UNMET NEED FOR CONTRACEPTION AMONG ADOLESCENTS AND YOUTH IN DEVELOPING COUNTRIES: A SCOPING REVIEW

Agung Dewanto [1*], Muhammad Lutf [2], Rafhani Rosyidah [3], Agus Wahyu Widayat [4]

[1] *Department of Obstetrics and Gynecology Gynecology Division of Reproductive Fertility Endocrinology, Faculty of Medicine, Public Health and Nursing, Gadjah Mada University, Yogyakarta, Indonesia*
[2] *Department of Medical Surgical Nursing, Faculty of Medicine, Public Health, and Nursing, Universitas Gadjah Mada, Yogyakarta, Indonesia*
[3] *Department of Midwifery, Universitas Muhammadiyah Sidoarjo, East Java, Indonesia*
[4] *Department of Medical Surgical Nursing, Faculty of Medicine, Public Health, and Nursing, Universitas Gadjah Mada, Yogyakarta, Indonesia*
agung.dewanto@ugm.ac.id, muhammadlutfi306@gmail.com, rafhani.rosyidah@gmail.com, guswahyu77@gmail.com
*Corresponding author: agung.dewanto@ugm.ac.id

Abstract—previous systematic reviews have revealed that adolescents' unmet need for contraception can vary from one study to another. Problems of access to and use of contraception in adolescents and youth occur in many developing countries. This article aimed to explore and identify barriers faced by adolescents and youth of developing countries in accessing and using contraception. Systematic searches were performed in seven databases: PubMed, ScienceDirect, EBSCO, Scopus, the Cochrane Library, Sage Journals, and Google Scholar, in the range of January 2011 to December 2022. A total of twenty-six articles were selected for further investigation. All articles cover nineteen quantitative and seven qualitative studies addressing barriers adolescents and youth from developing countries face in accessing and using contraception. Data were tabulated in Microsoft Excel spreadsheets. Furthermore, the data were presented descriptively. This review revealed that adolescents and youth in developing countries face the same barriers to meeting contraceptive needs. Specific interventions are required to resolve the unmet need for contraception in adolescents and youth through the health programs.

Keywords— Unmet need, Contraception, Adolescent, Youth, Developing countries

1. INTRODUCTION

The World Health Organization (WHO) describes women with unmet needs for contraceptives are those who are fertile and sexually active, do not use any contraceptives, but somehow reported to not get more children or some plan to to delay their next child program (1). This is important because it provides the basis for the state to provide good contraceptive services and guarantees its population's reproductive health rights. After the 2012 London Summit on Family Planning, more than 40 countries worldwide recognized that contraception is an important aspect of women's human rights(2). The prevalence of unmet need contraception around the world was around 25% with the prevalence of unmet needs in adolescents ranged from 34% -67% for those who were not married and 7% -62% for those who were married. Given that most adolescent pregnancies are unintended, and it indicates the importance of an unmet need for contraception in the adolescent population (3).

Contraception for adolescents is important to help family plan in the future and improve the health and independency of adolescents. Adolescent and youth access to contraception determines the timing and number of pregnancies and the spacing of children [4]. Contraception helps adolescents and youth limit family number. However, getting contraception as a teenager has many obstacles, such as access, transportation, family preferences, misunderstandings, availability of resources, fear and knowledge of adolescents, and lack of experience with the health system[5]. Adolescent and youth health service providers must discuss reproductive and sexual health in adolescents[6].

Recent research is needed to identify barriers adolescents and youth face in accessing and using contraception in developing countries[7]. We conducted a scoping review to answer these questions and discuss the existing literature. The main objective of this literature study is to investigate the barriers that adolescents and youth from developing countries face in accessing and using contraception.

2. METHODS

2.1 Research design

This scoping review procedure used the methodology from Arksey and O'Malley[8]. It included 5 steps: (1) Identifying the Research Question, (2) Identifying the Relevant Study, (3) Study Selection, (4) Extracting and mapping data, and (5) Compile, Summarize, and Report Results.

Step 1: Identifying the Research Question

The research question in this scoping review: What are the barriers adolescents and youth face in accessing and using contraception?

Step 2: Identifying Relevant Studies.

A systematic literature search was performed to gather the studies/articles reporting unmet needs for contraception among adolescents and youth in developing countries. This step used to search the relevant studies from research article databases including PubMed, ScienceDirect, EBSCO, Scopus, the Cochrane Library, Sage Journals, and Google Scholar. The time range was set from January 2011 to December 2022 and the keywords and terms used were Medical Subject Heading (MeSH) namely (((((((("Unmet Need"[Mesh]) OR "barrier "[Mesh]) OR "contraception"[Mesh]) OR "Family planning, Shared"[Mesh] AND ((("Adolescent [Mesh]) OR "Youth"[Mesh]) OR "Youth"[Mesh]) OR ""[Mesh] AND (((((“Developing countries ”[Mesh]) OR "Low-medium income countries"[Mesh]) \]).

Step 3: Study Selection

Study selection was conducted based on the Preferred Reporting Items for Systematic Reviews and Meta-analysis extension for Scoping Reviews (PRISMA) technique[9]. The article selection process was performed using Mendeley software based on the PRISMA guidelines. Subsequently, the data collected were processed and grouped according to the stages of identification, screening, verification eligibility, as well as inclusion and exclusion criteria. The results of two independent searches were compared, and any discrepancies in the article findings were discussed and resolved until an equal number of articles were obtained.

2.2 Inclusion and Exclusion Criteria

The inclusion and exclusion criteria were guided by PRISMA[9]. This characterization was done using flow diagrams covering several stages, including as follows:

2.2.1 Identification

There were 3597 articles obtained from the seven databases included in this present study.

