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Prevalence and determinants of antenatal care service utilisation among pregnant youths (15-35) years in Harare: A cross-sectional analysis of the 2015 Zimbabwe demographic and health survey.

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ABSTRACT

Maternal mortality remains a public health challenge in most developing countries. Effective and efficient utilisation of maternal health care services can aid towards alleviation of maternal mortality and morbidity. Antenatal care (ANC) is regarded as a vital health care and health promotion activity that seeks to enhance maternal and foetal well-being throughout pregnancy as well as favourable pregnancy outcomes. The study examines the factors associated with ANC service utilisation among pregnant youths (15-35) years in Harare, Zimbabwe. The study utilised secondary data extracted from the 2015 Zimbabwe Demographic and Health Survey to explore ANC service utilisation among pregnant youths (15-35) in Harare, Zimbabwe. Univariate, bivariate, and multivariate analysis was done. The results showed that 67.6% of the respondents utilized ANC services. Wealth influenced ANC utilisation, the poorer were 11.1 times more likely to utilize ANC services in Harare. ANC service utilization in Harare were (OR=0.323, p<0.05) less likely among respondents who belonged to mainline churches compared to other religious groups. Only, tetanus toxoid injection model was found to have significant background variables (Education and Wealth index). Respondents with primary education level were less likely (OR=0.228, p<0.05), and those with secondary education were less likely to go for tetanus vaccination compared to those with tertiary education (OR=0.144, p<0.05). The poorer were 5.6 times more likely to take Tetanus toxoid injection than the richest. There is need to raise some awareness on the importance of Tetanus toxoid injection among the primary and secondary educated youth so as to meet the globally set developmental goals and targets with regards to maternal mortality and child health.

KEYWORDS: Youths, Antenatal care services, utilisation, Harare

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Introduction

Maternal mortality reflects one of the shameful failures of human development (Chimankar & Sahoo, 2011). Approximately 80% of maternal deaths globally are as a result of haemorrhage, sepsis, unsafe induced abortion, hypertensive disorder of pregnancy, and obstructed labour, (Chimankar & Sahoo, 2011). In 2017, approximately 295 000 maternal deaths occurred worldwide, and everyday 810 women died from preventable motives associated with pregnancy and childbirth, (Tessema, Teshale & Tesema, 2021). The majority of deaths 94% occurring in less developed countries are preventable. Southern Africa alone accounted for roughly two-thirds 196 000 of maternal deaths while Southern Asia accounted for almost one fifth (58 000), (Gitonga, 2017; Tessema, Teshale & Tesema, 2021).

Zimbabwe is among countries with the highest maternal mortality rates (MMRs) globally, ranging at 614 deaths per 100 000 live births, (Murewanhema, Nyakanda & Madziyire, 2020). Although maternal mortality decreased from 960 deaths per 100 000 live births in 2010-11 to 651 deaths per 100 000 in 2015, (Zimstat & ICF international, 2016), Zimbabwe has failed to achieve the Millenium Development Goal (MDG) number five that endeavours to improve maternal health and reduce maternal mortality by 75% between 2000 and 2015, (Sebayang, Efendi & Astutik, 2017). Zimbabwe still has a long road from accomplishing the sustainable development Goal number 3 (SDG3) which aims to reduce the average global MMR to less than 70 deaths per 100 000 women leaving no country with a MMR greater than double the global average, (Murewanhema, Nyakanda & Madziyire, 2020).

The main objective of Antenatal care is to improve the health of the mother and the foetus, (Gender et al., 2014). Antenatal Care comprise of medical interventions such as vaccinations against tetanus toxoid and health guidance that a woman receives during gestation (Mupwanyiwa et al., 2020), and administration of sexually reproductive health services. A supplementary benefit of Antenatal Care is early anticipation of Mother to Child Transmission (PTMTC). Hence, receiving required sexual reproductive health services, bearing in mind that high HIV prevalence has contributed to maternal morbidity and mortality, 46% of the maternal mortality cases in less developed countries, Zimbabwe to be specific are HIV related, (Gender et al., 2014). High-quality and timely maternal health-care services are affected by accessibility, availability, and affordability

issues, hence negatively affecting millions of women of the reproductive age group, (Kim & Lee, 2016).

