, there would reach a certain level of social desirability that can bias the reports about the attitude and practices.

CONCLUSION

In this study, almost the overall knowledge, attitude and prevention practice of respondents towards COVID-19 pandemic very low. Therefore, risk communication and community engagement efforts for combat COVID-19 pandemics should emphasize addressing key preventive methods, use key messages to improve between existing knowledge, attitude and prevention practices.

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