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# Regional disparities and sociodemographic determinants of intention to use contraceptives among Somali women: a crosssectional analysis of the 2020 SDHS



Jamilu Sani<sup>1</sup> and Mohamed Mustaf Ahmed<sup>2\*</sup>

## Abstract

**Background** Contraceptive use is vital to improve maternal and child health, promote economic stability, and empower women. Despite global progress in family planning, Somalia faces unique challenges due to cultural, economic, and infrastructural barriers, resulting in low contraceptive use. This study investigated the prevalence and determinants of the intention to use contraceptives among women of reproductive age in Somali.

**Methods** Using data from the 2020 Somali Demographic and Health Survey (SDHS), this study analyzed a sample of 7,967 women aged 15–49. Contraceptive intention was categorized as "intent to use" versus "no intent to use." The SDHS questionnaire assesses intention to use contraceptives in the next 12 months, which aligns with standard DHS definitions. Bivariate and multivariable logistic regression analyses were conducted to assess the association between contraceptive intention and sociodemographic factors. Choropleth maps and bar charts illustrate regional disparities.

**Results** Overall, only 7.6% of the women intended to use contraception, with substantial regional variation. Woqooyi Galbeed reported the highest prevalence of contraceptive intention at 18.4%, while Gedo had the lowest at 1.1%. Significant predictors of contraceptive intention included higher education (AOR: 2.34, 95% CI: 1.21–4.56), secondary education (AOR: 1.91, 95% CI: 1.12–3.26). Women residing in nomadic communities had significantly lower odds of intending to use contraception (AOR: 0.40, 95% CI: 0.23–0.68). Since nomadic residence often implies reduced healthcare access, this finding suggests logistical and cultural barriers to contraceptive intentions. Cultural and geographic factors significantly influence contraceptive intentions.

**Conclusion** Regional, educational, and socioeconomic variations affect contraceptive intentions in Somalia. Addressing these disparities through targeted educational and healthcare access interventions could improve family planning and utilization, ultimately enhancing maternal and child health outcomes.

**Keywords** Maternal health, Somalia, Regional disparities, SDHS, Intention to use contraceptives, Reproductive age women

\*Correspondence: Mohamed Mustaf Ahmed momustafahmed@simad.edu.so <sup>1</sup>Department of Demography and Social Statistics, Federal University Birnin Kebbi, Birnin Kebbi, Kebbi State, Nigeria <sup>2</sup>Faculty of Medicine and Health Sciences, SIMAD University, Mogadishu, Somalia



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#### Introduction

Contraceptive use is a critical component of reproductive health and family planning, significantly contributing to reduced maternal and infant mortality, improved economic stability, and enhanced gender equality [1]. Intention to use contraceptives refers to an individual's stated likelihood of adopting contraception in the future [2, 3]. This measure is widely used in family planning research to assess potential demand for contraception. Beyond individual health benefits, contraceptive use has farreaching societal implications by decreasing unintended pregnancies, which often leads to increased healthcare costs and socioeconomic burdens [4, 5]. Despite global initiatives aimed at improving contraceptive accessibility, substantial disparities remain, particularly in low- and middle-income countries, where cultural, economic, and infrastructural barriers hinder access to family planning services [6-8].

Somalia presents unique challenges in reproductive health owing to prolonged conflict, limited healthcare infrastructure, and distinct cultural contexts. Consequently, contraceptive use in Somalia is notably lower than in many other sub-Saharan African countries, contributing to one of the highest fertility rates globally at 6.9 births per woman [9, 10]. Globally, the intention to use contraceptives among fecund sexually active women is around 42.8% [2, 3], but in Somalia, only 7% of currently married women use any contraceptive method, with just 1% using modern methods [11, 12]. This disparity highlights a significant gap in contraceptive use in Somalia compared to global averages, underscoring the need for improved access to family planning services. A significant portion of Somalia's population is rural and nomadic, with many women lacking access to healthcare services, particularly in remote areas [13]. High fertility rates are further exacerbated by cultural norms that favor large families, limited education regarding family planning options, and restricted access to healthcare facilities [14, 15]. This low prevalence of contraceptive use poses substantial challenges for maternal and child health as inadequate birth spacing and unintended pregnancies contribute to elevated maternal and neonatal mortality rates [16].

Research indicates that various factors influence contraceptive use and intentions among women, including sociodemographic characteristics, such as age, education level, and marital status. Specifically, education plays a pivotal role in contraceptive uptake; women with higher education levels tend to have a better understanding of reproductive health issues, empowering them to make informed family planning decisions [15, 17]. Economic factors also significantly affect contraceptive use: financially stable women are more likely to access health services and afford contraceptive methods [7, 18]. In Somalia, where poverty levels are high, economic constraints frequently limit women's ability to prioritize contraception. Geographic location further influences contraceptive access. Urban residents typically enjoy greater access to healthcare services and contraceptive options compared to their rural or nomadic counterparts who face logistical barriers and have fewer nearby healthcare facilities [9, 19, 20].

Additionally, cultural and religious beliefs significantly shape family planning intentions in Somalia; some communities perceive contraceptive use to be inconsistent with traditional norms [9, 21]. This cultural context presents unique challenges for reproductive health initiatives aimed at improving contraceptive use in the country. This study aimed to assess the factors influencing Somali women's stated intention to use contraceptives rather than actual usage patterns, while examining how sociodemographic factors contribute to disparities in these intentions across different regions. Utilizing data from the 2020 Somali Demographic and Health Survey (SDHS), this study provides a comprehensive analysis of the determinants of contraceptive intentions, focusing on factors such as education level, working status, wealth status, residence, and geographic region. Understanding these determinants is crucial for developing culturally sensitive and region-specific interventions to address the unique needs of Somali women. This study contributes to the broader literature on reproductive health in conflictaffected settings by offering insights that could inform policy actions aimed at increasing contraceptive access and improving maternal health outcomes in Somalia.

#### Methods

#### Study design and data source

This analysis employed a cross-sectional design, utilizing data from the 2020 Somali Demographic and Health Survey (SDHS). The SDHS is a nationally representative survey that gathers extensive health and demographic data from women of reproductive age, specifically those aged 15–49 years. For our analysis, we utilized the Individual Recode (IR) dataset, which emphasizes reproductive health indicators, including contraceptive usage and intentions.

#### Study population and sampling methods

The study population consisted of women aged 15–49 years who participated in the 2020 Somali Demographic and Health Survey (SDHS) and provided information on their contraceptive use intentions. The final analytical sample included 7,967 women. The SDHS employed a two-stage, stratified cluster sampling design to ensure national representativeness. In the first stage, enumeration areas (EAs) were selected from a national master sampling frame using probability proportional to size

(PPS) sampling, ensuring that larger EAs had a higher probability of selection. In the second stage, households within each selected EA were randomly selected using systematic random sampling. To avoid intra-household clustering bias and maintain statistical independence, if multiple eligible women (aged 15–49) resided in the same household, one woman was randomly selected for the interview.

#### **Data collection**

Data were collected through face-to-face structured interviews, administered by trained enumerators using standardized DHS questionnaires. The interviews covered key demographic and health-related factors, including contraceptive awareness, reproductive health behaviors, and fertility preferences. Information on contraceptive intention was specifically obtained by asking women whether they intended to use contraception in the next 12 months. The survey followed strict quality control procedures, including field supervision and realtime data validation, to ensure the accuracy and consistency of responses.

#### Study variables

The outcome variable for this study was the intention to use contraception, which was initially classified into four categories: users of modern methods, users of traditional methods, non-users intending to use contraception in the future (within next 12-months), and non-users not intending to use it. For the purpose of this analysis, we retained only the two categories related to intention, resulting in a binary classification: individuals intending to use contraception in the future were coded as "1," while those not intending to use it were coded as "0." Importantly, women currently using any form of contraception were excluded from this analysis.

The independent variables included various sociodemographic factors, such as age group (categorized into seven 5-year intervals from 15–19 to 45–49 years), education level (no education, primary, secondary, or higher), marital status (married, widowed, divorced, or never married), and wealth index. The wealth index, a proxy for socioeconomic status, was derived using principal component analysis (PCA). PCA was performed on a set of variables reflecting household asset ownership (e.g., radio, television, livestock), housing characteristics (e.g., flooring material, toilet facilities), and access to basic services (e.g., water source, electricity). The resulting continuous wealth index was then categorized into quintiles (poorest, poorer, middle, richer, richest). Other independent variables included employment status (employed or unemployed), perceived distance to a health facility (categorized as 'big problem' or 'not a big problem,' reflecting individual perceptions of accessibility), residence (urban, rural, or nomadic), and region. All independent variables were treated as categorical variables, as described above, to effectively assess their impact on the intention to use contraception.

#### Statistical analysis

Data analysis was performed using Stata version 17. DHS sampling weights were applied throughout the analysis to account for the complex survey design and ensure national representativeness. Descriptive statistics were used to summarize the sociodemographic characteristics of the study population and the overall prevalence of contraceptive intention, which was visualized using a pie chart. Regional disparities in contraceptive intention were displayed using a bar chart, and a choropleth map was generated using GeoPandas in Python with GADM map data for Somalia to provide a clear geographical representation.

Bivariate and multivariable binary logistic regression analyses were conducted to examine the associations between various sociodemographic factors and the intention to use contraceptives. Crude odds ratios (CORs), adjusted odds ratios (AORs), and 95% confidence intervals (CIs) were calculated to quantify the strength of these associations. All statistical tests were two-sided, and the significance level was set at p < 0.05.

While acknowledging that variables such as residence and wealth status have both individual and communitylevel components, and that multilevel modeling could offer insights into hierarchical influences, this study focused primarily on individual-level predictors of contraceptive intention. Therefore, a single-level logistic regression model was deemed appropriate for addressing the research objectives. Future research may explore multilevel modeling to further investigate contextual influences on contraceptive intention.

#### Results

#### Sociodemographic characteristics

The study included 7,967 women aged 15–49 years, with the highest representation in the 25–29 age group (23.31%), followed by the 20–24 age group (17.54%). Women aged 45–49 comprised the smallest proportion (6.44%) (Table 1). Education levels were predominantly low; 84.01% of the participants reported no formal education, while only 1.22% had higher education. The marital status distribution showed that most respondents were married (86.78%), 8.99% divorced, and 4.23% widowed. Regarding wealth, the lowest and second quintiles represented 23.17% and 19.39% of the participants, respectively, while the highest quintile accounted for 17.91%.

Access to healthcare was a notable concern, with 62.36% of women reporting that distance to health facilities was a "big problem." Employment levels were

Variable	Category	Weighted Frequency	Percent
Age Group	15–19	590	7.42%
	20–24	1,395	17.54%
	25–29	1,854	23.31%
	30–34	1,428	17.95%
	35–39	1,354	17.02%
	40–44	820	10.31%
	45–49	512	6.44%
Education	No Education	6,693	84.01%
	Primary	941	11.81%
	Secondary	235	2.95%
	Higher	98	1.22%
Marital Status	Married	6,914	86.78%
	Divorced	716	8.99%
	Widowed	337	4.23%
Wealth Quintile	Lowest	1,846	23.17%
	Second	1,545	19.39%
	Middle	1,499	18.82%
	Fourth	1,650	20.72%
	Highest	1,427	17.91%
Distance to Health Facility	Big problem	4,967	62.36%
	Not a big problem	2,997	37.64%
Work Status	Working	663	8.33%
	Not working	7,301	91.67%
Residence	Rural	1,993	25.01%
	Urban	4,943	62.04%
	Nomadic	1,031	12.94%
Region	Awdal	778	9.76%
	Woqooyi Galbeed	574	7.21%
	Togdheer	290	3.64%
	Sool	606	7.60%
	Sanaag	854	10.72%
	Bari	506	6.35%
	Nugaal	849	10.66%
	Mudug	890	11.18%
	Galgaduud	863	10.83%
	Hiraan	440	5.53%
	Middle Shabelle	284	3.56%
	Banadir	445	5.59%
	Bay	67	0.85%
	Bakool	302	3.79%
	Gedo	101	1.26%
	Lower Juba	117	1.47%

**Table 1** Sociodemographic characteristics (N = 7,967)

low, as 91.67% of women did not work. Regarding residence type, 62.04% lived in urban areas, 25.01% lived in rural areas, and 12.94% lived in nomadic communities. Regional distribution varied widely, with the Mudug, Sanaag, and Galgaduud regions having the highest representation, at 11.18%, 10.72%, and 10.83%, respectively.