The financial doldrums are also causing considerable challenges for countries to sustain the delivery of high quality, vital maternal and newborn health services, (UNICEF, 2020). ANC coverage reductions of 39.3 from 51.9%, due to the pandemic, would result in 56,700 additional maternal deaths, (Tadesse, 2020). Scholarly research on ANC service utilisation has been published globally, regionally and in Zimbabwe exploring different issues related to ANC, (Nghargbu & Olaniyan; Kufa, 2019; Gender et al., 2014; Dansereau et al., 2016; Appiah et al., 2020; Rwabilimbo et al., 2020; Tessema, Teshale & Tesema, 2021), and (Mlilo-Chaibva, 2017). However, most studies focused on ANC utilisation without decomposing ANC components (Blood pressure, Urine sample, Blood pressure and Tetanus Injection) which are part of the antenatal care utilisation services. The current study portrays a unique perspective from for example, (Kufa, 2012; Gender et al., 2014), and (Mlilo-Chaibva, 2017) employed qualitative research, focused on adolescents and used a smaller sample.

Improving reproductive, maternal, neonatal and child health (RMNCH) outcomes remains a challenge among several countries in most of the developing world Southern Africa included, (Sebayang, Efendi & Astutik, 2017). Zimbabwe, to date, specifically has failed to achieve the Millenium Development Goal 4 target to reduce child mortality, and Millennium Development Goal 5 targeting maternal mortality reduction by 75% between 2000 and 2015, (Sebayang, Efendi & Astutik, 2017). Extra efforts are, therefore, required for Zimbabwe to meet the newly set global developmental goals and targets established as Sustainable Development Goals (SDGs), on child and maternal mortality. The SDGS seeks to eradicate by 2030 preventable deaths among women, newborns and children under 5 years, with all countries targeting to curb neonatal mortality to at least as low as 12 deaths per 1000 live births and 25 deaths per 1000 live births, among under-5 mortality (UN IGME, 2020).

World Health Organisation (WHO) recommends every pregnant woman to receive at least four ANC visits being the proxy indicator for comprehensive ANC, (Rwabilimbo et al., 2020). Globally, the prevalence of Antenatal Care service utilisation is 85%, with women who attended at least four ANC visits with a skilled health professional being 58%, (Dansereau et al., 2016). From a study conducted among 6 Meso-American countries, it revealed that the prevalence of women who utilised ANC services ranged from 18% in Guatemala, to 38% in Panama and 81% in Nicaragua, (Dansereau et al., 2016).

The collective prevalence of recommended Antenatal Care service utilisation in sub-Saharan African countries were 59%, with Southern region of Africa recording the highest prevalence of recommended ANC service utilisation, 79%, and Eastern regions of Africa having a low prevalence of recommended ANC service utilization, 53%, (Tessema, Teshale & Tesema, 2021).

Further on, antenatal care service utilisation among pregnant in the African region has risen minimally as reported by over 69% women having had at least one Antenatal Care visit during the pregnancy, (Nghargbu & Olaniyan, 2019). One ANC visit is far below WHO recommendation of four visits.

In Zimbabwe, national studies conducted by ZIMSTAT (2015) revealed that the percentage of women who utilised the recommended four or more Antenatal Care visits as per the WHO recommended guidelines increased from 71% since 2005-06 to 76% in 2015, (Zimstat and ICF International, 2016). However, the utilisation does not specify which of the ANC components do women of the reproductive age use. Studies that decompose the components (Blood pressure, Urine sample, Blood pressure and Tetanus Injection) are much needed. As these will help in ANC care service programming in Zimbabwe. The timing and full immunisation for effective protection of the neonate tetanus is important (Anjana Verma, Smita Baheti, 2016; Faria et al., 2021).

Whereas urine samples can indicate potential problems such as a urinary tract infection or kidney infection, gestational diabetes, dehydration and pre-eclampsia. For instance, urinary tract infection was in pregnant women (O'Leary, Kelly & Keane, 2022). The importance of checking accurate blood pressure in pregnant women cannot be over emphasized since pre-eclampsia prediction and treatment of severe hypertension is detected and treated before it harms the baby and mother (Hurrell et al., 2022).