2.2.2. Screening

Excluded 2277 articles, as many articles as the same/duplicate, then filtered to produce 1320 articles.

2.2.3. Eligibility

Of the 1320 articles, most selected articles were excluded as they did not discuss unmet need contraception (579), comment/letter article to the editor (286), do not have full text (221), and were not written in English (22). Therefore, a total of 212 eligible articles were obtained at the final verification step.

2.2.4. Include

Furthermore, of the 212 eligible articles, some were then excluded due to the population did not match (82), the variable did not match (74), and the data analysis was not complete (30). A peer-reviewed journal paper was included if: published between the period of 2011-2022, was written in English, involved a human participant, and described all the barriers (unmet needs) that affect adolescents and youth. Access to contraceptives needs for their sexuality needs to prevent unintended pregnancy. Quantitative, qualitative, and mixed methods studies were included to consider the various aspects that hinder the adequacy of the contraceptive needs of sexually active adolescents from preventing unintended pregnancies. Articles were excluded if they were not in accordance with the conceptual framework of this present study. Articles were original research articles in the form of comments such as letters to editors or research articles that did not discuss the choice unmet need contraception, research articles that did not have a complete script or were not in English, and opinion pieces, posters, conference abstracts were being excluded.

Step 4: Extracting and Mapping Data

Table 1. Data eixtraction from individual study

Author & year of publication	Country	Purpose	Data Collection	Key Findings	Research Focus/Domain
Fouelifack FY et al 2022	Cameroon	To evaluate the unmet needs of adolescents who give birth	A descriptive cross-sectional study was carried out in three university hospitals in Yaoundé, Cameroon: Yaoundé Central Hospital, Yaoundé Gyneco-Obstetrics and Pediatric Hospital and the District Hospital of	low attendance rate for FP services (5.1%), a high rate of unwanted pregnancies (68.8%). The best-known source of contraceptive method supply was the shop (61.8%). Partner refusal was the most cited reason for not using contraceptive methods (38.3%).	Determinant factor unmet need contraception

			Bi- yem-Assi, from February 1, 2020 to June 30, 2020. 2692 births recorded, 188 (7%) were from adolescents.		
Schwandt H et al 2022	Rwanda	To xplore the perspectives of family planning providers and adult modern contraceptive users on adolescent contraceptive use.	qualitative study in 2018 utilized 32 in-depth interviews with modern contraceptive users and eight focus group discussions with family planning providers.	A Stigma regarding premarital sex results in barriers to adolescent access to contraceptive services. Family planning providers do provide services to adolescents; however, they often recommend secondary abstinence, offer a limited method selection, and accentuate risks associated with sexual activity and contraceptive use.	Determinant factor unmet need contraception
Gayatri M et al 2022	Indonesia	to explore the factors associated with the unmet need for contraception among young women in Indonesia	a cross-sectional study of the 2017 Indonesia Demographic and Health Survey was carried out.	Unmet need was higher among women in particular groups, including those with more children, women who	Determinant factor unmet need contraception

			The analysis was restricted to 4,017 married women aged 15 to 24 in Indonesia.	were cohabiting, those with a higher level of education, living in rural areas, if their husbands wanted more children, and where other family members in the household made the decision for access to healthcare.	
Bhusan NL et al 2021	Malawi	To explore risk factor Unmet need	Qualitative data from 60 AGYW (age 15–24) participating in a sexual and reproductive health study in Malawi to examine contraceptive conversation patterns among participants and their social ties.	The Many reproductive health interventions treat AGYW as a homogenous group, overlooking the needs of unmarried, nulliparous individuals, who are at highest risk for unintended	A Barrier contraception
Ameyaw EK et al 2022	Mali	To nvestigating the association between women's healthcare decision-making capacity and unmet need for contraception in Mali.	6593 women who participated in the 2018 Mali Demographic and Health Survey. Two binary logistic regression	Unmet need for contraception was more probable among women who took their healthcare decisions alone compared to those who did not take their	Determinant factor unmet need contraception

			models were built	healthcare decisions alone [AOR = 1.35; CI = 1.08–1.70].	
Crawford EE et al. 2021	Nigeria	To find out barrier contraception unmarried girl aged 15-19 yo,	A Cross sectional survey of unmarried girl aged 15-19 yo, 12.024 women interviewed about sexual activity and barrier contraception.	There was evidence that unmet need contraception because living in rural area, low education, low sosial economic, low exposure information about contraeption, not get perceived social support	Barrier contraception
Ormel H et al 2021	Kenya	To investigate barrier contraception	A qualitative study exploring the role of CHVs in increasing access and uptake of contraceptive services among youth aged 18–24 years in Narok and Homabay Counties, Kenya. We undertook 37 interviews and 15 focus group discussions involving CHVs, youth, community members, community	Of CHVs have the potential to increase access to contraceptives for young people, reducing unmet need for contraceptives. Their knowledge, skills and attitudes need strengthening through training and supervision	Barrier contraception

			leaders, youth leaders and health programme managers.		
Rizvi F , et al 2021	Cambodia	To find out determinatnt factors unmet need	Analyze data from the 2014 Cambodian Demographic and Health Survey to ascertain demographic and social factors potentially associated with unmet need for contraception. Bivariate and weighted multiple logistic regression analyses with adjusted odds ratios (AOR) were conducted for 4,823 Cambodian, sexually active females aged 15–20 years	Unmet need for contraception in Cambodian females adolescents is associated with younger age, unemployment and low personal autonomy for accessing healthcare but not with education or wealth status. There is a need to implement culturally appropriate reproductive and sexual health literacy programs to increase access to modern contraception and to raise women's autonomy	determinatnt factors unmet need
Sharma H et al 2021	India	to analyze spatial heterogeneity in the unmet need for family planning among young women age 15 to 24 and their mesoscale correlates.	data from the recent round of Indian DHS (2015–2016), commonly known as the National Family Health Survey	age, education, religion, poverty, number of children, media exposure, awareness about family planning, and birth occurred in the last 3 years were significant	Determinant factor unmet need contraception