# Prevalence and disparities in contraceptive use intention in Somalia

The overall prevalence of contraceptive intentions among women in Somalia was notably low (Fig. 1). Significant regional disparities were observed (Fig. 2), with Woqooyi Galbeed exhibiting the highest prevalence of contraceptive intention (18.4%) and Gedo the lowest (1.1%). The choropleth map in Fig. 2 visually represents the geographic distribution of contraceptive intention across Somalia, emphasizing the substantial regional variation. Proportion of contraceptive Intention



Fig. 1 Prevalence of contraceptive intention

# Bivariate analysis of sociodemographic factors associated with contraceptive use intention

The bivariate analysis (Table 2) identified significant associations between contraceptive use intention and several sociodemographic variables. Women aged 40–44 showed significantly lower intention to use contraception compared to those aged 15–19 (OR: 0.48, 95% CI: 0.25–0.92, p = 0.028). Education was a strong predictor: women with secondary education were more likely to intend to use contraceptives than those with no education (OR: 2.42, 95% CI: 1.49–3.94, p < 0.001). Similarly, women with higher education were almost four times more likely to intend to use contraceptives (OR, 3.93; 95% CI: 1.96–7.90, p < 0.001).

Marital status also influenced contraceptive intention, with divorced women less likely to intend future use compared to married women (OR, 0.69; 95% CI, 0.44–1.08; p=0.103). Women in the highest wealth quintile were more likely to intend to use contraceptives (OR: 1.78, 95% CI: 1.19–2.65, p=0.005). Additionally, distance to health facilities was a significant factor, as women who considered distance "not a big problem" had higher intentions to use contraception (OR: 1.37, 95% CI: 1.08– 1.74, p=0.011). Employment status and residence also impacted intentions, with non-working women less likely to intend contraceptive use (OR: 0.62, 95% CI: 0.43–0.89, p=0.01) and nomadic women showing significantly lower intentions compared to urban residents (OR: 0.40, 95% CI: 0.28–0.57, p < 0.001).

#### Multivariable analysis of factors associated with contraceptive use intention

Multivariate logistic regression analysis (Table 3) confirmed that education, age, and regional factors were significant predictors of contraceptive intention. Women with secondary education were nearly twice as likely to use contraception compared to those with no formal education (AOR: 1.91, 95% CI: 1.12–3.26, p=0.018). The likelihood of intending to use contraception was higher for women with higher education (AOR, 2.34; 95% CI: 1.21–4.56, p=0.012). Age remained a significant factor, with women aged 40–44 and 45–49 having reduced odds of contraceptive intention compared to younger women aged 15–19 (AOR: 0.39, 95% CI: 0.20–0.75, p=0.005; AOR: 0.31, 95% CI: 0.12–0.84, p=0.021).

Employment status and regional disparities persisted in the multivariable model. Women not working were less likely to intend to use contraceptives (AOR: 0.67, 95% CI: 0.47–0.97, p=0.032), while nomadic women continued to show lower intentions than urban residents (AOR: 0.40, 95% CI: 0.23–0.68, p=0.001). Regional analysis showed that women in Woqooyi Galbeed were nearly twice as likely to intend to use contraceptives compared to women in Awdal (AOR: 1.92, 95% CI: 1.08–3.42, p=0.026), whereas women in Sool and Sanaag had lower intentions (AOR: 0.48, 95% CI: 0.25–0.94, p=0.033; AOR: 0.44, 95% CI: 0.23–0.82, p=0.009).

#### Discussion

The findings of this study provide critical insights into the prevalence and determinants of contraceptive intentions among Somali women, revealing significant disparities shaped by sociodemographic and geographic factors. The overall prevalence of contraceptive intention was 7.6%, highlighting a significant gap in contraceptive demand. However, low contraceptive intention should not be equated with an unmet need for family planning. While unmet need refers to women who desire contraception but lack access, low intention may stem from cultural norms, misinformation, or a low perceived risk of pregnancy [2, 3]. Addressing these factors requires targeted awareness campaigns rather than simply increasing contraceptive availability [6, 22]. The low contraceptive intention observed in this study aligns with findings from other conservative settings where religious and cultural beliefs strongly influence reproductive behaviors [23, 24]. However, Somalia's rate is significantly lower than Ethiopia and Ghana, where contraceptive intention ranges from 45.76 to 49.3% [25-27]. This substantial gap may be attributed to Somalia's deeply rooted religious conservatism, which often discourages contraceptive use [9, 28]. In contrast, Ethiopia and Ghana have benefited from structured family planning programs, increasing awareness and accessibility of contraceptive methods [29, 30].



Contraceptive Intention across Regions of Somalia

Fig. 2 Map of Somalia showing the distribution of contraceptive intention across the regions

In addition to religious conservatism, Somalia's weak healthcare infrastructure and high illiteracy rates further contribute to low contraceptive intention. In this study, 84% of women had no formal education, which is strongly associated with lower reproductive health literacy and limited awareness of contraception [31]. Unlike Kenya, where government-led family planning programs have improved contraceptive awareness, Somalia lacks large-scale reproductive health initiatives integrated into primary healthcare services [32, 33]. Furthermore, misconceptions about contraceptive side effects, limited decision-making autonomy among women, and strong societal norms favoring large families further reduce the likelihood of contraceptive adoption [34]. These findings highlight the need for culturally appropriate interventions, particularly those engaging religious and community leaders to promote accurate information about family planning [23, 35].