Socio-demographic factors influencing antenatal care service utilisation

Socio-economic factors encompass demographic, social, structural and attitudinal influences which upsurge the probability of a person to utilize Antenatal Care services when pregnant, (Akowuah, Agyei-baffour & Awunyo-vitor, 2018). The age of the pregnant mother is associated with Antenatal Care services utilisation (Dulla, Daka & Wakgari, 2017; Adedokun & Yaya, 2020; Appiah et al., 2020; Ssetaala et al., 2020) and (Tadesse, 2020), revealed that pregnant women aged between 20-34 years were more likely to utilize ANC services. Not undermining the contributions of the aforementioned studies, the

data was obtained from studies that focused more on adolescents' pregnant women and women of the reproductive age group (15-49) years.

Furthermore, existing literature found that the education level of pregnant woman determines their ANC use. According to previous studies an association between maternal education and utilisation of health services in Ghana reveals a strong link between mothers' formal education and a composite measure of women's health knowledge in accessing healthcare services, (Dulla, Daka & Wakgari, 2017; Ali et al., 2020; Appiah et al., 2020; Rwabilimbo et al., 2020; Tadesse, 2020). Thus, studies conducted in different countries reported that maternal age, number of living children, educational status, place of residence, occupation, religion, socio-economic status, and previous obstetric history were factors significantly associated with the use of Antenatal Care services, (Tadesse, 2020). There is a dearth of literature on Antenatal Care services utilization among pregnant youths aged (15-35) in sub-Saharan Africa as well as in Zimbabwe.

The linkage between socio-demographic background variables and ANC Components and ANC utilisation in Zimbabwe is demonstrated in Figure. 1. The conceptual framework assumes that background variables operate to influence uptake of ANC components and the overall ANC utilisation.

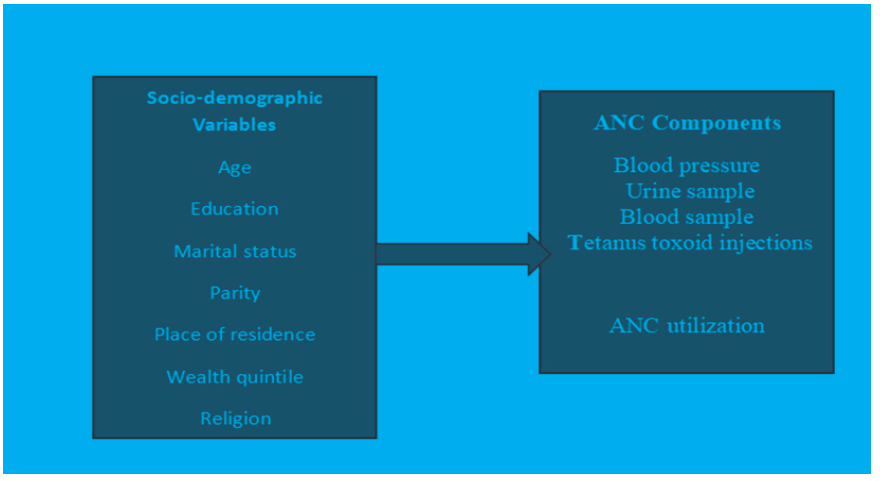

Figure 1: Link between socio-demographic variables,
Sources: ANC Components and ANC utilisation

Methods

This study was a nationally representative cross-sectional design. We conducted a secondary data analysis of the 2015 Zimbabwe Demographic and Health Survey (ZDHS) dataset, with Harare province as the focal point of study.

The ZDHS collected data on women's socio-demographic characteristics, reproductive health, and nutrition indicators. The 2015 ZDHS is the sixth in line survey to be conducted by Zimbabwe National Statistical Agency (ZIMSTAT), in collaboration with Micro International. The 2015 ZDHS sample was selected with a two-stage cluster design, with enumeration areas (EAs) as the sampling units for the first stage, (ZDHS, 2015). The sample included 400 EAs, 166 in urban areas and 234 in rural areas. A representative sample of 11, 196 households were selected (ZDHS, 2016 & Micro International). Women aged 15-49 years and men aged 15-54 years who were either permanent residents of selected households or visitors who stayed in the household the night before the survey were eligible for the interview. In this study, only pregnant youths (15-35) years who reported to have been pregnant two years preceding the survey and these are part of youth according to the African charter, (Affairs, 2007), who resided in Harare province consented to be interviewed. In this study 448 former pregnant youths (15-35) years were extracted from the larger sample of 1239 women aged 15-49 years in Harare.