			(NFHS), this study identifies the significant correlates of unmet need of contraception among young married women in India	predictors of unmet need.	
Sserwanja Q et al. 2021	Uganda	To find out Major determinant barrier contraception in Uganda adolescent	A cross sectional study conducted using demography healths survey, 4264 adolescent (15-19yo) was survey	Major determinant barrier contraception were low married adolescent, Age adolescent, rural area, low income .and low socio economic.	Barrier contraception
Singh I, et al 2021	India	To ssess the prevalence of modern contraceptives among married adolescents, and to determine its association with sociodemographic variables, health worker outreach, and media exposure to FP messages in India.	National Family Health Survey (NFHS-4) conducted in India during 2015–16. The sample size is restricted to 13,232 currently married adolescent girls aged 15–19 years, who were not pregnant at the time of the survey. Bivariate and multivariate analysis	Unmet need contraceptives was found to be low among the uneducated, those residing in rural areas, among backward classes, those practising Hindu religion, women in the poorest wealth quintile, women without children, and those with no exposure to FP messages via media or health care worker	Determinant factor unmet need contraception

			were conducted to assess the levels of contraceptive use and its predictors among married adolescents.		
Sidibév S et al 2020	Guinea	To find out determinatnt factors unmet need	Guinea Demographic and Health Surveys (DHS) conducted in 1999, 2005, 2012, and 2018. 4654 Among urban adolescents and young women (15–24 years)	Age, administrative region, wealth index, marital status, and ethnic group are significantly associated with modern FP	Determinant factor unmet need contraception
Shresta S, et al. 2020	Nepal	To evaluate barrier for contraception	Interview and semi-structured individu of 27 girls (15-19 yo) and 27 health worker service	major barrier for contraception is poor literacy about sexual and reproductive health, followed by patient's lack outonomy, stigma and strict gender norms. Other barriers that health institutions are not adolescent friendly and have passive outreach strategy	To evaluate barrier for unmet need contraception
Nisak BA et al 2020	Indonesia	To determine the factors	Observational non-	A Women who have never done	Determinant factor unmet

		related to the unmet need for family planning in married women	reactive study subjects were 29,189 married women aged 15- 49 years old). The data source comes from the Indonesian Demographic and Health Survey (IDHS) in 2017	birth control have a high risk of unmet need—women's knowledge about contraceptive methods related to the contraceptive method and the history of using family planning (p-value <0.05).	need contraception
Wai MM et al 2019	Myanmar	To find out.unmet need contraception barrier	A cross-sectional survey using adapted Demographic and Health surveys questions was conducted in south and north Yangon from September 2016 to November 2016. A total of 1100 currently married women of 18–49 years participated	Significantly higher in urban than rural women (22.6% versus 16.6%). Rural women also showed significant lesser odds (adjusted OR: 0.63; 95% CI: 0.461–0.849) of unmet need than the urban counterparts.	Barrier contraception
Ozdemir R Et al 2019	Turkey	To investigate levels and related factors of the unmet needs for family planning among	Cross-sectional study was conducted in the rural Cumayani	Education, employment and income levels of the rural women . Not being	Related factors of the unmet needs for family planning

		married women aged 15–49 years living in two settlements (rural and urban) having different economic, social and cultural structures in Karabuk,	village and the urban Emek neighbourhood between October 2016 and June 2017. The sample size was determined to be 289 married women aged 15–49 years	married by civil marriage was a significant predictor of unmet need.	
Juarez F et al, 2018	Mexico	To estimate the prevalence of unmet need contraception.	Mexican National Survey of Demographic Dynamics 2014, using a sub-sample of 56,797 sexually active women aged 15–19 years who were either currently in union or who had never been in union	Statistically significant determinant unmet need contraception associated with younger women (OR = 6.8; CI = 2.95–15.48); women never in union (OR = 1.6; CI = 1.40–1.79); low levels of education (OR = 1.4; CI = 1.26–1.56); and residing in poor regions (OR = 1.9; CI = 1.52–2.49). Those with full access to public services were significantly less likely to have unmet need for contraception	Determinant factor unmet need contraception
Islam AZ et al 2016	Bangladesh	To find determinants of unmet need for contraception among	An This study utilised a cross-sectional data	. The results suggest that region, place of	Determinant factor unmet need contraception

		currently married fecund young women	(n1⁄44982) extracted from the Bangladesh Demographic and Health Survey (BDHS) 2011. . Multinomial logistic regression was used to identify the determinants of unmet need for contraception among currently married fecund young women	residence, religion, husband's desire for children, visits of FP workers, decision-making power on child health care, reading about FP in newspaper/ magazine and number of births in three years preceding the survey were significant predictors of unmet need for contraception	
Worku AG et al 2015	Ethiopia	To evaluate barrier for contraception	The study used data from the three Demographic Health Surveys conducted in Ethiopia, in 2000, 2005, and 2011. Young married women age 15–24 years with sample	Barrier for contraception are age, educational status, religion, couple concordance on family size, and fertility preference were	Barrier contraception

			sizes of 2,157 in 2000, 1,904 in 2005, and 2,146 in 2011 were included. Logit-based decompositi on analy-sis technique was used for analysis of factors contributing to the recent changes	the major sources of this increase	
Jejebhoy, et al.2014	India	To assess determinant factor barrier contraception	Indian states among 9,572 women aged 15–24 who were married for five or fewer years, we explore the scope of this demand, the extent to which it has been satisfied, and, using logistic regression analyses	Factors correlated with contraceptive use to delay first pregnancy among those report- ing demand . non educated women, Women who reported feeling pressure to prove their fertility were less likely to have practiced contraception	Determinant factor unmet need contraceptio n
Imasiku EN et al 2014	Zambia	To examine an important predictor of unmet need for contraception.	4343 ever-married women drawn from the 2007	unmet need contraception among women with secondary or higher	predictor of unmet need for contraceptio n.