### Table 2 Bivariate analysis of sociodemographic factors associated with contraceptive use intention

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Primary         863 (92.0%)         78 (8.3%)         1.27 [0.93-1.73]         0.129           Secondary         201 (85.5%)         32 (14.9%)         2.42 [1.49-3.94]         0.001           Higher         76 78.2%)         21 (21.9%)         32 (14.9-3.94]         0.001           Maritel Status         .         .         .         .           Maritel Concord         6387 (92.4%)         32 (5.4%)         0.69 (0.44-1.08]         0.13           Widowed         32 (96.0%)         33 (3.9%)         0.69 (0.44-1.08]         0.13           Worked Concord         324 (96.0%)         33 (3.9%)         0.69 (0.44-1.08]         0.13           Wealth Concord         324 (96.0%)         10 (5.5%)         1         .         .           Second         1,741 (94.3%)         105 (5.7%)         1.64 (1.09-2.47]         0.021           Modde         1,346 (9.1%)         134 (8.1%)         1.64 (1.09-2.47]         0.022           Fourth         1,516 (9.1.9%)         134 (8.1%)         1.64 (1.09-2.47]         0.021           Fourth         1,516 (9.1.9%)         134 (8.1%)         1.64 (1.09-2.47]         0.021           Fourth         1,516 (9.1.9%)         134 (8.1%)         1.78 (1.09-2.47]         0.021
Secondary         201 (85.5%)         35 (14.9%)         242 [1.49–3.94]         <0.001           Higher         76 (78.2%)         21 (21.9%)         393 [1.96–7.90]         <0.001           Married         6387 (92.4%)         227 (7.6%)         1            Divorced         6387 (92.4%)         39 (54.9%)         0.69 [0.44–1.08]         0.103           Widowed         324 (96.1%)         39 (5.4%)         0.69 [0.44–1.08]         0.103           Weath Quintile
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Maritel StatusMarried6,387 (92.4%)527 (7.6%)1-Divored670 (94.6%)39 (5.4%)0.69 (0.44-1.08)0.13Widowed324 (96.1%)13 (3.9%)0.50 (0.20-1.25)0.13WeathCuintile </td
Married6387 (92.4%)527 (7.6%)1-Divorced677 (94.6%)39 (5.4%)0.69 (0.44–1.08)0.103Widowed324 (96.1%)13 (3.9%)0.50 [0.20–1.25]0.137Weat324 (96.1%)13 (3.9%)0.50 [0.20–1.25]0.137Weat1.741 (94.3%)105 (5.7%)1-Second1.478 (95.7%)66 (4.3%)0.74 [0.47–1.18]0.070Middle1.364 (91.0%)135 (9.0%)1.64 [1.09–2.47]0.015Fourth1.516 (91.9%)134 (8.1%)1.46 [0.98–2.18]0.005Highest1.299 (0.3%)138 (9.7%)1.78 [1.19–2.65]0.005Discreto Health Facility1.90321 (6.5%)1.37 [1.08–1.74]0.011Not a big problem2.739 (91.4%)228 (8.6%)1.37 [1.08–1.74]0.011Not Working626 (93.5%)321 (6.5%)1.37 [1.08–1.74]0.011Not Working592 (89.3%)71 (1.07%)1.Not Working592 (89.3%)71 (1.07%)1.Not Working592 (89.3%)73 (7.7%)0.012.Not Working592 (89.3%)32 (7.7%)0.40 (81–1.35]0.752Noradic78 (94.5%)35 (5.2%)0.40 (0.28–0.57].Noradic79 (94.8%)53 (5.2%)0.40 (0.28–0.57].Not Working646 (81.6%)16 (8.4%)1Moradic79 (94.8%)53 (5.2%)0.40 (1.41.45]Not Working646 (81.6%)<
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Widowed324 (96.1%)13 (3.9%)0.50 [0.20-1.2]0.13Weith QuintileLowest1,741 (94.3%)105 (5.7%)1-Second1,748 (95.7%)66 (4.3%)0.74 [0.47-1.18]0.207Middle1,364 (91.0%)135 (9.0%)1.64 [1.09-2.47]0.017Fourth1,516 (91.9%)134 (8.1%)1.46 (0.98-2.18]0.062Highest1,289 (90.3%)138 (9.7%)1.78 [1.19-2.65]0.062Jota big problem2,399 (91.3%)321 (6.5%)1-Not a big problem2,739 (91.4%)258 (8.6%)1.37 [1.08-1.74]0.011Working592 (93.9%)71 (10.7%)1-Not a big problem949 (93.1%)71 (0.7%)1-Not Working629 (93.9%)71 (0.7%)1.04 (0.81-0.35]0.75Norking592 (93.9%)71 (0.7%)1.04 (0.81-0.35]0.75Norking978 (93.5%)378 (7.7%)1.04 (0.81-0.35]0.75Noradic978 (94.8%)53 (5.2%)0.40 (0.28-0.57]0.010Piero124 (9.4%)53 (5.2%)0.40 (0.28-0.57]0.020Noradic978 (94.8%)53 (5.2%)0.40 (0.28-0.57]0.021Moradic978 (94.8%)164 (8.3%)1Moradic139 (9.7%)64 (8.3%)1.04 (0.81-0.35]0.021Nordic978 (94.8%)53 (5.2%)0.40 (0.28-0.57]0.021Moradic139 (9.6%)164 (8.3%)1.04 (0.81-0.35]0.021
Wealth Quintile         I,741 (94,3%)         105 (5.7%)         1         -           Second         1,478 (95,7%)         66 (4.3%)         0.74 [0.47-1.18]         0.207           Middle         1,364 (91,0%)         135 (9,0%)         1.64 [1.09-2.47]         0.017           Fourth         1,516 (91,9%)         134 (8,1%)         1.46 [0.98-2.18]         0.062           Highest         1,289 (90,3%)         138 (9.7%)         1.78 [1.19-2.65]         0.062           Distance to Health Facility         2,739 (91.4%)         258 (8.6%)         1.78 [1.9-2.65]         0.011           Working         1,289 (90,3%)         218 (6.5%)         1         -         0.011           Not a big problem         2,739 (91.4%)         258 (8.6%)         1.37 [1.08-1.74]         0.011           Working         592 (89.3%)         71 (10.7%)         1         -           Not Working         592 (89.3%)         71 (10.7%)         1         -           Residence         Urban         1,846 (92.6%)         147 (7.4%)         1         -           Working         978 (94.8%)         378 (7.7%)         1.04 (0.81-1.35]         0.752           Nomadic         978 (94.8%)         53 (5.2%)         0.40 (0.28-0.57]         <0.0
Lowest         1,741 (94,3%)         105 (5.7%)         1         -           Second         1,478 (95.7%)         66 (4.3%)         0.74 [0.47-1.18]         0.207           Middle         1,364 (91.0%)         135 (9.0%)         1.64 [1.09-2.47]         0.017           Fourth         1,516 (91.9%)         138 (9.7%)         1.64 (0.98-2.18]         0.062           Highest         1,289 (90.3%)         138 (9.7%)         1.78 [1.19-2.65]         0.005           Distance to Health Facility          321 (6.5%)         1.37 [1.08-1.74]         0.005           Distance to Health Facility         2.739 (9.1%)         258 (8.6%)         1.37 [1.08-1.74]         0.016           Not a big problem         2.739 (1.4%)         258 (8.6%)         1.37 [1.08-1.74]         0.016           Not a big problem         2.799 (1.4%)         258 (8.6%)         1.37 [1.08-1.74]         0.016           Workststaus          7.101.07%)         1         -         0.16         0.16           Working         592 (89.3%)         7.101.07%)         1.40 (1.08.105)         0.016         0.16           Not Working         592 (89.3%)         7.101.07%)         1.40 (1.08.105)         0.15           Noracic         9.849.8%
Second         1,478 (95,7%)         66 (4.3%)         0.74 [0,47-1.18]         0.207           Middle         1,364 (91.0%)         135 (90%)         1.64 [1,09-2,47]         0.017           Fourth         1,516 (91.9%)         134 (8.1%)         1.46 [0,98-2.18]         0.062           Highest         1,289 (90.3%)         138 (9.7%)         1.78 [1.19-2.65]         0.005           Distance to Health Facility         2         321 (6.5%)         1         -           Big problem         4,646 (93.5%)         321 (6.5%)         1.37 [1.08-1.74]         0.011           Not a big problem         2,739 (91.4%)         258 (8.6%)         1.37 [1.08-1.74]         0.011           Working         0,794 (93.1%)         71 (10.7%)         1         -           Not Working         0,592 (89.3%)         71 (10.7%)         0.610 (0.3-0.89]         0.11           Rural         1,846 (92.6%)         147 (7.4%)         0.62 (0.43-0.89]         0.57           Not working         92 (89.3%)         378 (7.7%)         1.04 (0.81-1.35]         0.57           Norad         978 (92.3%)         378 (7.7%)         0.40 (0.28-0.57]         <0.01
Middle         1,364 (91.0%)         135 (9.0%)         1.64 (1.09–2.47)         0.017           Fourth         1,516 (91.9%)         134 (8.1%)         1.46 (0.98–2.18]         0.062           Highest         1,289 (90.3%)         138 (9.7%)         1.78 [1.19–2.65]         0.005           Distance to Health Facility         .         .         0.005           Distance to Health Facility         .         .         .         0.005           Distance to Health Facility         .         .         .         .         .           Big problem         4,646 (93.5%)         321 (6.5%)         1         .         .           Not a big problem         2,739 (91.4%)         258 (8.6%)         1.37 [1.08–1.74]         0.011           Vormar's Work Status         .         .         .         .         .         .           Working         6.92 (89.3%)         71 (10.7%)         1         .         .         .           Not Working         6.794 (93.1%)         208 (6.9%)         0.62 [0.43–0.89]         0.01         .           Rural         1.846 (92.6%)         147 (7.4%)         1         .         .         .           Nomadic         91 (8.96.98)         378 (7.9%)
Fourth         1,516 (91,9%)         134 (8,1%)         1,46 (0.98–2.18)         0.062           Highest         1,289 (90,3%)         138 (9.7%)         1,78 [1.19–2.65]         0.005           Distance to Health Facility               Big problem         4,646 (93,5%)         321 (6.5%)         1             Not a big problem         2,739 (91,4%)         258 (8.6%)         1,37 [1.08–1.74]         0.011           Worman's Work Status             0.011           Working         592 (89.3%)         71 (10.7%)         1             Not Working         6,794 (93.1%)         508 (6.9%)         0.62 [0.43–0.89]         0.01           Residence                Urban         1,846 (92.6%)         147 (7.4%)         1.04 [0.81–1.35]         0.752           Nomadic         978 (94.3%)         378 (7.7%)         0.40 [0.82–0.57]         0.001           Region                Mondal Colong         978 (94.3%)         53 (5.2%)         0.40 [0.82–0.57]         <0.001           Morphy Galbeed </td
Highest         1,289 (90.3%)         138 (9.7%)         1,78 [1.19–2.65]         0.005           Distance to Health Facility
Distance to Health Facility         Note bit for the facility         Instruction of the facility           Big problem         4,646 (93,5%)         321 (6.5%)         1         -           Not a big problem         2,739 (91,4%)         258 (8.6%)         1.37 [1.08–1.74]         0.011           Worman's Work Status          - <td< td=""></td<>
Big problem         4,646 (93.5%)         321 (6.5%)         1         -           Not a big problem         2,739 (91.4%)         258 (8.6%)         1.37 (1.08–1.74)         0.011           Working         592 (89.3%)         71 (10.7%)         1         -           Not Working         60,794 (93.1%)         508 (6.9%)         0.62 (0.43–0.89)         0.01           Residence           -         -         -           Urban         1,846 (92.6%)         147 (7.4%)         0.62 (0.43–0.89)         0.01           Rural         4,565 (92.3%)         378 (7.7%)         0.40 (0.81–1.35)         0.752           Nomadic         978 (94.8%)         53 (5.2%)         0.40 (0.28–0.57)         0.010           Region         713 (91.7%)         64 (8.3%)         1         -           Avdal         713 (91.7%)         64 (8.3%)         1         -           Modooyi Galbeed         468 (81.6%)         106 (18.4%)         249 [1.40–4.46]         0.002           Young Sanag         578 (95.5%)         28 (4.5%)         0.53 (0.27–1.02]         0.55
Not a big problem         2,739 (91.4%)         258 (8.6%)         1.37 [1.08–1.74]         0.011           Working         592 (89.3%)         71 (10.7%)         1         -           Not Working         592 (89.3%)         71 (10.7%)         1         -           Not Working         6,794 (93.1%)         508 (6.9%)         0.62 [0.43–0.89]         0.01           Residence           .         .         .           Urban         1,846 (92.6%)         147 (7.4%)         1         .         .           Nomadic         978 (94.8%)         378 (7.7%)         1.04 [0.81–1.35]         0.752         .           Nomadic         978 (94.8%)         53 (5.2%)         0.40 [0.28–0.57]         .         .           Woqooyi Galbeed         133 (91.7%)         64 (8.3%)         1         .         .           Woqooyi Galbeed         468 (81.6%)         106 (18.4%)         249 [1.40–4.46]         0.002           Togdheer         261 (90.0%)         29 (10.0%)         1.23 [0.70–2.19]         0.472           Sool         578 (95.5%)         28 (4.5%)         0.53 [0.27–1.02]         0.051           Sonag         815 (95.4%)         39 (4.6%)         0.53 [0.29–1.00]         0.51<
Working         592 (89.3%)         71 (10.7%)         1         -           Not Working         6,794 (93.1%)         508 (6.9%)         0.62 [0.43–0.89]         0.01           Residence         Urban         1,846 (92.6%)         147 (7.4%)         1         -           Normadic         978 (94.8%)         378 (7.7%)         1.04 [0.81–1.35]         0.752           Nomadic         978 (94.8%)         53 (5.2%)         0.40 [0.28–0.57]         <001
Working         592 (89.3%)         71 (10.7%)         1         -           Not Working         6,794 (93.1%)         508 (6.9%)         0.62 (0.43–0.89)         0.01 <b>R</b> =sidence            0.62 (0.43–0.89)         0.01 <b>R</b> =sidence               0.62 (0.43–0.89)         0.01 <b>R</b> =sidence               0.62 (0.43–0.89)         0.01 <b>R</b> =sidence                    Nonadic         1,846 (0.26%)         147 (7.4%)         1 <t< td=""></t<>
Not Working         6,794 (93.1%)         508 (6.9%)         0.62 [0.43-0.89]         0.01           Residence   <
Residence         Iteration of the second secon
Urban         1,846 (92.6%)         147 (7.4%)         1         -           Rural         4,565 (92.3%)         378 (7.7%)         1.04 [0.81–1.35]         0.752           Nomadic         978 (94.8%)         53 (5.2%)         0.40 [0.28–0.57]         <0.001
Rural4,565 (92.3%)378 (7.7%)1.04 [0.81–1.35]0.752Nomadic978 (94.8%)53 (5.2%)0.40 [0.28–0.57]<0.001Region </td
Nomadic         978 (94.8%)         53 (5.2%)         0.40 [0.28-0.57]         <0.001           Region
Region         Awdal         713 (91.7%)         64 (8.3%)         1         -           Woqooyi Galbeed         468 (81.6%)         106 (18.4%)         2.49 [1.40–4.46]         0.002           Togdheer         261 (90.0%)         29 (10.0%)         1.23 [0.70–2.19]         0.472           Sool         578 (95.5%)         28 (4.5%)         0.53 [0.27–1.02]         0.051           Sanaag         815 (95.4%)         39 (4.6%)         0.53 [0.29–1.00]         0.051
Awdal713 (91.7%)64 (8.3%)1-Woqooyi Galbeed468 (81.6%)106 (18.4%)2.49 [1.40-4.46]0.002Togdheer261 (90.0%)29 (10.0%)1.23 [0.70-2.19]0.472Sool578 (95.5%)28 (4.5%)0.53 [0.27-1.02]0.057Sanaag815 (95.4%)39 (4.6%)0.53 [0.29-1.00]0.051
Woqooyi Galbeed468 (81.6%)106 (18.4%)2.49 [1.40-4.46]0.002Togdheer261 (90.0%)29 (10.0%)1.23 [0.70-2.19]0.472Sool578 (95.5%)28 (4.5%)0.53 [0.27-1.02]0.057Sanaag815 (95.4%)39 (4.6%)0.53 [0.29-1.00]0.051
Togdheer261 (90.0%)29 (10.0%)1.23 [0.70-2.19]0.472Sool578 (95.5%)28 (4.5%)0.53 [0.27-1.02]0.057Sanaag815 (95.4%)39 (4.6%)0.53 [0.29-1.00]0.051
Sool         578 (95.5%)         28 (4.5%)         0.53 [0.27-1.02]         0.057           Sanaag         815 (95.4%)         39 (4.6%)         0.53 [0.29-1.00]         0.051
Sanaag         815 (95.4%)         39 (4.6%)         0.53 [0.29-1.00]         0.051
Bari 482 (95 3%) 24 (4 7%) 0 55 [0 26–1 15] 0 111
Nugaal 795 (93.7%) 53 (6.3%) 0.75 [0.38–1.47] 0.398
Mudua 850 (95 5%) 40 (4 5%) 0.52 [0.26-1.06] 0.071
Galgaduud 773 (89.6%) 90 (10.4%) 1 29 [0.70–2.38] 0.414
Hiraan 410 (93 2%) 30 (68%) 0.81 [0.41–1.57] 0.528
Middle Shabelle         268 (94 6%)         15 (54%)         0.64 [0.29–1.38]         0.252
Banadir 416 (93 5%) 29 (6 5%) 077 [0.44–1.36] 0.376
Bay 64 (95 2%) 3 (4 8%) 0.56 [0.24–1.35] 0.197
Bakool 286 (95.0%) 15 (5.0%) 059 [0.24 + 1.05] 0151
Gedo 99 (98.9%) 1 (11%) 0 13 [0.05–0.33] < 0.001
Lower Juba 105 (90.0%) 12 (10.0%) 1.29 [0.64–2.58] 0.48