Outcome variable

The outcome was Antenatal care service utilisation measured by number of ANC visits less than 4 visits = 0; more than 4^{+} ANC visits =1; utilisation of components of ANC (blood pressure, urine sample, blood sample, and tetanus toxoid injections all coded 1=yes and No =0 for each component.

Covariates

Determinants of maternal healthcare utilisation were included based on the available literature. The selected control variables included in the analysis are place of residence (urban and rural), age (15-19, 20-24, 25-29, 30-35), parity, religion, education level, marital status and wealth quantile (poorest, poorer, middle, richer, and richest).

Statistical analysis

Frequencies of key outcome variables and covariates were obtained to describe the study sample. First, bivariate analysis was done to examine the association between the background characteristics and ANC service utilisation, other components of ANC were examined using chi-square test of independence. Binary logistic regression models were computed for the following outcome variables (Antenatal Care Service Utilisation) and each of the four components of ANC (blood pressure, urine sample, blood sample, and tetanus toxoid injections). Only tetanus toxoid injection model was found to have significant background variables was presented in the final multivariate analysis.

Results

Table 1, shows the frequency distribution of the study participants. More than two thirds of the respondents 67.6% utilised ANC services. A quarter of the respondents (26%), were aged between 20-24 years. The majority of the participants (71%), were living in Harare urban. Concerning marital status, more than half of the study participants (54% were married, 39% had not given birth children prior to the survey. The majority of women (92%), were Christians and 81% had secondary education. With regards to wealth status, almost half of the respondents (47%) were from the richest wealth quantile. The majority of respondents had been screened for HIV (98%)

Table 1: *Percentage distribution of respondent's demographic and socio-economic characteristics.*

Demographic characteristics	**Percentage %**
Age group	
15-19	24.4
20-24	26.2
25-29	25.0
30-35	24.4
Type of place of residence	
Urban	71.1
Rural	28.9

Demographic characteristics	Percentage %
Education	
Primary	8.9
Secondary	80.5
Higher	10.6
Marital status	
Never married	36.3
	54.1
Married	9.6
Formerly married	
Parity	
No children	39.8
1 child	20.5
2 children	20.4
3+ children	19.4
Religion	
Main line churches	26.3
Pentecostal	39.7
Apostolic sect	26.3
Other religion	7.7
Wealth index	
Poorer	2.2
Middle	9.6
Richer	41.1
Richest	47.1
Antenatal Care service Utilization	
Yes	67.6
No	32.4
HIV Testing	
Yes	98.0
No	2.0

N=448

Table 2 shows antenatal care service utilisation by background variables. The analysis indicated that Antenatal Care utilisation was associated with place of residence (p<0.000), Education (p<0.000), Wealth quantile (p<0.000), Religion (p<0.000), and Parity (p<0.002). The utilisation of ANC services was almost three quarters (74%) among youth who resided in Harare urban. Wealth was significantly associated with ANC utilisation. ANC increased with an increase in age with highest prevalence recorded among the richest quintile. Furthermore, utilisation of ANC services was influenced by religion. ANC utilisation was least among respondents who belonged to the Apostolic Sect (58%). Parity influence ANC utilisation, it declined with an increase in parity.

Table 2: *ANC service utilisation by back ground variables*

Demographic characteristics	**YES %**	**NO%**	**P VALUE**
Age			
15-19	73.7	26.3	
20-24	68.6	31.4	0.705
25-29	64.4	35.6	
30-34	69.6	30.4	
Type of place of residence	74.3	25.7	
Urban	54.6	45.4	0.000
Rural			
Education			
Primary	45.2	54.8	
Secondary	67.2	32.8	0.000
Higher	95.0	5.0	
Marital Status			
Never married	73.3	26.7	
Married	66.0	34.0	0.181
Formerly married	78.4	21.6	

Demographic characteristics	YES %	NO%	P VALUE
Parity			
1 child	75.2	24.8	
2 children	71.1	28.9	0.002
3+ children	57.1	42.9	
Wealth index			
Poorer	35.3	64.7	
Middle	56.4	43.6	
Richer	57.6	42.4	0.000
Richest	88.7	11.3	
Religion			
Mainline churches	80.0	20.0	
Pentecostal	72.3	27.7	0.000
Apostolic sect	58.1	41.9	
Other religion	48.8	51.2	