			Zambia Demo- graphic and Health Survey. Descriptive analysis indicates that in all ethnic groups except the Barotse and Tonga, women aged 15–49 years were married at an average age below 18.	education was significantly lower (47% and 50%, respectively) compared with those with no education. Ethnicity was not a significant predictor of unmet need for con- traception. \	
Okigbo CC et al 2014	Liberia	To. examined the association between intimate partner violence and unmet need for modern contraception	Secondary analysis of data collected using the Priorities for Local AIDS Control Efforts (PLACE) method. Data from 499 sexually experienced young women (aged 14-25) in Montserrado County, Liberia were examined. Intimate partner violence (55.7%), unintended pregnancy (83.2%), and	Among covariates examined, only contraceptive at sexual debt associated with unmet need(OR0.27;95% CI0.14-0.52)	Determinant factor unmet need contraception

			abortion (45.3%) were pervasive in the study population. An estimated 35.9% of respondents had an unmet need for modern contraception.		
Motlaq ME et al 2013	Iran	To determine the prevalence of contraceptive use and unmet need for family planning in Iran and to explore the public-health implications.	cross-sectional study was conducted by interviewing 2120 married women aged 15–49 years. The sample population was enrolled in 6 large Iranian cities (Tehran, Mashhad, Tabriz, Isfahan, Shiraz, and Ahvaz) and 2 small cities (Zahedan and Kerman) from September 22 to December 20, 2011.	The main reasons given for unmet need for family planning were low perceived risk of pregnancy (41.8%) and family opposition (21.8%	Determinant factor unmet need contraception
Senguepta et al 2012	India	To find out determinant factor unmet need contraception	The data for this analysis has been taken from District Level	Determinant unmet need are age of women, educational level of the couples, sons	Determinant factor unmet need contraception

			Household Survey (DLHS) under the Reproductive and Child Health Programme. The survey was conducted during the period 2002-2024 in 593 districts of India	ever born, child loss, religion, SLI, households having electronic media and visit by FP workers are highly significant factors influencing the unmet need for spacing.	
Nishta NA et al 2012	Pakistan	To o explore family planning service providers' perceptions regarding use of different contraceptive methods and to identify factors that are influencing their use amongst currently married youth aged 18-24 years in slum areas of Karachi.	A Qualitative exploratory study design was adopted and a total of ten in-depth interviews were conducted with family planning service providers of the area. For content analysis coding of transcribed interviews was done and then categories were made and furthermore themes were derived.	side effects; myths and misconceptions; lack of proper knowledge about different contraceptives; unmet needs of contraceptives; socio-cultural and religious factors about different contraceptive methods and family planning service providers own biases against or for use of contraceptive methods amongst youth in the study area.	Influencing factor unmet need
Abdul-Rahman et al 2011	Ghana	To explore unmet need for modern contraception	Data from the 2003 and 2008 Ghana Demographi	Unmet need for modern contraception due to barriers	Determinant factor unmet need

	c and Health Surveys to examine changes in contraceptive use among sexually active female adolescents (15-19 years old	such as limited access, cost and misconceptions about the effects of contraceptives, lack of knowledge, to the contraceptive method, to opposition by the respondent , religion,	contraception

The data was extracted using Microsoft Excel Spreadsheet, and Table 1 shows the data gathered from the study. As many as 26 studies from 22 countries were obtained, including the author's name, country, research objectives, method of data collection, main findings, and research focus.

Step 5: Compile, Summarize, and Report Results.

Each article identified the barriers adolescents and youth faced in accessing and using contraception from developing countries. The codes generated from these findings were entered into the codebook and then grouped into categories, ensuring no overlapping data. From the results of the categorization, it was known that there were obstacles at the individual, partner, household, and health service levels faced by adolescents and youth in accessing and using contraception.

3. RESULTS

From the 7 database sources, 3,597 studies were found, and 1320 studies were obtained after duplication separation. From the sorted papers, 212 articles were selected because they met the eligibility criteria, and further only 26 articles met the inclusion criteria.