### Table 3 Multivariable analysis of factors associated with contraceptive use intention

Nether         Itent           Age Group	Variable	Contraceptive Use Intention		AOR [95% C.I]	P-value
AperiantJensorJensorJensorJensorJensorJensorJensorJensorJensorJuris (120%)123 (85%)1.12 (0.701–1.79)0.640JensorJuris (120%)123 (85%)1.12 (0.701–1.79)0.640JensorJuris (120%)125 (85%)1.00 (0.63–1.83)0.670JensorJensor125 (93.0%)95 (70%)0.83 (0.50–1.39)0.771JensorJensorJensor0.31 (0.12–0.84)0.071JensorJensorJensor0.31 (0.12–0.84)0.071JensorJensorJensor0.91 (0.65–1.28)0.83Secondary201 (0.52)1MarinelO.248 (02.4%)445 (0.7%)0.91 (0.65–1.28)0.83JensorJensorJensor0.12-MarinelO.278 (02.4%)21 (1.9%)0.91 (0.65–1.28)0.12MarinelO.278 (02.4%)37 (4.4%)0.91 (0.65–1.28)0.12MarinelO.278 (02.4%)37 (4.4%)0.58 (0.37–0.37)0.18JensorJensorJensorMarinelJensorJensorMarinelJensorJensorMarinelJensorJensorMarinelJensorJensorMarinelJensorJensorMarinelJensorJensorMarinelJensorJensorMarinelJ		No Intent	Intent		
15-19         548 (22.80)         42 (7.39)         1         -           25-24         1.705 (52.0%)         1.49 (8.0%)         1.00 (0.63-159)         0.640           25-29         1.705 (52.0%)         1.54 (8.7%)         1.12 (0.64-1.33)         0.660           35-39         1.729 (9.37%)         95 (7.0%)         0.38 (0.50-1.39)         0.079           40-44         79 (9.0%)         15 (8.7%)         0.33 (0.12-0.80         0.021           45-49         479 (9.7%)         15 (8.7%)         0.31 (0.12-0.80         0.021           Education Level         -         -         -         -           Pittrany         65 (32.0%)         35 (14.3%)         0.91 (0.5-1.28)         0.680           5ccondary         20 (85.5%)         35 (14.3%)         0.91 (0.5-1.28)         0.680           5ccondary         20 (85.5%)         35 (14.3%)         0.55 (0.20-1.48)         0.26           Married         6.387 (92.4%)         52 (7.5%)         1         -           Divorced         6.77 (94.6%)         95 (7.5%)         1         -           Married         0.38 (0.5.7%)         1         -         -           Married         0.38 (12.4%)         0.55 (0.20-1.4%)         0.26 (	Age Group				
do-24(27,9)(29)(23,8)%)(120,70-1,79)(0.40)3C-241,303 (01,2%)(25,8)%)1.12 (0.68-1.83)0.6993C-341,203 (01,2%)(95,0%)0.83 (05,01,3%)0.4793C-341,209 (03,0%)95 (0,0%)0.38 (05,01,3%)0.4794D-44701 (06,4%)29 (0,6%)0.33 (0,12-0.48)0.00545-1947 (77,0%)15 (5,0%)0.31 (0,12-0.48)0.58Vicuation6.24 (09,4%)74 (0,3%)1-Pirmary863 (02,0%)74 (0,4%)0.91 (0,65-1.28)0.58Secondary70 (18,5%)3.5 (14,9%)0.91 (1,12-3,26)0.018Wartal Status77 (94,6%)1Martal Status77 (94,6%)9.6 (48)0.58 (0,30,001)0.18Wartal Martal6.37 (92,4%)527 (7,5%)1-Divorced6.77 (94,6%)1.3 (0,9%)0.58 (0,37,001)0.18Wartal Martal1.34 (90,1%)1.3 (0,9%)0.58 (0,37,01)0.16Divorced1.244 (90,1%)1.5 (5,7%)1-Second1.246 (95,7%)1.6 (1,37,17)0.150.20Fourth1.516 (91,9%)1.38 (0,7%)0.68 (0,37,1.4%)0.20Fourth1.516 (91,9%)1.38 (0,7%)0.66 (0,37,1.4%)0.20Fourth1.516 (91,9%)1.38 (0,7%)0.66 (0,37,1.4%)0.20Fourth1.516 (91,9%)1.38 (0,7%)1.60 (1,37,1.7)0.20Fourth1.516 (91,9%)1.61 (0,61,7.1.7) <td< td=""><td>15–19</td><td>548 (92.8%)</td><td>42 (7.2%)</td><td>1</td><td>-</td></td<>	15–19	548 (92.8%)	42 (7.2%)	1	-
25-29         1.705 (92.0%)         1.49 (8.0%)         1.00 (0.6.1-5.0)         0.999           30-34         1.303 (91.3%)         125 (0.7%)         1.17 (0.8.4-1.83)         0.666           35-30         1.250 (92.0%)         95 (7.0%)         0.33 (0.2.0-7.5)         0.055           45-49         497 (92.0%)         15 (3.0%)         0.31 (0.2.0-8.4)         0.025           Education Level           1         -           Phimary         863 (92.0%)         78 (8.3%)         0.91 (0.5.5-1.28)         0.018           Secondary         201 (85.5%)         35 (14.9%)         1.1         -           Maried         0.372 (24.9%)         39 (5.4%)         0.58 (0.27.0-1.48)         0.018           Univarced         0.372 (49.0%)         39 (5.4%)         0.58 (0.27.0-1.48)         0.210           Widewed         3.24 (90.1%)         10 (5.5%)         1         -           Univarced         1.478 (95.7%)         66 (4.3%)         0.26 (0.271.16)         0.556           Fourth         1.248 (90.0%)         1.35 (90.0%)         1.85 (90.0%)         1.556           Warked         1.478 (95.7%)         1.28 (90.0%)         1.28 (90.0%)         1.20 (20.121.17)         0.556	20–24	1,273 (91.2%)	123 (8.8%)	1.12 (0.70–1.79)	0.640
30-341.03 (01 3%)1.25 (9%)1.12 (0.68-1.83)0.66635-391.259 (93.0%)95 (7.0%)0.83 (0.20-0.75)0.05545-49470 (06.4%)20 (1.6%)0.31 (0.12-0.84)0.2145-49470 (70.78)45.0 (6.7%)1-Nc Education6.248 (93.4%)45.6 (6.7%)1-Phimary863 (02.0%)78 (83.5%)0.91 (0.65-1.28)0.81Sc condary21 (85.5%)21 (21.9%)23.4 (1.21-4.56)0.12Marilel SatusMarilel Satus1Marilel A (1.6%)31 (4.1%)0.55 (0.37-0.01)0.18-Warlel Cauton324 (96.1%)31 (3.1%)0.55 (0.37-0.01)0.18Warlel Cauton324 (96.1%)13 (3.1%)0.55 (0.20-1.48)0.256Warlel Cauton1.478 (95.7%)66 (1.3%)0.62 (0.37-0.01)0.070Marilel Cauton1.478 (95.7%)66 (1.3%)0.62 (0.37-1.04)0.556Fourth1.516 (0.1%)1.35 (0.9%)0.66 (0.37-1.17)0.155Distance Unitation1.478 (95.7%)66 (1.3%)0.62 (0.37-1.17)0.155Distance Unitation1.289 (90.3%)1.88 (9.7%)0.66 (0.37-1.17)0.155Distance Unitation1.478 (95.7%)1.44 (8.1%)0.67 (0.47-0.97)0.252Distance Unitation1.289 (90.3%)1.19 (9.1-1.56)0.2020.202Distance Unitation1.289 (90.3%)1.10 (0.27,0.16,0.10)1.10 (0.27,0.16,0.10)<	25–29	1,705 (92.0%)	149 (8.0%)	1.00 (0.63–1.59)	0.989
5-391.259 (93.0%)95 (7.0%)0.33 (0.20-1.30)0.47940-44791 (96.4%)29 (3.6%)0.39 (0.20-0.75)0.005145-49497 (97.0%)15 0.0%)0.31 (0.12-0.84)0.021Education Level1-Pirmary863 (92.0%)78 (8.3%)0.01 (0.5.1-28)0.018Higher7.0 (78.2%)21 (12.1%)2.24 (1.21-4.56)0.012Secondary20 (85.9%)35 (14.9%)0.58 (0.37-0.91)0.018Maried6.387 (92.4%)52 (7.6%)1-Divorced6.77 (94.0%)39 (5.4%)0.58 (0.37-0.91)0.018Withowed0.38 (0.37-0.91)0.0380.37-0.91)0.018Withowed1.478 (95.7%)66 (4.3%)0.55 (0.20-1.4%)0.70Withowed1.478 (95.7%)66 (4.3%)0.55 (0.20-1.4%)0.55Second1.478 (95.7%)1.5 (5.7%)1-Ewest1.478 (95.7%)1.8 (9.7%)0.66 (3.7-1.17)0.55Fourth1.50 (9.0%)138 (9.7%)0.65 (0.37-1.17)0.55Fourth1.289 (9.0%)1.38 (9.7%)0.67 (0.47-0.97)0.55Big problem2.49 (9.3%)2.58 (6.9%)1.1-Not Working6.97 (9.1%)2.98 (6.9%)1.10 (0.47-0.97)0.52Working6.97 (9.1%)2.98 (6.9%)1.10 (0.47-0.97)0.52Working6.97 (9.1%)2.98 (6.9%)1.10 (0.47-0.97)0.52Working6.97 (9.1%)2.98 (6.9%)1.10 (0	30–34	1,303 (91.3%)	125 (8.7%)	1.12 (0.68–1.83)	0.666
40-44         79 (96.4%)         29 (62%)         0.39 (0.20-0.75)         0.005           45-49         497 (97.0%)         15 (3.0%)         0.31 (0.12-0.84)         0.21           No Education         6.24 (93.4%)         45 (6.7%)         1         -           Primary         86.3 (92.0%)         78 (8.3%)         0.91 (0.65-1.2.3)         0.018           Secondary         201 (85.5%)         35 (14.9%)         1.91 (1.12-3.26)         0.018           Mariad Status         1.75 (7.8%)         2.12 (1.9%)         2.34 (1.21-4.56)         0.012           Mariad Mariad Status         1.74 (94.3%)         57 (7.6%)         1         -           Mariad Multide         1.24 (96.1%)         13 (3.9%)         0.55 (0.02-1.4%)         0.216           Waldowed         3.24 (96.1%)         13 (3.9%)         0.55 (0.02-1.4%)         0.216           Waldowed         1.478 (95.7%)         66 (4.3%)         0.65 (0.37-1.04)         0.570           Middle         1.478 (95.7%)         14 (8.1%)         0.75 (0.37-1.04)         0.570           Middle         1.248 (91.9%)         12 (0.63-1.17)         0.15           Distance Onellif Facility         1.58 (91.9%)         1.74 (94.3%)         0.66 (0.37-1.17)         0.15	35–39	1,259 (93.0%)	95 (7.0%)	0.83 (0.50-1.39)	0.479
45-9         497 (97,0%)         15 (3.0%)         0.31 (0.12-0.84)         0.021           Education Level              Education Level              Primary         803 (92.0%)         78 (8.3%)         0.91 (0.65-1.28)         0.580           Secondary         201 (65.5%)         21 (21.9%)         234 (121-4.56)         0.012           Maried         6.387 (92.4%)         21 (21.9%)         234 (121-4.56)         0.012           Maried         6.387 (92.4%)         39 (5.4%)         0.58 (0.37-0.91)         0.018           Walved         2.24 (96.1%)         39 (5.4%)         0.58 (0.37-0.91)         0.018           Walved         1.24 (96.1%)         1.5 (9.07%)         1         -           Second         1.741 (94.3%)         1.5 (9.07%)         0.62 (0.37-1.07)         0.070           Middle         1.244 (91.5%)         1.5 (9.07%)         0.550         5.500         5.500           Fourth         1.51 (9.07%)         1.53 (9.07%)         0.520 (0.37-1.07)         0.070           Middle         1.244 (93.5%)         21 (6.5%)         1         -           Second         1.741 (94.3%)         1.53 (9.07%)         1.19 (0.91-1.	40–44	791 (96.4%)	29 (3.6%)	0.39 (0.20-0.75)	0.005
Education6.248 (93.4%)4.45 (6.7%)1-No Education6.248 (92.2%)78 (8.3%)0.91 (0.55-1.28)0.580Secondary201 (95.5%)35 (14.9%)1.91 (1.12-3.26)0.018Higher0.76 (92.%)2.21 (92.9%)2.34 (121-4.56)0.18Marital Staru77 (0.48%)10 (5.4%)0.55 (0.03-0.91)0.18Divarced6.77 (94.6%)13 (3.9%)0.55 (0.03-0.91)0.18Widowed2.21 (96.1%)13 (3.9%)0.55 (0.02-1.48)0.25Vidowed1.478 (95.7%)66 (4.3%)0.62 (0.37-1.04)0.070Middle1.478 (95.7%)66 (4.3%)0.62 (0.37-1.04)0.070Middle1.478 (95.7%)16 (5.7%)10.55Fourth1.516 (91.9%)134 (8.1%)0.75 (0.43-1.28)0.25Highest1.289 (0.3%)138 (9.7%)0.66 (0.37-1.17)0.155Distance to Health Facility12.99 (0.3%)2.98 (6.6%)1.90 (9.1-1.56)0.202Working6.79 (9.4%)5.91 (6.5%)10.1020.202Not Howking5.29 (6.3%)7.1 (0.7%)10.1020.202Not Working6.29 (9.2%)7.1 (7.4%)10.10.1Noradic9.29 (9.4%)5.02 (9.6%)1.10 (0.9-2.0%)0.202Noradic9.29 (9.4%)5.02 (9.6%)1.10 (0.5-2.0%)0.202Not Morking6.29 (9.2%)7.7 (7.4%)10.1Noradic9.29 (9.4%)1.00 (7	45–49	497 (97.0%)	15 (3.0%)	0.31 (0.12-0.84)	0.021
No.Education         648 (93.4%)         44 (67.8%)         1         -           Primary         863 (92.0%)         78 (83.9%)         0.91 (025–128)         0.018           Higher         201 (85.5%)         35 (14.9%)         1.91 (112–3.26)         0.018           Higher         76 (78.2%)         21 (21.9%)         2.34 (121–4.56)         0.012           Married         6.387 (92.4%)         39 (5.4%)         0.58 (0.37–0.91)         0.018           Warker         527 (79.4%)         31 (3.9%)         0.55 (0.20–1.4%)         0.236           Warker         124 (96.1%)         36 (5.7%)         1         -           Second         1.478 (95.7%)         66 (4.3%)         0.52 (0.37–1.0%)         0.070           Middle         1.344 (91.0%)         15 (9.0%)         0.85 (0.50–1.4%)         0.556           Fourth         1.54 (91.0%)         134 (8.1%)         0.52 (0.37–1.0%)         0.556           Fourth         1.344 (91.0%)         135 (9.0%)         0.85 (0.37–1.1%)         0.556           Fourth         1.289 (90.3%)         13 (9.7%)         0.66 (0.37–1.1%)         0.556           Fourth         1.292 (90.3%)         13 (6.9%)         1         -           Working         6.794	Education Level				
Primary         863 (92.0%)         78 (83%)         0.91 (0.65-1.28)         0.580           Secondary         21 (0.15,5%)         31 (14.9%)         1.91 (1.12-3.6)         0.018           Higher         76 (78.9%)         2.1 (2.19%)         2.34 (1.12-3.6)         0.012           Marriad         6.37 (92.4%)         3.9 (5.4%)         5.8 (0.37-0.91)         0.018           Wolowed         324 (96.1%)         39 (5.4%)         0.55 (0.20-1.48)         0.236           Weath Quintile         1         -         -         -           Lowest         1.741 (94.3%)         105 (5.7%)         1         -         -           Middle         1.364 (91.0%)         135 (90.9%)         0.85 (0.50-1.46)         0.556           Fourth         1.561 (91.9%)         138 (97%)         0.65 (0.37-1.04)         0.070           Middle         1.364 (91.0%)         138 (97%)         0.85 (0.50-1.46)         0.2568           Fourth         1.561 (91.9%)         138 (97%)         0.85 (0.50-1.46)         0.202           Workstau         1.599 (91.3%)         231 (6.5%)         1         -           Distance to lealth Facility         2.99 (91.3%)         231 (6.5%)         1         -           Workstau	No Education	6,248 (93.4%)	445 (6.7%)	1	-