Table 2 presents the association between background characteristics and Antenatal Care service utilization in Harare. The binary logistic regression revealed that respondents with primary education level were 7.7 times more likely to utilize antenatal care services, (OR=7.781, $p<0.05$) compared to those who attained a higher education. With regards to wealth, the poorer were 11.1 times more likely to utilize antenatal care services in Harare compared to the richest wealth quintile group. Antenatal Care utilization services in Harare were (OR=0.323, $p<0.05$) less likely among respondents who belonged to mainline churches compared to other religion. In addition, respondents who proffered to be Pentecostal were less likely to utilize Antenatal Care services (OR=0.390, $p<0.05$) in comparison to other religion. Furthermore, Parity was a significant predictor of utilization of Antenatal Care services for instance, respondents with one child were more likely to utilize Antenatal Care services (OR=1.555, $p<0.05$) compared to those who had borne more than three children. Also, respondents with two children were less likely to utilize Antenatal Care services (OR=0.474, $p<0.05$), compared to those who had given birth to more than three children.

Table 3: Multivariate association between background variables and ANC services utilisation ZDHS 2015.

Demographic characteristics	B	S.E.	Exp(B)
Age group			
15-19	-0.103	0.674	0.902
20-24	0.162	0.376	1.176
25-29	0.337	0.283	1.401
30-34 (Ref)			
Type of place of residence			
Urban	-0.146	0.296	0.864
Rural (ref)			
Education			
Primary	2.052	0.848	7.781**
Secondary	1.318	0.767	3.735
Higher (ref)			
Marital status			
Never married	1.158	0.756	3.184
Married	0.694	0.411	2.001
Formerly married (ref)			
Parity			
1 child	2.588	0.371	1.555**
2 children	0.747	0.286	0.474**
3+ children (ref)			

Demographic characteristics	B	S.E.	Exp(B)
Religion			
Main line churches	-1.131	0.439	0.323**
Pentecostal	-0.942	0.395	0.390**
Apostolic sect	-0.497	0.394	0.609**
Other religion (ref)			
Wealth index			
Poorer	2.415	0.681	11.190**
Middle	1.313	0.488	3.716**
Richer	1.420	0.315	4.136**
Richest (ref)			

Note: * p<0.10, **p<0.005, ***p<0.001. OR-Crude odds ratio, Ratio, B-beta value, R-reference category.

Table 3 presents the frequency distribution of the components of Antenatal Care by background characteristics. The respondents aged 15-19 years utilised specific components of ANC (Bp, urine sample, blood sample, and tetanus injection), more (92%). With respect to place of residence, Urban respondents utilized the all-specific components of Antenatal care, (91%), majority of the respondents with secondary education had a higher prevalence of ANC components utilisation (92%). A marginal difference was witnessed among the never married respondents as they utilised components of ANC more (93%). Respondents with one child utilised all specific components of ANC, (91%). Among religious dominations, respondents who belong to the mainline churches utilized all specific components of ANC (Bp, blood sample, urine sample, tetanus injection), (92%), whilst Richer wealth quantile respondents utilised all specific components of ANC, (92%).

Table 4: *Frequency distribution of Components of ANC by background variables*

Demographic characteristics	Blood Pressure%	Urine sample %	Blood sample%	Tetanus injection%
Age group				
15-19	100.0	76.5	100.0	89.5
20-24	97.3	77.7	98.2	85.2
25-29	98.0	81.8	99.3	82.3
30-34	100.0	81.8	100.0	83.4

Demographic characteristics	Blood Pressure%	Urine sample %	Blood sample%	Tetanus injection%
Type of place of residence				
Urban	99.3	83.5	99.6	81.9
Rural	97.2	74.5	98.6	87.2
Education				
Primary	91.2	67.6	97.1	78.6
Secondary	99.1	80.6	99.4	87.4
Higher	100.0	90.0	100.0	54.1
Marital status				
Never married	100.0	85.7	100.0	84.6
Married	98.6	81.8	99.2	84.0
Formerly married	97.9	68.8	100.0	82.0
Parity				
1 child	98.6	82.9	100.0	83.5
2 children	97.9	77.6	97.9	86.3
3+ children	99.3	81.0	100.0	81.6
Religion				
Main line churches	99.0	82.5	100.0	83.3
Pentecostal	100.0	85.2	98.8	85.1
Apostolic sect	95.8	71.7	99.2	85.7
Other religion	100.0	82.9	100.0	73.2
Wealth index				
Poorer	100.0	75.0	91.7	64.7
Middle	98.0	64.7	98.0	90.7
Richer	98.5	82.9	99.5	85.9
Richest	98.7	82.9	100.0	80.4
Total	**98.5**	**62.7**	**78.5**	**83.8**