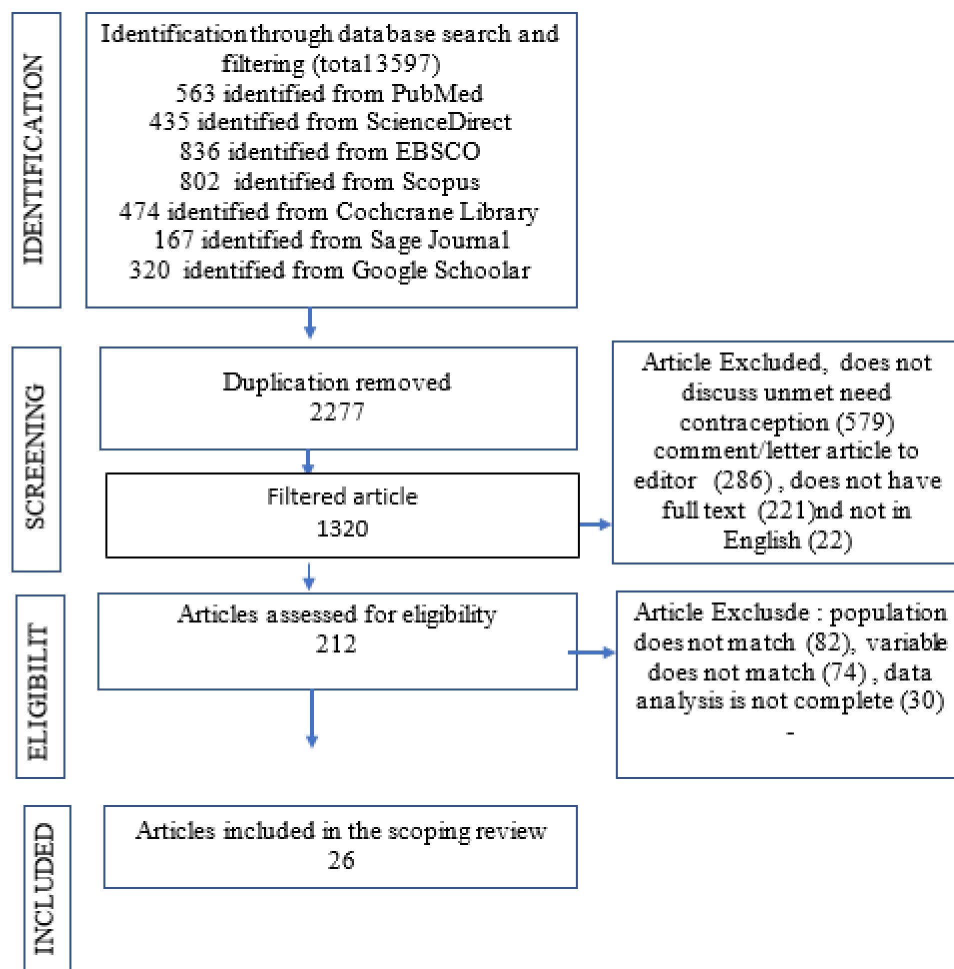

Figure 1. PRISMA-ScR FlowChart in article and result search

Figure 1 shows the results of a systematic search process. The composition of manuscripts that met the inclusion criteria was included 9 de-cross sectional studies, 12 Demographic and Health Surveys, and 5 qualitative studies. All these studies were published from January 2011 to December 2022. The studies in this review were mostly published by research groups from the African continent (n=11), followed by the Asian continent (n=13), the American continent (n=1), and the Australian continent (n=1). Overall information from each study can ben in table 1, which provides quantitative and qualitative data regarding the various determinants of the unmet ned for contraception in adolents and youth. Countries with the highest total unmet need for contraception are found in Nigeria[(10)] (59% in a facility-based survey from 2004) and Rwanda[11] (58% based on DHS data from 2005). As for the regional focus, the highest estimation of total unmet need contraception is found for the SSA and Asia regions with 74% and 62% respectively[12].

3.1 Individual Level

The age factor analyzed in this study was included those from Cambodia[(18)], Uganda[(37)], Guinea[(34)], Mexico[(17)], Ethiopia[(6)], and India[(21)]. Age was a significant derminant of the incidence of unmet need contraception in adolescents and youth of developing countries. Age

was negatively related to the unmet need for contraception, indicating that the older a woman's unmet need for contraception decreases. Studies from Cambodia(18) and Uganda(37) revealed that the relationship between adolescent age and the incidence of unmet needs for contraception changed during the reproductive age from younger to older reproductive years. The woman's age also influences other determinants of unmet needs, such as discussions about contraception. Older adolescents in India(23) and Mexico(17) we more involved in discussions about contraceptive use with their partners than their younger counterparts.

Nine studies examined the level of education of adolescents and youth as a significant determinant of unmet need for contraception, namely 3 from India(21), Nigeria(10), Turkey(28), Mexico(17), Ethiopia(6), Zambia(16), and Mexico(17). Country studied like Indonesia[25] and Cambodia[18] revealed that higher education levels were associated with the increase of unmeit needs. Studies from India showed that partner education was associated with a decrease in total unmet needs, in which the higher the partner's education led to the lower the risk of unmet needs.

The role of adolescent knowledge about contraception was examined in eight studies, namely those studies in Nigeria(10), Nepal(33), Indonesia(14), Bangladesh(7), Iran(26), Pakistan(31), and India(23,32) with 2 studies. Adolescents' knowledge of contraception is negatively related to unmet needs for contraception. Six studies examined the role of religious belief in the occurrence of an unmet need for contraception. Research in Pakistan(31) showed that Muslim belief is strongly associated with an increase in the unmet need for contraception when compared to Hinduism. Research in Catholic Ghana(22) has a relationship with a decrease in unmet need for contraception when compared to other religious beliefs(14).

Five studies examined adolescent authority to use contraception, namely in Indonesia(14), Cambodia(18), Bangladesh(7), Ethiopia(6), and Iran(26). The results showed that a patriarchal system in which men are the sole decision-makers and women are considered as the property of men will reduce the authority of young women in contraception use.

3.2 Partner level

A study from India(23) on the role of partner education showed a negative relationship with the incidence of unmet need contraception. This study showed that male adolescents have limited knowledge of modern contraceptive methods and it felt that family planning programs tend to target mainly female adolescents. Studies from Cameroon(19) on partner refusal to use contraception contributed as much as 38% to the occurrence of unmet needs. Couples' active discussion of contraception was a significant determinant. Active communication between male and female adolescents about the decision to use contraception will reduce the incidence of unmet needs. Studies in Liberia(13) showed that sexual violence by sexual partners causes an increase in the incidence of unmet needs.