Secondary         201 (85.5%)         35 (14.9%)         191 (1.12-3.26)         0.018           Higher         70 (78.2%)         21 (21.9%)         23 (1.21-4.56)         0.012           Marial Satus               0.012           Maried         6.387 (92.4%)         597 (7.6%)         1               0.018              0.018          0.018           0.018          0.018          0.018          0.018          0.018          0.018          0.018          0.018         0.0070         Middle         1.316 (91.9%)         0.62 (0.01-16)         0.020         0.020         0.020         0.020         0.020         0.020         0.020         0.020         0.020	Primary	863 (92.0%)	78 (8.3%)	0.91 (0.65–1.28)	0.580
Higher         76 (78.2%)         21 (21.9%)         2.34 (1.21-4.56)         0.012           Married         6.387 (92.4%)         527 (7.6%)         1         -           Divorced         6.77 (94.6%)         39 (5.4%)         0.58 (0.37-0.91)         0.018           Widoved         324 (96.1%)         13 (3.9%)         0.55 (0.27-1.48)         0.256           Weath Quintie         U         U         0.070         0.070           Middle         1,34 (9.0%)         15 (9.0%)         0.85 (0.57-1.4%)         0.0556           Fourth         1,516 (91.9%)         134 (8.1%)         0.75 (0.43-1.28)         0.288           Higherst         1,299 (90.3%)         138 (9.7%)         0.75 (0.43-1.28)         0.288           Distance to Health Facility         Jose (0.37-1.07)         0.556         0.75 (0.43-1.28)         0.288           Working         1,299 (90.3%)         138 (9.7%)         0.76 (0.47-0.97)         0.020           Distance to Health Facility         Jose (0.37-1.07)         0.32         0.38 (0.7%)         1.9 (0.91-1.56)         0.20           Not a big problem         4.646 (93.5%)         21 (16.7%)         1         -         0.20           Not dividing         5.7 (5.3%)         21 (0.83-1.51)	Secondary	201 (85.5%)	35 (14.9%)	1.91 (1.12–3.26)	0.018
Marial Satus         Jume	Higher	76 (78.2%)	21 (21.9%)	2.34 (1.21-4.56)	0.012
Married         6,387 (92,4%)         527 (7,6%)         1            Divorced         677 (94,6%)         39 (5,4%)         0.58 (0.37-0.91)         0.018           Widowed         324 (96,1%)         13 (3.9%)         0.55 (0.20-1.48)         0.236           Wath Quintle         U         U         U         U         U           Lowest         1,741 (94,3%)         105 (5,7%)         1         -         -           Second         1,748 (95,7%)         66 (4,3%)         0.88 (0.50-1.40)         0.555           Fourth         1,516 (91.9%)         134 (8,1%)         0.75 (0.43-1.28)         0.288           Inputtee         1,289 (90.3%)         138 (97%)         0.65 (0.37-1.17)         0.255           Distance to telath Facility         1         -         -         0.288           Morking         0,279 (90.3%)         251 (6.5%)         1         -           Not a toip problem         2,739 (91.4%)         258 (6.9%)         0.67 (0.47-0.97)         0.322           Working         6,794 (93.1%)         508 (6.9%)         0.67 (0.47-0.97)         0.322           Not atoip problem         1         -         -         -           Not Kituu         1	Marital Status				
Divorced         677 (94,6%)         39 (5,4%)         0.58 (0.37-0.91)         0.018           Widowed         324 (96,1%)         13 (3.9%)         0.55 (0.2-0.1.48)         0.236           Weath Quintile         .         .         .         .           Lowest         1,741 (94.3%)         105 (5.7%)         1         .           Second         1,478 (95.7%)         66 (4.3%)         0.62 (0.37-1.04)         0.070           Middle         1,364 (91.9%)         134 (8.1%)         0.75 (0.43-1.28)         0.288           Fourth         1,516 (91.9%)         138 (9.7%)         0.66 (0.37-1.17)         0.155           Distance to Health Facility         .         .         .         .           Big problem         4,646 (93.5%)         .21 (6.5%)         1         .           Not a big problem         2,739 (91.4%)         258 (8.6%)         1.9 (0.91-1.56)         0.202           Working         592 (93.3%)         71 (10.7%)         1         .         .           Not working         592 (93.3%)         73 (10.7%)         1         .         .           Working         592 (93.3%)         73 (10.7%)         1         .         .           Working         592 (93	Married	6,387 (92.4%)	527 (7.6%)	1	-
Widowed         324 (96.1%)         13 (3.9%)         0.55 (0.20-1.4)         0.236           Weath         U         U           Lowest         1,741 (94.3%)         105 (5.7%)         0.62 (0.37-1.04)         0.070           Middle         1,364 (91.0%)         135 (0.0%)         0.85 (0.50-1.46)         0.556           Fourth         1,364 (91.0%)         134 (81.9%)         0.66 (0.37-1.17)         0.155           Fourth         1,289 (0.3%)         134 (8.1%)         0.75 (0.43-1.28)         0.288           Highest         1.289 (0.3%)         138 (0.7%)         0.66 (0.37-1.17)         0.155           Distance to Health Facility            -           Big problem         4.646 (93.5%)         321 (6.5%)         1         -           Not a big problem         2,739 (91.4%)         328 (6.9%)         1         -           Not a big problem         592 (89.3%)         71 (0.7%)         1         -           Not a big problem         592 (89.3%)         71 (0.7%)         1         -           Working         592 (89.3%)         73 (74%)         1         -           Urban         1,846 (92.6%)         147 (74%)         1         -      N	Divorced	677 (94.6%)	39 (5.4%)	0.58 (0.37-0.91)	0.018
Weath Quintile         Interference         Interference         Interference           Lowest         1,741 (94,3%)         105 (5.7%)         1         -           Second         1,478 (95.7%)         66 (4.3%)         0.62 (0.37-1.04)         0.070           Middle         1,346 (91.0%)         135 (09%)         0.85 (0.50-1.46)         0.556           Fourth         1,516 (91.9%)         134 (8.1%)         0.75 (0.43-1.28)         0.288           Highest         1,289 (90.3%)         138 (0.7%)         0.66 (0.37-1.17)         0.155           Distance to Health Facility         U         0.202         Work Status         0.202           Working         592 (89.3%)         321 (6.5%)         1         -           Not Abig problem         2,739 (91.4%)         508 (6.9%)         0.67 (0.47-0.97)         0.032           Working         592 (89.3%)         508 (6.9%)         0.67 (0.47-0.97)         0.032           Residence         Urban         1,846 (92.6%)         1         -           Moradic         978 (93.4%)         578 (7.7%)         1         -           Moradic         978 (94.8%)         378 (7.7%)         1.12 (0.83-1.51)         0.459           Nomadic         978 (95.4%)	Widowed	324 (96.1%)	13 (3.9%)	0.55 (0.20–1.48)	0.236
Lowest         1,741 (94,396)         105 (5,796)         1         -           Second         1,478 (95,796)         66 (4,396)         0.62 (0.37-1.04)         0.070           Middle         1,364 (91.096)         135 (9.096)         0.85 (0.50-1.46)         0.55           Fourth         1,516 (91.996)         134 (8,196)         0.75 (0.43-1.28)         0.288           Highest         1,289 (90.396)         138 (9.796)         0.66 (0.37-1.17)         0.155           Distance to Health Facility               Big problem         2,739 (91.496)         321 (6.596)         1            Not a big problem         2,739 (91.496)         258 (8.696)         1.09 (0.91-1.56)         0.202           Working         592 (89.396)         71 (10.796)         1             Not Working         592 (89.396)         71 (10.796)         1             Not Working         592 (89.396)         71 (10.796)         1             Not Working         592 (89.396)         78 (7.796)         1.12 (0.83-1.51)         0.50           Nomadic         788 (4.876)         16 (4.8396)         1.2 (0.08-3.42)         0.026	Wealth Ouintile			· · · ·	
Second         1,478 (95.7%)         66 (4.3%)         0.62 (0.37-1.04)         0.070           Middle         1,364 (91.9%)         135 (9.0%)         0.85 (0.50-1.46)         0.556           Fourth         1,516 (91.9%)         134 (8.1%)         0.75 (0.43-1.28)         0.288           Highest         1,289 (90.3%)         138 (9.7%)         0.66 (0.37-1.17)         0.155           Distance to Health Facility         1         -         -         -           Big problem         4.646 (93.5%)         321 (6.5%)         1         -         -           Not a big problem         6,794 (93.1%)         508 (6.9%)         0.67 (0.47-0.97)         0.032           Working         592 (89.3%)         71 (10.7%)         1         -         -           Not Working         6,794 (93.1%)         508 (6.9%)         0.67 (0.47-0.97)         0.032           Residence         Urban         1,846 (02.6%)         147 (7.4%)         1         -           Mural         4,565 (92.3%)         378 (7.7%)         1,12 (0.83-1.51)         0.459           Nomadic         978 (94.8%)         53 (5.2%)         0.40 (0.23-0.68)         0.001           Regiden         1         -         -         -         -	Lowest	1.741 (94.3%)	105 (5.7%)	1	-
Indedic         1364 (91.0%)         135 (9.0%)         0.85 (0.50-1.46)         0.556           Fourth         1,516 (91.9%)         134 (8.1%)         0.75 (0.43-1.28)         0.288           Highest         1,289 (90.3%)         138 (9.7%)         0.66 (0.37-1.17)         0.155           Distance to Health Facility                Big problem         4,646 (93.5%)         321 (6.5%)         1         -            Not a big problem         2,739 (91.4%)         258 (8.6%)         1.19 (0.91-1.56)         0.202           Working         592 (89.3%)         71 (10.7%)         1         -            Not Working         6,794 (93.1%)         258 (8.6%)         0.67 (0.47-0.97)         0.032           Residence           -             Urban         1,846 (92.6%)         147 (7.4%)         1         -            Normadic         928 (94.8%)         378 (7.7%)         1.12 (0.83-1.51)         0.026           Fogdner         261 (90.0%)         166 (18.4%)         1.92 (1.08-3.42)         0.026           Togdheer         261 (90.0%)         29 (1.00%)         1.60 (6.5-2.06)         0.633 <td>Second</td> <td>1.478 (95.7%)</td> <td>66 (4.3%)</td> <td>0.62 (0.37-1.04)</td> <td>0.070</td>	Second	1.478 (95.7%)	66 (4.3%)	0.62 (0.37-1.04)	0.070
Fourth         1,516 (91.9%)         134 (8.1%)         0.75 (0.43-1.2%)         0.288           Highest         1,289 (90.3%)         138 (9.7%)         0.666 (0.37-1.17)         0.155           Distance to Health Facility               Big problem         4,646 (93.5%)         321 (6.5%)         1         -           Not a big problem         2,739 (91.4%)         258 (8.6%)         1.19 (0.91-1.56)         0.202           Working         592 (89.3%)         71 (10.7%)         1         -           Not Working         692 (89.3%)         71 (10.7%)         1         -           Not Working         592 (89.3%)         73 (7.7%)         1.12 (0.83-1.51)         0.459           Not Working         4,565 (92.3%)         378 (7.7%)         1.12 (0.83-1.51)         0.459           Nomadic         92 (90.9%)         378 (7.7%)         1.12 (0.83-1.51)         0.459           Normadic         92 (90.9%)         378 (7.7%)         1.12 (0.83-1.51)         0.459           Solo         738 (91.5%)         64 (8.3%)         1         -           Modal         713 (91.7%)         64 (8.3%)         1         -           Sora asg         516 (55%)         29 (10	Middle	1.364 (91.0%)	135 (9.0%)	0.85 (0.50–1.46)	0.556