N=448

Table 5 presents the bi-variate analysis of background characteristics by components of Antenatal Care service utilisation. Only Tetanus toxoid injection was significantly associated with wealth index and educational status. For instance, education was associated (p<0.000), with Tetanus injection, and wealth index (p<0.042). Respondents with secondary education received tetanus toxoid injection (87%). In addition, middle income earners received tetanus toxoid injection in the arm more (91%).

Table 5: *Bivariate analysis of background variables by Components of Antenatal Care*

Demographic characteristics	Blood Pressure	p-value	Urine sample	p-value	Blood sample	p-value	Tetanus injection	P-value
Age group								
15-	96.0							
19	100.0	0.27	76.5	0.78	100.0	0.39	89.5	0.82
20-24	97.3		77.7		98.2		85.2	
25-29	98.0		81.8		99.3		82.3	
30-35								
Type of place of residence								
Urban	99.3	0.84	83.5	0.27	99.6	0.22	81.9	0.15
Rural	97.2		74.5		98.6		87.2	
Education								
Primary	91.2	0.26	67.6		97.1		78.6	
Secondary	99.1		80.6	0.28	99.4	0.25	87.4	0.00
Higher	100.0		90.0		100.0		54.1	
Marital status								
Never married	100.0		85.7		100.0		84.6	
Married	98.6	0.84	81.8	0.22	99.2	0.77	84.0	0.93
Formerly married	97.9		68.8		100.0		82.0	

Demographic characteristics	Blood Pressure	p-value	Urine sample	p-value	Blood sample	p-value	Tetanus injection	P-value
Parity								
1 child	98.6		82.9		100.0		83.5	
2 children	97.9	0.63	77.6	0.53	97.9	0.54	86.3	0.00
3+ children	99.3		81.0		100.0		81.6	
Religion								
Main line	99.0		82.5		100.0		83.3	
churches				0.35		0.65		
Pentecostal	100.0	0.24	85.2		98.8		85.1	0.26
Apostolic sect	95.8		71.7		99.2		85.7	
Other religion	100.0		82.9		100.0		73.2	
Wealth index								
Poorer								
Middle	100.0	0.95	75.0	0.22	91.7	0.73	64.7	
Richer	98.0		64.7		98.0		90.7	0.04
Richest	98.5		82.9		99.5		85.9	
	98.7		82.9		100.0		80.4	
Total	**98.5**		**62.7**		**78.5**		**83.8**	

In isolating the net effects of each independent variable on utilisation of the components of Antenatal Care, a model was built basing on the identified predictors explained by the bivariate analysis. Only tetanus toxoid injection model was found to have significant background variables (Education and Wealth index). In this case independent variables at bivariate level were included in the model, in which the dependent variable was receiving Tetanus toxoid injection in the arm. Respondents with primary education level were less likely (OR=0.228, $p<0.05$) to take Tetanus toxoid injection in the arm as part of their Antenatal Care in Harare. The results show that respondents with secondary education were less likely (OR=0.144, $p<0.05$) to take tetanus toxoid injection as part of their ANC. Furthermore, respondents who belonged to the Poorer wealth index were 5.6 times more likely to take Tetanus toxoid injection in the arm as part of Antenatal care services.

