### Introduction

Worldwide, 270 million women of reproductive age (15– 49 years) had an unmet need for contraception in 2019; this unmet need is projected to increase by 10% by 2030 (UN,2019). Unmet need for contraception is defined as the proportion of fecund and sexually active women who do not want to become pregnant but are not using any form of contraception. Moreover, 24% of women of reproductive age in low-income countries who wanted to avoid pregnancy could not use a modern method of contraception, with the majority of them living in sub-Saharan Africa (WHO,2019)

In Sub-saharan Africa, most adolescent and young women are growing up in disadvantaged settings marked by high unemployment rates, rapid urbanization, oftenlimited educational opportunities, and rapidly changing socio-cultural norms and practices. Apart from these general difficulties, they face a number of sexual and reproductive health issues, such as unintended pregnancies, unsafe abortions, and high fertility. This high unmet need for contraception and its related consequences have been reported to be associated with several factors such as individual, sociocultural-, knowledge- (about contraceptive methods), and healthcare service-related factors (Stats MA,2020). However, most of these studies mainly focused in general on women of reproductive age who were married, highlighting the need of evidence of the unmet need of contraception among adolescents and young women.

### Methodology

Data were extracted from the 2022 Kenya Demographic and Health Surveys (KDHS 2022). The DHS are nationally representative demographic and household surveys that collect data on a wide range of reproductive, maternal, and child health topics, such as fertility, health-seeking behaviors, and Family Planning methods. The study utilized the women data file for identification of the adolescents age (15-19) and young women (20-24) who experienced the unmet need for contraception and the individual and contextual characteristics which played an influential factor .Descriptive statistics was used to show the distribution of the study population by different background characteristics. Multilevel mixed -effects logistic regression models were used to assess the association between individual and contextual characteristics and unmet need for contraception among adolescents and young women.

# **Definition of Variables**

The outcome variable coded in binary (1 = Yes for unmet need and 0 = No for not unmet need) was generated from a constructed DHS dataset. Unmet need for contraception was defined as women who do not want to become pregnant but are not using any contraception among all sexually active adolescents and young women. Those women include married and/or sexually active unmarried considered fecund but neither pregnant

nor in postpartum amenorrhea, and willing to delay their next birth by at least 2 years or limit their pregnancies without using a modern method of FP. This definition includes those currently pregnant or in postpartum amenorrhea but whose current pregnancy or last birth was not desired.

Individual- and community-level variables were considered as determinants of the unmet need for contraception for this analysis based on a literature review. Individual-level variables included socio-demographic characteristics (age, level of education, marital status, guintile wealth number of living children, knowledge of modern contraceptive, and exposure to FP messages). For the need of our analyses, the participants' age was recoded into two age groups (15-19 years and 20-24 years). The women's level of education was also recoded into no formal education, primary, secondary, and higher level of education. The participants' marital status was defined as currently in union (married or living in the union) and not in union (single, divorced or widowed, or separated). In the past 6 months, exposure to family planning messages was defined as recalling a family planning message heard or seen from the media, including radio, television, or newspapers. The women's economic status was measured through the household wealth index as defined in the KDHS dataset. The DHS wealth index was calculated using economic status indicators that included the main assets available at the household level at the time of the survey. Wealth index quintiles were defined for each household (poorest, poor, middle, richer, and richest). Community-level variables included residence (rural and urban) and by county.

# **Methods of Analysis**

Descriptive statistics was used to show the distribution of the study population by different background characteristics. Bivariate analysis, Cross tabulation was used to show any significant relationships existing between the dependent variable which is an unmet need for contraception and each individual and community level variable. To show statistical significance, Pearson chi-square test was used to measure the dependence of the association.

### Results

The findings indicate that the number of living children, maternal age, formal education and marital status were strong determinants of unmet need for contraceptive among adolescents and young women. For these group of women, having more than three children increases the odds of not using contraception. Adolescents less than 18 years ware more likely to experience an unmet need for contraception as compared to those who were 20 years and above. For adolescent 15-19 and young women 20-24 having secondary or above level of education reduced the odds of unmet need for contraception to 0.13 times.

### **Conclusion and Policy implications**

The social norms in Kenyan society dictate a low personal and reproductive health autonomy in sexually active adolescent girls and young women. This raises the risk of maternal and child morbidity and mortality. Age of adolescent girls and women, wealth quantile, level of education, media exposure, region and county were significantly associated with unmet need for contraception. Hence, there is the need to implement consistently effective reproductive health policies among adolescent girls and young women living in selected counties of Kenya. Moreover, Public health policies and interventions that improve the existing strategies to improve media exposure of adolescent girls and young women on reproductive health issues and increase the wealth status of households should be designed and implemented to reduce the unmet need for contraception in Kenya.