Highest         1,289 (90,3%)         138 (6,7%)         0.66 (0.37–1.17)         0.155           Distance to Health Facility	Fourth	1 516 (91 9%)	134 (8 1%)	0.75 (0.43–1.28)	0.288
Distance to Health Facility         Distance to Health Facility           Big problem         4,646 (93.5%)         321 (6.5%)         1         -           Not a big problem         2,739 (91.4%)         258 (8.6%)         1.19 (0.91–1.56)         0.202           Working         592 (89.3%)         71 (10.7%)         1         -           Not working         6,794 (93.1%)         508 (6.9%)         0.67 (0.47–0.97)         0.032           Residence           -         -           Urban         1,846 (92.6%)         147 (7.4%)         1         -           Rural         4,565 (92.3%)         378 (7.7%)         1.12 (0.83–1.51)         0.459           Nomadic         978 (94.8%)         53 (5.2%)         0.40 (0.23–0.68)         0.001           Region          -         -         -           Awdal         713 (91.7%)         64 (8.3%)         1         -         -           Orgdheer         1690.0%)         29 (10.0%)         1.16 (0.65–2.06)         0.623           Sool         578 (95.5%)         28 (4.5%)         0.48 (0.25–0.94)         0.033           Sanaag         815 (95.4%)         39 (4.6%)         0.44 (0.23–0.82)         0.009	Highest	1 289 (90 3%)	138 (9.7%)	0.66 (0.37–1.17)	0.155
Big problem         4,646 (93,5%)         321 (6.5%)         1         -           Not a big problem         2,739 (91,4%)         258 (8.6%)         1.19 (0.91–1.56)         0.202           Work Status         -         -         -         -           Working         592 (89,3%)         71 (10.7%)         1         -         -           Not Working         6.794 (93,1%)         508 (6.9%)         0.67 (0.47–0.97)         0.032           Residence         -         -         -         -           Urban         1,846 (92.6%)         147 (7.4%)         1         -         -           Rural         4,565 (92.3%)         378 (7.7%)         1.12 (0.83–1.51)         0.459           Nomadic         978 (94.8%)         53 (5.2%)         0.40 (0.22–0.68)         0.001           Region         -         -         -         -           Avdal         713 (91.7%)         64 (83.5%)         1         -           Woqooyi Galbeed         468 (81.6%)         106 (18.4%)         1.92 (1.08–3.42)         0.026           Togdheer         261 (90.0%)         29 (10.0%)         1.16 (0.65–2.06)         0.633           Sool         78 (95.5%)         28 (4.5%)         0.44 (0.	Distance to Health Facility	1,203 (301370)	100 (51776)		0.100
bits bits problem         2,739 (91,4%)         258 (8.6%)         1.19 (0.91–1.56)         0.202           Work Status         .	Big problem	4 646 (93 5%)	321 (6 5%)	1	-
Nords Status         Line Sectors of Control         Line Sectors of Control         Line Sectors of Control           Work Status         592 (89.3%)         71 (10.7%)         1         -           Not Working         6,794 (93.1%)         508 (6.9%)         0.67 (0.47-0.97)         0.032           Residence           -         -         -           Urban         1,846 (92.6%)         147 (7.4%)         1         -         -           Rural         4,565 (92.3%)         378 (7.7%)         0.40 (0.23-0.68)         0.001           Nomadic         978 (94.8%)         53 (5.2%)         0.40 (0.23-0.68)         0.001           Region         -         -         -         -         -           Awdal         713 (91.7%)         64 (8.3%)         1         -         -           Mogocyl Galbeed         468 (81.6%)         106 (18.4%)         1.92 (1.08-3.42)         0.026           Togdheer         261 (90.0%)         29 (10.0%)         0.48 (0.25-0.94)         0.663           Sool         Sord         578 (95.5%)         28 (4.5%)         0.44 (0.23-0.82)         0.009           Bari         482 (95.3%)         94 (4.6%)         0.44 (0.23-0.82)         0.009         0.	Not a big problem	2 739 (91 4%)	258 (8.6%)	1 19 (0 91–1 56)	0 202
Working         592 (89.3%)         71 (10.7%)         1         -           Not Working         6,794 (93.1%)         508 (6.9%)         0.67 (0.47–0.97)         0.032           Residence                0.032           Residence           147 (7.4%)         1         -             Rural         4,565 (92.3%)         378 (7.7%)         1.12 (0.83–1.51)         0.459           Nomadic         979 (94.8%)         53 (5.2%)         0.40 (0.23–0.68)         0.001           Region                 Awdal         713 (91.7%)         64 (8.3%)         1         -             Woqooyi Galbeed         468 (8.16%)         106 (18.4%)         1.92 (1.08–3.42)         0.026            Togdheer         261 (90.0%)         29 (10.0%)         1.16 (0.65–2.06)         0.623	Work Status	2,, 3, (, , , , , , , , , , , , , , , , ,	250 (0.070)		0.202
Initiality         Def (00.5%)         Fe (00.5%)         Def (00.7%)         Def (00.7%) <thdef (00.7%)<="" th=""> <thdef (00.7%)<="" th="">         &lt;</thdef></thdef>	Working	592 (89 3%)	71 (10 7%)	1	-
Residence         For (Sams)         Descention         Descention           Residence         Urban         1,846 (92.6%)         147 (7.4%)         1         -           Rural         4,565 (92.3%)         378 (7.7%)         1.12 (0.83–1.51)         0.459           Nomadic         978 (94.8%)         53 (5.2%)         0.40 (0.23–0.68)         0.001           Region         -         -         -         -           Awdal         713 (91.7%)         64 (8.3%)         1         -           Woqooyi Galbeed         468 (81.6%)         106 (18.4%)         1.92 (1.08–3.42)         0.026           Togdheer         261 (90.0%)         29 (10.0%)         1.16 (0.65–2.06)         0.623           Sool         578 (95.5%)         28 (4.5%)         0.48 (0.25–0.94)         0.033           Sanaag         815 (95.4%)         29 (1.0%)         0.44 (0.23–0.82)         0.009           Bari         482 (95.3%)         24 (4.7%)         0.44 (0.23–0.82)         0.009           Bari         482 (95.3%)         24 (4.7%)         0.49 (0.23–1.04)         0.64           Nugaal         795 (93.7%)         53 (6.3%)         0.60 (0.31–1.19)         0.145           Mudug         850 (95.5%)         40 (4.	Not Working	6 794 (93 1%)	508 (6 9%)	0.67 (0.47–0.97)	0.032
Urban         1,846 (92.6%)         147 (7.4%)         1         -           Rural         4,565 (92.3%)         378 (7.7%)         1.12 (0.83–1.51)         0.459           Nomadic         978 (94.8%)         53 (5.2%)         0.40 (0.23–0.68)         0.001           Region         -         -         -         -         -           Woqooyi Galbeed         468 (81.6%)         106 (18.4%)         1.92 (1.08–3.42)         0.026           Togdheer         261 (90.0%)         29 (10.0%)         1.16 (0.65–2.06)         0.623           Sool         578 (95.5%)         28 (4.5%)         0.48 (0.25–0.94)         0.033           Sanaag         815 (95.4%)         39 (4.6%)         0.44 (0.23–0.82)         0.009           Bari         482 (95.3%)         24 (4.7%)         0.49 (0.23–1.04)         0.64           Nugaal         795 (93.7%)         53 (6.3%)         0.60 (0.31–1.19)         0.145           Mudug         850 (95.5%)         40 (4.5%)         0.43 (0.21–0.87)         0.019           Galgaduud         773 (89.6%)         90 (10.4%)         1.00 (0.55–1.83)         0.999           Hiraan         410 (93.5%)         29 (6.5%)         0.54 (0.25–1.17)         0.118           Banadir	Residence	0,7 5 1 (551170)	300 (0.370)		0.002
Bural1,505 (22.0%)378 (7.7%)1.12 (0.83–1.51)0.459Nomadic978 (94.8%)53 (5.2%)0.40 (0.23–0.68)0.001Region-Awdal713 (91.7%)64 (8.3%)1-Woqooyi Galbeed468 (81.6%)106 (18.4%)1.92 (1.08–3.42)0.026Togdheer261 (90.0%)29 (10.0%)1.16 (0.65–2.06)0.623Sool578 (95.5%)28 (4.5%)0.48 (0.25–0.94)0.033Sanaag815 (95.4%)39 (4.6%)0.44 (0.23–0.82)0.009Bari482 (95.3%)24 (4.7%)0.49 (0.23–1.04)0.064Nugaal795 (93.7%)53 (6.3%)0.60 (0.31–1.19)0.145Mudug850 (95.5%)40 (4.5%)0.43 (0.21–0.87)0.019Galgaduud773 (89.6%)90 (10.4%)1.00 (0.55–1.83)0.999Hiraan410 (93.2%)30 (6.8%)0.57 (0.34–1.30)0.233Middle Shabelle268 (94.6%)15 (5.4%)0.53 (0.30–0.94)0.030Bay64 (95.2%)3 (4.8%)0.39 (0.16–0.95)0.039Bakool286 (95.0%)15 (5.0%)0.44 (0.20–0.97)0.041Gedo99 (98.9%)1 (1.1%)0.11 (0.04–0.28)0.000Lower Juba105 (90.0%)12 (10.0%)0.99 (0.48–2.05)0.972	Urban	1 846 (92 6%)	147 (7 4%)	1	-
Nomadic1,000 (0.1.0)510 (0.1.0)1.12 (0.05 (1.0.1)0.1.05Nomadic978 (94.8%)53 (5.2%)0.40 (0.23-0.68)0.001Region-Awdal713 (91.7%)64 (8.3%)1-Woqooyi Galbeed468 (81.6%)106 (18.4%)1.92 (1.08-3.42)0.026Togdheer261 (90.0%)29 (10.0%)1.16 (0.65-2.06)0.623Sool578 (95.5%)28 (4.5%)0.48 (0.25-0.94)0.033Sanaag815 (95.4%)39 (4.6%)0.44 (0.23-0.82)0.009Bari482 (95.3%)24 (4.7%)0.49 (0.23-1.04)0.64Nugaal795 (93.7%)53 (6.3%)0.60 (0.31-1.19)0.145Mudug850 (95.5%)40 (4.5%)0.43 (0.21-0.87)0.019Galgaduud773 (89.6%)90 (10.4%)1.00 (0.55-1.83)0.999Hiraan410 (93.2%)30 (6.8%)0.57 (0.34-1.30)0.233Middle Shabelle268 (94.6%)15 (5.4%)0.53 (0.30-0.94)0.030Bay64 (95.2%)3 (4.8%)0.39 (0.16-0.95)0.039Bay64 (95.2%)15 (5.0%)0.44 (0.20-0.97)0.011Bakool286 (95.0%)15 (5.0%)0.44 (0.20-0.97)0.041Gedo99 (98.9%)1 (1.1%)0.11 (0.04-0.28)0.000	Bural	4 565 (92 3%)	378 (7.7%)	1 12 (0 83–1 51)	0.459
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Awdal713 (91.7%)64 (8.3%)1-Woqooyi Galbeed468 (81.6%)106 (18.4%)1.92 (1.08-3.42)0.026Togdheer261 (90.0%)29 (10.0%)1.16 (0.65-2.06)0.623Sool578 (95.5%)28 (4.5%)0.48 (0.25-0.94)0.033Sanaag815 (95.4%)39 (4.6%)0.44 (0.23-0.82)0.009Bari482 (95.3%)24 (4.7%)0.49 (0.23-1.04)0.064Nugaal795 (93.7%)53 (6.3%)0.60 (0.31-1.19)0.145Mudug850 (95.5%)40 (4.5%)0.43 (0.21-0.87)0.019Galgaduud773 (89.6%)90 (10.4%)1.00 (0.55-1.83)0.999Hiraan410 (93.2%)30 (6.8%)0.67 (0.34-1.30)0.233Middle Shabelle268 (94.6%)15 (5.4%)0.54 (0.25-1.17)0.118Banadir416 (93.5%)29 (6.5%)0.39 (0.16-0.95)0.039Bay64 (95.2%)3 (4.8%)0.39 (0.16-0.95)0.039Bakool286 (95.0%)15 (5.0%)0.44 (0.20-0.97)0.041Gedo99 (98.9%)1 (1.1%)0.11 (0.04-0.28)0.000Lower Juba105 (90.0%)12 (10.0%)0.99 (0.48-2.05)0.972	Region	<i>, , , , , , , , , , , , , , , , , , , </i>	00 (0.270)	0.10 (0.20 0.00)	0.001
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Middle Shabelle       268 (94.6%)       15 (5.4%)       0.54 (0.25-1.17)       0.118         Banadir       416 (93.5%)       29 (6.5%)       0.53 (0.30-0.94)       0.030         Bay       64 (95.2%)       3 (4.8%)       0.39 (0.16-0.95)       0.039         Bakool       286 (95.0%)       15 (5.0%)       0.44 (0.20-0.97)       0.041         Gedo       99 (98.9%)       1 (1.1%)       0.11 (0.04-0.28)       0.000         Lower Juba       105 (90.0%)       12 (10.0%)       0.99 (0.48-2.05)       0.972	Hiraan	410 (93.2%)	30 (6.8%)	0.67 (0.34–1.30)	0.233
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Bay         64 (95.2%)         3 (4.8%)         0.39 (0.16-0.95)         0.039           Bakool         286 (95.0%)         15 (5.0%)         0.44 (0.20-0.97)         0.041           Gedo         99 (98.9%)         1 (1.1%)         0.11 (0.04-0.28)         0.000           Lower Juba         105 (90.0%)         12 (10.0%)         0.99 (0.48-2.05)         0.972	Banadir	416 (93.5%)	29 (6 5%)	0.53 (0.20-0.04)	0.110
Bakool         286 (95.0%)         15 (5.0%)         0.44 (0.20-0.97)         0.041           Gedo         99 (98.9%)         1 (1.1%)         0.11 (0.04-0.28)         0.000           Lower Juba         105 (90.0%)         12 (10.0%)         0.99 (0.48-2.05)         0.972	Bav	64 (95.2%)	2 (0.570)	0.39 (0.16_0.05)	0.030
Gedo         99 (98.9%)         1 (1.1%)         0.11 (0.04–0.28)         0.000           Lower Juba         105 (90.0%)         12 (10.0%)         0.99 (0.48–2.05)         0.972	Bakool	286 (95.0%)	15 (5 0%)	0.32 (0.10-0.33)	0.039
Lower Juba 105 (90.0%) 12 (10.0%) 0.99 (0.48–2.05) 0.000	Gedo	QQ (Q8 Q0%)	1 (1 1%)	0.11 (0.04_0.28)	0.00
	Lower Juba	105 (90.0%)	12 (10 0%)	0.99(0.48-2.05)	0.000