Table 6: *Multivariate association between background variables and Tetanus toxoid injection ZDHS 2015*

Demographic characteristics	B	S.E.	Exp(B)
Age group			
15-19	-0.167	0.891	0.846
20-24	0.195	0.447	1.216
25-29	0.272	0.344	1.313
30-35 (Ref)			
Type of place of residence			
Urban	0.493	0.441	1.637
Rural (ref)			
Education			
Primary	-1.480	0.608	0.228**
Secondary	-1.939	0.432	0.144**
Higher (ref)			
Marital status			
Never married	-0.191	0.913	0.826
Married	-0.097	0.428	0.907
Formerly married (ref)			
Parity			
1 child	-0.235	0.423	0.790
2 children	-0.543	0.358	0.581
3+ children (ref)			
Religion			
Main line churches	-1.159	0.496	0.314
Pentecostal	-1.011	0.449	0.364
Apostolic sect	-0.758	0.453	0.496
Other religion (ref)			
Wealth index			
Poorer	1.730	0.742	5.642**
Middle	-0.159	0.706	0.853
Richer	-0.079	0.340	0.924
Richest (ref)			

Notes: *p<0.10, **p<0.05, ***p<0.001. OR-odds ratio, B-beta value, R-reference category.

Discussion

The main aim of the study was to examine factors associated with Antenatal Care service utilisation among pregnant youths (15-35) years in Harare, Zimbabwe. The current study found that 67.6% of the respondents reported four recommended ANC visits. The findings of the current study show a higher ANC prevalence compared to the 18% in Guatemala and 38% in Panama, (Dansereau et al., 2016), and 64% in East district of Ghana reported by (Appiah et al., 2020), and 52% in Sub-Saharan Africa reported by (Adedokun and Yaya, 2020). Thus, the results of the current study are however, lower than the current 85% global utilization rate, (Dansereau et al., 2016). Hence, the lower utilisation rate can be attributed to aspects such as affordability issues in that, some youths cannot afford the costs of having the required visits. Perhaps the major contributing factor is the customary beliefs and hostile attitude portrayed by health care professionals as well as other elderly pregnant women as a result of their Afrocentric views on being pregnant and young. It may be perceived as a taboo causing pregnant youths to have a lower utilisation rate of Antenatal Care services. However, more perinatal deaths were associated with the four-visit model (FANC Model) than models comprising of eight ANC visits (Dowswell et al., 2015).

Adding on, the study also at examined the factors influencing the uptake of Antenatal Care components utilisation, (Blood pressure, blood sample, urine sample, and tetanus toxoid injection). Consistent with utilisation of Antenatal care services, attending all components of ANC is a pre-requisite for one to be regarded as having fully utilised ANC services (components that is BP test, urine sample taken, blood sample taken, and tetanus toxoid injection in the arm).

The study showed that tetanus toxoid injection was a significant predictor of uptake of Antenatal Care components utilisation. The study found that, the poorest were more likely to go for tetanus toxoid injection than the richest. Contrary, other studies found a significant association with higher odds of receiving tetanus toxoid injection and having higher wealth quantile, (Adedokun & Yaya, 2020). Youth with primary and secondary education were less likely to go for tetanus toxoid injection compared to those with tertiary education. Similarly, to our study, antenatal tetanus vaccination was significantly associated with higher level of mother's education (Mohammed & Ahmed, 2022).

This indicates that despite advances in vaccination, there are still challenges in some pregnant women in accepting tetanus vaccination. On the other hand, further studies should be done to investigate why women with primary and secondary education shun free tetanus vaccination offered in Zimbabwe.

Lastly, the study assessed uptake of HIV test and screening among pregnant youths. The study found that all background variables were not predictors of HIV testing and screening. However, 98% of the respondents reported ever having been screened, tested for HIV / AIDs as part of their Antenatal Care.

The results of the current study are higher than 90% reported by (Tuladhar & Dhakal, 2011) in Nepal, 95% reported by (Kufa, 2012) in Chitungwiza, Zimbabwe, 62% reported by (Ssetaala et al., 2020), in Uganda and 42% reported by (Fagbamigbe & Idemudia, 2015) in Nigeria. This could be explained by the ministry of health PMTCT program which makes it compulsory for all pregnant women to be screened and tested for HIV.

Conclusion

The study aimed to provide the correlates of ANC utilisation as well as the decomposed ANC components. In Zimbabwe, Antenatal Care service utilisation is fairly wide spread, with 67.6% of youths (15-35) years had their first Antenatal Care visit within 4+ months of their pregnancy, HIV screening was found to be almost universal. However, uptake of tetanus toxoid injection is worrisome, programs that target the richest pregnant youth and those with primary and secondary education could help improve uptake of tetanus vaccination.

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