3.3 Household Level

Low socioeconomic status examined in 6 studies in Nigeria(10), Cambodia(18), India(21), Turkey(28), Pakistan(31), and Ghana(22) showed a negative relationship that a low socioeconomic status increased unmet needs, this is because women from low socioeconomic status are very likely to have a lower level of education. Rural residence was examined in seven studies, namely Indonesia(14), Nigeria(10), Uganda(37), India(35), Guinea(34), Mexico(17), and Bangladesh[7] with socioeconomic results having a negative relationship with the incidence of unmet needs. Studies from Myanmar[2](9) showed that there is a positive relationship between rural residence and unmet needs. Urban women have a much higher unmet need than rural women (22.6% versus 16.6%). Norms and stigma affect unmet needs, which can be seen in 3 studies, namely

Indonesia[25], Nepal[33], and Rwanda[11]. Indonesia has a stigma that having many children will grant a lot of fortune so it will increase the incidence of unmet needs. Rwanda has a stigma of premarital sex which causes barriers to adolescent access to contraceptive services.

3.4 Health Services Level

The problem of unmet need for contraception at the health service level includes access to contraceptive information, access to contraceptive services, and the availability of contraceptives[24]. Ten studies from India totaling 3 studies, Rwanda[11], Malawi[30], Nigeria[10], Nepal[33], Bangladesh Nepal[7], Iran[26], and Pakistan[31] examined access to contraceptive information in adolescents, the results showed a negative relationship, namely poor access to contraceptive information increases unmet need. Research in Bangladesh[7] showed that the habit of reading about contraception in newspapers/magazines has a negative relationship with the incidence of unmet needs. Studies in India showed that households with electronic media and visits by family planning officers are significant factors preventing unmet need contraception

Health service factors such as staff friendliness towards clients, quality of service, and costs affect contraceptive use in adolescents[36]. There are 8 studies from Rwanda[11], Malawi[30], Mali[15], Nepal[33], Bangladesh[7], India[32], Kenya[20], and Pakistan[31] examining the effect of poor contraceptive health services on high unmet needs with the result having a negative relationship. Two studies from Bangladesh[7] and India[32] showed that visiting contraceptive service personnel has the effect of reducing unmet needs. Studies from Rwanda[11] showed that contraceptive staff often highlight the side effects of using contraceptives and offer a limited choice of contraceptive methods. A study from Malawi[30] reported that contraceptive service workers treat adolescents as a homogeneous group and ignore the needs of unmarried nulliparas. While a study in Mali[15] found that the assistance of contraceptive service workers in choosing contraception would significantly reduce unmet needs. A study in Nepal[33] reported that contraceptive staff was not youth-friendly and their services were not evenly distributed. Studies in Pakistan[31] showed that family planning officers provide less optimal services to adolescents than adults. Studies in Kenya[20] showed that having community health volunteers increases access to contraceptive services and reduces unmet needs.

The problem with providing contraceptives is meeting the quantity and quality of contraceptives, contraceptive information materials, and providing adequate competence among service workers[12]. Four studies from Rwanda[11], Mexico[17], Pakistan[31], and Ghana[22] showed that with the availability of contraceptives, there will be a decrease in unmet needs with significant research results. Studies in Mexico[17] show that adolescents who have full access to public services are significantly less likely to experience unmet needs.

4. DISCUSSION

Our review of 26 studies on the unmet need for contraception in adolescents and youth covering several developing countries on the continents of Africa, Asia, Australia, and America provides evidence of a high incidence of unmet need for contraception in adolescents and youth. This present review were able to detect similarities in the causative factors that influence the high incidence of unmet need for contraception among adolescents and youth. Teenagers experience many of the same obstacles as adults, but some things are unique to teenagers[1]. This present review revealed that adolescents and youth in younger developing countries are lacking of basic knowledge of reproductive physiology and contraceptive methods. This will hinder the acceptance of modern contraception and sexual autonomy.

Religious belief systems play a fairly central role for most adolescents and youth in developing countries because religious leaders tend to take positions that are often hesitant or even restrictive towards modern contraception[27]. There are various views on contraception from religions. The first is Islam which forbids vasectomy and tubectomy type of contraception because they are permanent. Nevertheless, Islam allows the use of other contraception. The Catholic religion only allows natural contraception or abstinence, while different types of contraception are not allowed. Protestant Christianity views family welfare as placed and embodied in fundamental understanding according to God's will and does not forbid his people to use contraception. According to Buddhism, contraception must be implemented because birth control creates family welfare. Contraception is justified in Buddhism. Buddha's followers can choose the birth control method suitable for each of them. Meanwhile, Contraception in Hinduism is permissible because family planning can limit the number of children, which is often correlated to prosperity. Religion has a significant role in the use of contraceptives, where religion has recommendations for what is allowed and what is not[27].

When adolescents and youth are encouraged to use contraception, they are anchored firmly in traditional religious and cultural expectations regarding family, sexuality, and fertility[2]. Contraceptive staff must not associate stereotyped religious, social, and cultural characteristics with adolescents who consult about contraception. Contraceptive staff must understand that different religions can influence decision-making about contraception in adolescent couples[3]. Contraceptive staff must realize that every teenager is unique. The values a teenager adopted may not match their religion or cultural norms even though they are from the same culture[27].

Education and employment status of adolescents and youth were also identified as additional important factors influencing the unmet need contraception[4]. Available evidence suggested that independent employment and income increase adolescent girls' autonomy by reducing gender inequality and improving financial decision-making within the household[5].