Regional disparities in contraceptive intentions were pronounced, with Woqooyi Galbeed reporting the highest prevalence at 18.4%, while Gedo recorded the lowest at 1.1%. These variations underscore the uneven distribution of healthcare resources and family planning services across Somalia. Regions with higher contraceptive intentions, such as Woqooyi Galbeed, benefit from better healthcare access and targeted family planning programs [36, 37]. Conversely, underserved regions, such as Gedo, face significant logistical challenges, exacerbated by conflict and inadequate infrastructure, limiting access to reproductive health services [38]. Cultural differences may further discourage family planning in more conservative regions where opposition to contraception remains high [22].

Education emerged as one of the strongest predictors of contraceptive intention. Women with secondary education were nearly twice as likely to intend to use contraception (AOR: 1.91, 95% CI: 1.12-3.26), and those with higher education showed an even stronger association (AOR: 2.34, 95% CI: 1.21–4.56). These findings align with studies from Nigeria, Ethiopia, and Ghana, where formal education significantly increases contraceptive awareness and uptake (Nyarko, 2015; Worku et al., 2022). Education not only enhances knowledge of reproductive health but also empowers women to make autonomous contraceptive decisions [17, 39, 40]. The extremely low contraceptive intention rate among women with no formal education, combined with Somalia's high illiteracy rate, suggests an urgent need for targeted reproductive health education programs. These efforts should focus on rural and nomadic populations where school attendance is low, addressing knowledge gaps and dispelling misconceptions surrounding contraception [19, 41].

Economic disparities also influenced contraceptive intention. Women in the highest wealth quintile were more likely to intend to use contraception (AOR: 0.66, 95% CI: 0.37-1.17), consistent with findings from Kenya and Uganda, where financial stability is associated with greater contraceptive use [24, 26, 42]. Economic security enhances access to healthcare, reduces financial barriers to contraception, and strengthens reproductive autonomy [43]. Conversely, women in the lowest and second wealth quintiles (42.56%) faced systemic economic constraints that limited their ability to access reproductive health services, reinforcing disparities in family planning utilization [44]. Geographic disparities further compounded these inequalities, as urban women demonstrated higher contraceptive intention (7.4%) compared to nomadic women (5.2%) (AOR: 0.40, 95% CI: 0.23-0.68). Mobility restrictions, limited healthcare access, and cultural traditions emphasizing large families likely contributed to these differences [36, 45]. Addressing these barriers requires innovative solutions such as mobile health clinics and community-based outreach programs tailored to the needs of nomadic and rural populations [46].

Cultural and religious beliefs continue to play a significant role in shaping contraceptive decision-making in Somalia. Previous research indicates that traditional norms and religious doctrines often present significant barriers to family planning, as contraceptive use is perceived to contradict Islamic teachings [23, 47]. Opposition to contraception is particularly strong in rural and conservative communities where religious leaders hold substantial influence over reproductive health decisions [23]. To address these challenges, future interventions should integrate culturally sensitive educational campaigns that actively engage religious and community leaders in family planning advocacy [12, 48]. Additionally, integrating family planning education into broader maternal and child health initiatives may facilitate greater acceptance of contraception and improve reproductive health outcomes in Somalia [49].

#### Conclusion

This study highlights significant regional and sociodemographic disparities in contraceptive intention among Somali women, with education, wealth, and residence emerging as key determinants. The findings indicate that women with higher education levels and greater economic stability are more likely to intend to use contraception, emphasizing the role of education and financial autonomy in reproductive decision-making. The particularly low contraceptive intention rate (7.6%) in Somalia, compared to other sub-Saharan African countries, underscores the need for targeted interventions to address misconceptions, cultural barriers, and healthcare access limitations. The study also reinforces the importance of recognizing nomadic populations as a distinct group with unique healthcare challenges. While the findings contribute to understanding contraceptive intention in Somalia, further research incorporating qualitative insights and multilevel modeling could provide a more comprehensive perspective on contextual and structural influences. Strengthening reproductive health education, expanding access to family planning services, and engaging community leaders are essential steps toward improving contraceptive uptake and reproductive autonomy among Somali women.

#### Limitation

This study has several limitations that should be acknowledged. First, the cross-sectional nature of the 2020 Somali Demographic and Health Survey (SDHS) limits the ability to establish causal relationships between contraceptive intention and its determinants. Additionally, contraceptive intention was self-reported, making the findings susceptible to social desirability bias, where participants may have overstated or understated their intentions due to cultural or societal influences. Another limitation is the exclusion of multilevel modelling, which could have accounted for hierarchical influences such as community-level and regional factors. However, incorporating a multilevel approach would require a fundamental restructuring of the analytical framework and shift the study's focus from individual determinants to broader contextual influences, which was beyond the scope of this research. Furthermore, while DHS data is nationally representative, nomadic populations in remote areas may be underrepresented, potentially affecting the generalizability of findings to all subpopulations. Despite these limitations, this study provides valuable insights into the sociodemographic disparities in contraceptive intention among Somali women, offering a foundation for targeted reproductive health interventions.

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#### Author contributions

JS: conceptualized, designed, and conducted the study, including data analysis, visualization, and writing the original draft. MMA: contributed data curation and provided oversight and editing.

#### Funding

None.

#### Data availability

This research did not involve the collection of primary data. The findings are based on secondary data from the 2020 Somali Demographic and Health Survey (SDHS), which is publicly accessible via the DHS website: https://micro data.nbs.gov.so.

#### Declarations

#### Ethics approval and consent to participate

This study utilized secondary data from the 2020 Somali Demographic and Health Survey (SDHS), conducted in accordance with established ethical guidelines. The research complied with ethical principles by obtaining the necessary approvals from the Somalia National Health Research Ethics Committee and the ICF Institutional Review Board. Informed consent was secured from all participants prior to data collection, ensuring that their rights and confidentiality were upheld throughout the research process.

#### **Competing interests**

The authors declare no competing interests.

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#### References

- Family planning/contraception methods [Internet]. [cited 2024 Aug 3]. Available from: https://www.who.int/news-room/fact-sheets/detail/family-planni ng-contraception
- Budu E, Ahinkorah BO, Seidu AA, Armah-Ansah EK, Salihu T, Aboagye RG, et al. Intention to use contraceptives among married and cohabiting women in sub-saharan Africa: a multilevel analysis of cross-sectional data. BMJ Open. 2022;12(11):e060073.

- Ishola O, Ajijola L, Luximon-Ramma A. Examining Contraceptive Ideational Disparities Among Adolescents and Young Women in Nigeria. 2023 [cited 2025 Feb 19]; Available from: https://www.academia.edu/download/1210693 20/download.pdf
- Coulson J, Sharma V, Wen H. Understanding the global dynamics of continuing unmet need for family planning and unintended pregnancy. China Popul Dev Stud. 2023;7(1):1–14.
- 5. unfpa unintended pregnancy neglected crisis pdf. Google Search [Internet]. [cited 2024 Nov 16]. Available from: https://www.google.com/search?q=unfp a+unintended+pregnancy+neglected+crisis+pdf%26;sca\_esv=46d1524bbf4 d7360%26;sxsrf=ADLYWIKuWS14PhPnN70fPdyxCwZyuQUmLw%3A1731722 614437%26;ei=dv03Z7W2GpakhbIPsNXIqQ%26;ved=0ahUKEwi1yaG64d-JA xUWUkEAHbAqMrUQ4dUDCA8%26;uact=5%26;oq=unfpa+unintended+pre gnancy+neglected+crisis+pdf%26;gs\_lp=Egxnd3Mtd2l6LXNIcnAiL3VuZnBh IHVuaW50ZW5kZWQgcHJIZ25hbmN5IG5IZ2xIY3RIZCBjcmIzaXMgcGRmMgU QIRigAUigFFCXDFjGD3ABeAGQAQGYAYADoAG5CKoBBTItMy4xuAEDyAEA-A EBmAIEoALOBcICChAAGLADGNYEGEeYAwCIBgGQBgiSBwUxLjAuM6AHoAs% 26;sclient=qws-wiz-serp
- Chandra-Mouli V, Akwara E. Improving access to and use of contraception by adolescents: what progress has been made, what lessons have been learnt, and what are the implications for action? Volume 66. Best Practice & Research Clinical Obstetrics & Gynaecology; 2020. p. 107.
- Budu E, Dadzie LK, Salihu T, Ahinkorah BO, Ameyaw EK, Aboagye RG, et al. Socioeconomic inequalities in modern contraceptive use among women in Benin: a decomposition analysis. BMC Women's Health. 2023;23(1):444.
- Abdulai M, Kenu E, Ameme DK, Bandoh DA, Tabong PT, Lartey AA, et al. Demographic and socio-cultural factors influencing contraceptive uptake among women of reproductive age in Tamale Metropolis, Northern region, Ghana. Ghana Med J. 2020;54(2 Suppl):64–72.
- Khan MN, Khalif IY, Rana MS, Khan MMA, Khanam SJ, Alam MB. Improving the uptake of contraception. Somalia Bull World Health Organ. 2023;102(1):75.
- Family Planning Trends in Sub-Saharan Africa world. bank Google Search [Internet]. [cited 2024 Nov 16]. Available from: https://www.google.com/sear ch?q=Family+Planning+Trends+in+Sub-Saharan+Africa+world+bank%26;sc a\_esv=46d1524bbf4d7360%26;sxsrf=ADLYWIKQONO-Rsuh71s-a1aFq-aK2dcg pg%3A1731723017872%26;ei=Cf83Z9L4NIOXhblPhsvK2Qk%26;ved=0ahUKE wiSodH64t-JAxWDWEEAHYalMpsQ4dUDCA8%26;uact=5%26;oq=Family+Pla nning+Trends+in+Sub-Saharan+Africa+world+bank%26;gs\_lp=Egxnd3Mtd2 I6LXNIcnAiN02hbWIseSBQbGFubmluZyBUcmVuZHMgaW4gU3ViLVNhaGFyY W4gQWZyaWNhIHdvcmxkIGJhbmtIAFAAWABwAHgAkAEAmAEAoAEAqgEAu AEDyAEA-AEBmAIAoAIAmAMAkgcAoAcA%26;sclient=gws-wiz-serp
- Gele AA, Shrestha M, Sheikh NS, Qureshi SA. Pregnant and powerless: exploring barriers to contraceptive use among women in Mogadishu, Somalia. Health Serv Res Managerial Epidemiol. 2022;9:23333928221117057.
- Gele A, Shrestha M, Khalif F, Qureshi S. Barriers and Facilitators to Modern Contraception Among Married Women in Conflict Affected Town of Mogadishu, Somalia. 2021 [cited 2024 Dec 9]; Available from: https://scholar.archive.org/work/3eabpyu3jfecfh3s2baftcyhqm/access/wayback/https://assets.resear chsquare.com/files/rs-551043/v1/a99f7f77-dd83-4722-a26c-35b134b3427b.p df
- Morrison J, Malik SMMR. Health equity in Somalia? An evaluation of the progress made from 2006 to 2019 in reducing inequities in maternal and newborn health. Int J Equity Health. 2024;23(1):46.
- 14. Church AC, Ibitoye M, Chettri S, Casterline JB. Traditional supports and contemporary disrupters of high fertility desires in sub-Saharan Africa: a scoping review. Reproductive Health. 2023;20:86.
- 15. Bongaarts J. Trends in fertility and fertility preferences in sub-Saharan Africa: the roles of education and family planning programs. Genus. 2020;76(1):32.
- Sikaluzwe M, Phiri M, Lemba M, Shasha L, Muhanga M. Trends in prevalence and factors associated with unintended pregnancies in Zambia (2001–2018). BMC Pregnancy Childbirth. 2024;24:148.
- 17. Woldeamanuel BT, Gessese GT, Demie TG, Handebo S, Biratu TD. Women's education, contraception use, and high-risk fertility behavior: A cross-sectional analysis of the demographic and health survey in Ethiopia. Front Glob Womens Health. 2023;4:1071461.
- Anik Al, Islam MR, Rahman MS. Association between socioeconomic factors and unmet need for modern contraception among the young married women: A comparative study across the low- and lower-middleincome countries of Asia and Sub-Saharan Africa. PLOS Glob Public Health. 2022;2(7):e0000731.
- 19. Wulifan JK, Dordah AD, Sumankuuro J. Nomadic pastoralists' experience accessing reproductive and maternal healthcare services in low

and middle-income countries: A contextual scoping review. Pastoralism. 2022;12(1):47.

- Tsegaw M, Mulat B, Shitu K. Modern contraceptive utilization and associated factors among married women in Liberia: evidence from the 2019 Liberia demographic and health survey. OAJC. 2022;13:17–28.
- 21. Gele AA, Musse FK, Shrestha M, Qureshi S. Barriers and facilitators to contraceptive use among Somali immigrant women in Oslo: A qualitative study. PLoS ONE. 2020;15(3):e0229916.
- 22. Sinai I, Omoluabi E, Jimoh A, Jurczynska K. Unmet need for family planning and barriers to contraceptive use in Kaduna, Nigeria: culture, Myths and perceptions. Cult Health Sex. 2020;22(11):1253–68.
- 23. Barro A, Bado AR. Religious leaders' knowledge of family planning and modern contraceptive use and their involvement in family planning programmes in Burkina Faso: A qualitative study in Dori in the Sahel region. Open Access J Contracept. 2021;12:123–32.
- Tumwizere G, Nsenga R, Ndugga P, Kwagala B. Intention to use modern contraceptives among current nonusers of reproductive age in Uganda. Contracept Reprod Med. 2024;9(1):67.
- Asmamaw DB, Eshetu HB, Negash WD. Individual and Community-Level factors associated with intention to use contraceptives among reproductive age women in Sub-Saharan Africa. Int J Public Health. 2022;67:1604905.
- Oppong FB, Logo DD, Agbedra SY, Adomah AA, Amenyaglo S, Arhin-Wiredu K, et al. Determinants of contraceptive use among sexually active unmarried adolescent girls and young women aged 15–24 years in Ghana: a nationally representative cross-sectional study. BMJ Open. 2021;11(2):e043890.
- Shitu K, Alem AZ, Alemneh TS, Terefe B. Individual and community-level determinants of intention to use contraceptive among married women in Ethiopia: A multi-level analysis of National Survey. medRxiv. 2022;2022–02.
- 28. Addow AA, FAMILY PLANNING BETWEEN THE SOMALI CULTURE. AND THE ISLAMIC TRADITION. [cited 2025 Jan 13]; Available from: https://www.researc hgate.net/profile/Ali-Addow/publication/373859442\_FAMILY\_PLANNING\_BE TWEEN\_THE\_SOMALI\_CULTURE\_AND\_THE\_ISLAMIC\_TRADITION/links/6522 5b44d717ef1293d69217/FAMILY-PLANNING-BETWEEN-THE-SOMALI-CULTUR E-AND-THE-ISLAMIC-TRADITION.pdf
- 29. Ashford H. POPULATION CONTROL, DEVELOPMENT, AND GHANA'S NATIONAL FAMILY PLANNING, PROGRAMME, 1960–1972. Hist J. 2020;63(2):469–93.
- Zimmerman LA, Yi Y, Yihdego M, Abrha S, Shiferaw S, Seme A, et al. Effect of integrating maternal health services and family planning services on postpartum family planning behavior in Ethiopia: results from a longitudinal survey. BMC Public Health. 2019;19:1–9.
- Habte A, Hailegebreal S, Simegn AE. Predictors of maternal health services uptake in West African region: a multilevel multinomial regression analysis of demographic health survey reports. Reprod Health. 2024;21(1):45.
- Gahungu J, Vahdaninia M, Regmi PR. The unmet needs for modern family planning methods among postpartum women in Sub-Saharan Africa: a systematic review of the literature. Reprod Health. 2021;18(1):35.
- Mutumba M. Mass media influences on family planning knowledge, attitudes and method choice among sexually active men in sub-Saharan Africa. PLoS ONE. 2022;17(1):e0261068.
- Jonas K, Duby Z, Maruping K, Harries J, Mathews C. Rumours, Myths, and misperceptions as barriers to contraceptive use among adolescent girls and young women in South Africa. Front Reproductive Health. 2022;4:960089.
- Mwakisole AH, Lambert VJ, Nzali A, Aristide C, Laizer E, Cordeiro AA, et al. Partnerships with religious leaders to promote family planning in rural Tanzania: an open-label, cluster randomised trial. Lancet Global Health. 2023;11(12):e1943–54.

- Ajegbile ML. Closing the gap in maternal health access and quality through targeted investments in low-resource settings. J Global Health Rep. 2023;7:e2023070.
- Ouedraogo L, Habonimana D, Nkurunziza T, Chilanga A, Hayfa E, Fatim T, et al. Towards achieving the family planning targets in the African region: a rapid review of task sharing policies. Reprod Health. 2021;18(1):22.
- Okeke SR, Okeke-Obayemi DO, Njoroge MR, Yaya S. Collateral damage: the overlooked reproductive health crisis in conflict zones. Reprod Health. 2024;21:198.
- 39. Adokiya MN, Boah M, Adampah T. Women's autonomy and modern contraceptive use in Ghana: a secondary analysis of data from the 2014 Ghana demographic and health survey. Eur J Contracept Reproductive Health Care. 2021;26(5):383–9.
- Götmark F, Andersson M. Human fertility in relation to education, economy, religion, contraception, and family planning programs. BMC Public Health. 2020;20(1):265.
- Anyatonwu OP, San Sebastián M. Rural-urban disparities in postpartum contraceptive use among women in Nigeria: a Blinder-Oaxaca decomposition analysis. Int J Equity Health. 2022;21:71.
- 42. Ochako R, Mbondo M, Aloo S, Kaimenyi S, Thompson R, Temmerman M, et al. Barriers to modern contraceptive methods uptake among young women in Kenya: a qualitative study. BMC Public Health. 2015;15(1):118.
- 43. Ahinkorah BO, Seidu AA, Armah-Ansah EK, Ameyaw EK, Budu E, Yaya S. Socio-economic and demographic factors associated with fertility preferences among women of reproductive age in Ghana: evidence from the 2014 demographic and health survey. Reproductive Health. 2021;18(1):2.
- Osborne A, Aboagye RG, Bangura C, Ahinkorah BO. Predictors of intention to use contraceptives among married and cohabiting women in Ghana: A cross-sectional study. Contracept Reprod Med. 2024;9(1):55.
- 45. Binyaruka P, Borghi J. An equity analysis on the household costs of accessing and utilising maternal and child health care services in Tanzania. Health Econ Rev. 2022;12(1):36.
- Rabiou LM, Oumarou B, Mor D, Abdou M, Ibrahim C, Tamuzi JL, et al. Mobile outreach clinics for improving health care services accessibility in vulnerable populations of the Diffa region in Niger: a descriptive study. Int J Equity Health. 2024;23(1):235.
- 47. Turner N. Influence of religion and religiosity on fertility and contraceptive use in continental sub-Saharan Africa: a comprehensive review. University of Gothenburg [Internet]. 2021 [cited 2025 Feb 19]; Available from: https://www .researchgate.net/profile/Nicola-Turner-5/publication/355057207\_Influence\_ of\_Religion\_and\_Religiosity\_on\_Fertility\_and\_Contraceptive\_Use\_in\_Contin ental\_Sub-Saharan\_Africa\_A\_Comprehensive\_Review/links/63fa74520d98a9 7717b97cf1/Influence-of-Religion-and-Religiosity-on-Fertility-and-Contracep tive-Use-in-Continental-Sub-Saharan-Africa-A-Comprehensive-Review.pdf
- Durrance-Bagale A, Marzouk M, Tung LS, Agarwal S, Aribou ZM, Ibrahim NBM, et al. Community engagement in health systems interventions and research in conflict-affected countries: a scoping review of approaches. Global Health Action. 2022;15(1):2074131.
- Sheikh NS, Gele A. Factors influencing the motivation of maternal health workers in conflict setting of Mogadishu, Somalia. PLOS Global Public Health. 2023;3(3):e0001673.

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