The unmet need for contraception in adolescents needs to be understood on a more individual basis and handled in a different way[4]. Access to contraceptive information, access to contraceptive services, and the availability of contraceptives influence the incidence of unmet needs. Contraceptive information problems for adolescents include a poor understanding of how contraceptives work and how to use them correctly[4]. Adolescents have misconceptions about the short- and long-term side effects of contraceptives on their health and their fertility[24]. Health workers were unfriendly and refused to provide information on contraceptive services to unmarried youth because they did not consent to premarital sexual activity. Contraceptives are not available to adults or adolescents and laws or policies prevent the provision of contraceptives to unmarried youth under a certain age.

LIMITATIONS

This research has a few limitations. The articles reviewed were only in English. Comparing different populations and study methodologies, each one by one, can not be done. Teenagers aged 20-24 years have different contraceptive needs from those aged 10-19, which can lead to bias.

CONCLUSION

Adolescents and youth in developing countries faced several barriers to get access into contraception and using it correctly and consistently. These barriers were shown at four levels, namely individuals, couples, households, and health services. At the individual and couple levels, it seemed necessary to prepare for a mature age of marriage, increasing access to

education, and a culture of democratic decision-making with spouses is a fundamental solution. Household factors include an economic status that can meet basic needs and prevent unemployment, religious factors, namely changing the way of thinking of religious experts regarding better contraception and equal distribution of access to infrastructure between villages and cities is important. The level of health services included information about contraception for adolescents that is fulfilled, contraception services for adolescents that are friendly and not differentiated from adults, and the availability of good contraceptives.

REFERENCES

1. Worku AG, Tessema GA, Zeleke AA. Trends of modern contraceptive use among young married women based on the 2000, 2005, and 2011 Ethiopian demographic and health surveys: a multivariate decomposition analysis. PloS one. 2015 Jan 30;10(1):e0116525. https://doi.org/10.1371/journal.pone.0116525.g002
2. Islam AZ, Mostofa MG, Islam MA. Factors affecting unmet need for contraception among currently married fecund young women in Bangladesh. The European Journal of Contraception & Reproductive Health Care. 2016 Nov 1;21(6):443-8. https://doi.org/10.1080/13625187.2016.1234034
3. Okigbo CC. Factors associated with unmet need for modern contraception in post-conflict Liberia. African journal of reproductive health. 2014 Jun 1;18(2):58-67.
4. Wemakor A, Garti H, Saeed N, Asumadu O, Anyoka B. Prevalence and determinants of unmet need for contraception in North Gonja District, Ghana. BMC women's health. 2020 Dec;20(1):1-9. https://doi.org/10.1186/s12905-020-01077-4
5. Nisak BA. Determinants of unmet needs in married women in Indonesia (Indonesian Dhs Analysis 2017). J. Biometrika dan Kependud. 2021 Jul;10(1):1. https://doi.org/10.20473/jbk.v10i1.2021.1-10
6. Ameyaw EK, Seidu AA, Ahinkorah BO. Women’s healthcare decision-making and unmet need for contraception in Mali. Reproductive Health. 2022 Aug 20;19(1):183. https://doi.org/10.1186/s12978-022-01484-w
7. Imasiku EN, Odimegwu CO, Adedini SA, Ononokpono DN. Variations in unmet need for contraception in Zambia: does ethnicity play a role?. Journal of biosocial science. 2014 May;46(3):294-315. https://doi.org/10.1017/S0021932013000357
8. Arksey H, O'Malley L. Scoping studies: towards a methodological framework. Int J Soc Res Method 2005;8:19–32. https://doi.org/10.1080/1364557032000119616
9. Moher D, Liberati A, Tetzlaff J, et al. Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. Plos Med 2009;7:e1000097. https://doi.org/10.1371/journal.pmed.1000097
10. Juarez F, Gayet C, Mejia-Pailles G. Factors associated with unmet need for contraception in Mexico: evidence from the National Survey of Demographic Dynamics 2014. BMC public health. 2018 Dec;18:1-8. https://doi.org/10.1186/s12889-018-5439-0
11. Rizvi F, Williams J, Bowe S, Hoban E. Factors influencing unmet need for contraception amongst adolescent girls and women in Cambodia. PeerJ. 2020 Oct 7;8:e10065. https://doi.org/10.7717/peerj.10065
12. Fouelifack FY, Mengue CC, Ofeh MA, Fouelifa LD, Fouedjio JH. Unmet Needs for Family Planning among Adolescent Girls Giving Birth in Three Teaching Hospitals in Yaoundé. Open Journal of Obstetrics and Gynecology. 2022 Aug 2;12(8):849-62. https://doi.org/10.4236/ojog.2022.128072
13. Ormel H, Oele G, Kok M, Oruko H, Oluoch B, Smet E, Indalo D. Reducing unmet need for contraceptive services among youth in Homabay and Narok counties, Kenya: the role

of community health volunteers–a qualitative study. BMC Health Services Research. 2021 Dec;21(1):1-0. https://doi.org/10.1186/s12913-021-06363-x

14. Sharma H, Singh SK, Srivastava S. Spatial heterogeneity and major correlates of Unmet Need of family planning among young married women aged 15-24 in India: An Exploratory Study. Sage Open. 2021 Jun;11(2):21582440211024615. https://doi.org/10.1177/21582440211024615
15. Smith J. Improving adolescent access to contraception in sub-Saharan Africa: a review of the evidence. African Journal of Reproductive Health. 2020 May 7;24(1):152-64. https://doi.org/10.29063/ajrh2020/v24i1.16
16. Deitch J, Stark L. Adolescent demand for contraception and family planning services in low-and middle-income countries: A systematic review. Global public health. 2019 Sep 2;14(9):1316-34. https://doi.org/10.1080/17441692.2019.1583264
17. Sekine K, Carandang RR, Ong KI, Tamang A, Jimba M. Identifying the causal effect of child marriage on unmet needs for modern contraception and unintended pregnancy in Nepal: a cross-sectional study using propensity score matching. BMJ open. 2021 Apr 1;11(4):e043532. https://doi.org/10.1136/bmjopen-2020-043532
18. Grubb LK, Alderman EM, Chung RJ, Lee J, Powers ME, Rahmandar MH, Upadhya KK, Wallace SB. Barrier protection use by adolescents during sexual activity. Pediatrics. 2020 Aug 1;146(2). https://doi.org/10.1542/peds.2020-007245
19. Abdul-Rahman L, Marrone G, Johansson A. Trends in contraceptive use among female adolescents in Ghana. African Journal of Reproductive Health. 2011;15(2).
20. Singh I, Shukla A, Thulaseedharan JV, Singh G. Contraception for married adolescents (15–19 years) in India: insights from the National Family Health Survey-4 (NFHS-4). Reproductive Health. 2021 Dec;18:1-0. https://doi.org/10.1186/s12978-021-01310-9
21. Mutua MK, Wado YD, Malata M, Kabiru CW, Akwara E, Melesse DY, Fall NA, Coll CV, Faye C, Barros AJ. Wealth-related inequalities in demand for family planning satisfied among married and unmarried adolescent girls and young women in sub-Saharan Africa. Reproductive Health. 2021 Jun;18(1):1-3. https://doi.org/10.1186/s12978-021-01076-0
22. Gayatri M, Fajarningtiyas DN. Unmet Need for Contraception Among Young Women: Evidence From Indonesia. Journal of Population and Social Studies [JPSS]. 2023;31:170-85. https://doi.org/10.25133/JPSSv312023.010
23. Murphy MK, Stoffel C, Nolan M, Haider S. Interdependent barriers to providing adolescents with long-acting reversible contraception: qualitative insights from providers. Journal of Pediatric and Adolescent Gynecology. 2016 Oct 1;29(5):436-42. https://doi.org/10.1016/j.jpag.2016.01.125
24. Motlaq ME, Eslami M, Yazdanpanah M, Nakhaee N. Contraceptive use and unmet need for family planning in Iran. International Journal of Gynecology & Obstetrics. 2013 May 1;121(2):157-6 https://doi.org/10.1016/j.ijgo.2012.11.024
25. Srikanthan A, Reid RL. Religious and cultural influences on contraception. Journal of obstetrics and gynaecology Canada. 2008 Feb 1;30(2):129-37.
26. Wai MM, Bjertness E, Stigum H, Htay TT, Liabsuetrakul T, Moe Myint AN, Sundby J. Unmet need for family planning among urban and rural married women in Yangon region, Myanmar—a cross-sectional study. International journal of environmental research and public health. 2019 Oct;16(19):3742. https://doi.org/10.3390/ijerph16193742
27. Bhushan NL, Phanga T, Maseko B, Vansia D, Kamtsendero L, Gichane MW, Maman S, Pettifor AE, Rosenberg NE. Contraceptive conversations among adolescent girls and young women and their partners, peers, and older female family members in Lilongwe,

Malawi: a qualitative analysis. Studies in Family Planning. 2021 Dec;52(4):397-413. https://doi.org/10.1111/sifp.12174

28. Nishtar NA, Sami N, Alim S, Pradhan N. Determinants of contraceptives use amongst youth: an exploratory study with family planning service providers in Karachi Pakistan. Global journal of health science. 2013 May;5(3):1. https://doi.org/10.5539/gjhs.v5n3p1
29. Cohen N, Mendy FT, Wesson J, Protti A, Cissé C, Gueye EB, Trupe L, Floreak R, Guichon D, Lorenzana K, Buttenheim A. Behavioral barriers to the use of modern methods of contraception among unmarried youth and adolescents in eastern Senegal: a qualitative study. BMC Public Health. 2020 Dec;20:1-9. https://doi.org/10.1186/s12889-020-091314
30. Sengupta R, Das A. Contraceptive practices and unmet need among young currently married rural women in empowered action group (EAG) states of India.
31. Duncan R, Anderson L, Pickering N. Closing the gap between need and uptake: a case for proactive contraception provision to adolescents. Asian Bioethics Review. 2019 Mar 31;11:95-109. https://doi.org/10.1007/s41649-019-00082-6
32. Shrestha S, Wærdahl R. Girls' access to adolescent friendly sexual and reproductive health services in Kaski, Nepal. Asia & the Pacific Policy Studies. 2020 Sep;7(3):278-92. https://doi.org/10.1007/s41649-019-00082-6
33. Sidibé S, Delamou A, Camara BS, Dioubaté N, Manet H, El Ayadi AM, Benova L, Kouanda S. Trends in contraceptive use, unmet need and associated factors of modern contraceptive use among urban adolescents and young women in Guinea. BMC Public Health. 2020 Dec;20(1):1-0. https://doi.org/10.1186/s12889-020-09957-y
34. Jejeebhoy SJ, Santhya KG, Zavier AF. Demand for contraception to delay first pregnancy among young married women in India. Studies in family planning. 2014 Jun;45(2):183-201.https://doi.org/10.1111/j.1728-4465.2014.00384.x
35. Chandra-Mouli V, McCarraher DR, Phillips SJ, Williamson NE, Hainsworth G. Contraception for adolescents in low and middle income countries: needs, barriers, and access. Reproductive health. 2014 Dec;11:1-8. https://doi.org/10.1186/1742-4755-11-1
36. Sserwanja Q, Musaba MW, Mukunya D. Prevalence and factors associated with modern contraceptives utilization among female adolescents in Uganda. BMC women's health. 2021 Dec;21:1-7. https://doi.org/10.1186/s12905-021-01206-7