# **Systematic Review**

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# Sexual violence as a factor contributing to adolescent pregnancy in lower middle-income countries: a systematic review

# Shivam Kumar Jha<sup>1</sup>, Rashid Akhtar<sup>2</sup>, Salman Khan<sup>3</sup>\*

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## \*Correspondence: Salman Khan.

E-mail: salmantomar7860@gmail.com

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# **ABSTRACT**

Adolescent pregnancy, particularly unintended, is influenced by multiple factors at individual, community, and societal levels. According to the WHO, 95% of adolescent pregnancies occur in low- and middle-income countries, with a majority being unintended. Sexual violence is one of the keys, yet underexplored, contributors to such pregnancies. This systematic review aimed to explore the association between sexual violence and adolescent pregnancy in lower-middle-income countries, as classified by the World Bank. The literature search was conducted using the terms "Adolescent Pregnancy" AND "Sexual Violence" across PubMed and Google Scholar. Out of 1001 articles identified, five peer-reviewed studies met the inclusion criteria and were analyzed. Findings revealed that most first pregnancies among adolescents were unintended and often linked to sexual violence, including forced sex, coercion, or rape. The COVID-19 pandemic, with its related lockdowns and school closures, has further increased adolescent girls' vulnerability by deepening poverty and limiting access to sexual and reproductive health (SRH) services. All studies emphasized the urgent need for poverty reduction strategies, improved access to SRH services, and comprehensive sexuality education. Empowering adolescent girls with knowledge and resources to protect themselves from sexual abuse and coercion is critical. Policymakers must prioritize interventions that address gender inequalities and strengthen protection mechanisms against sexual violence to prevent unintended adolescent pregnancies.

Keywords: Systematic review, Sexual violence, Adolescent pregnancy, Lower middle-income countries

## INTRODUCTION

Adolescence is a life phase between childhood and adulthood from ages 10-19 characterized by dynamic brain development and formative biological (physical and cognitive) and social transition during which the future patterns of adult health are established. La Currently, more than one-sixth of global population are adolescents and 90% of them live in low and middle- income countries. Existing social and economic inequalities in these

countries results in adverse health outcomes among adolescent girls more than boys.<sup>5,6</sup> Early and unintended pregnancy is one such adverse health outcome among adolescent girls occurring as a result of multiple factors at the individual, community and societal levels.<sup>7</sup>

According to WHO, 95% of all adolescent pregnancies occur in low and middle-income countries and at least 10 million of those are unintended.<sup>8,9</sup> Globally, death among older adolescent girls (15-19 years) is mostly due to complications during pregnancy and childbirth.<sup>9</sup> The

<sup>&</sup>lt;sup>1</sup>Amity Institute of Public Health, Amity University, Noida, UP, India

<sup>&</sup>lt;sup>2</sup>Department of Public Health, School of Healthcare and Allied Science, GD Goenka University, Gurugram, Haryana, India

<sup>&</sup>lt;sup>3</sup>Department of Public Health, Faculty of Science, Maulana Azad University, Jodhpur, Rajasthan, India

adolescent-specific fertility rate varies considerably across continents, within continents and even within countries and is highest in eastern Asia and western Africa resulting in overall non-reduction of actual number of childbirths to adolescent and therefore the huge public health problem persists and needs attention.<sup>9</sup>

Factors that contribute to teenage pregnancy are multiple and varies based on the region. <sup>10</sup> In lower middle-income countries (as classified by the World Bank): existing poverty child marriage lack of sexual education early sexual debut peer pressure barriers to SRH services and contraception gender inequality and sexual violence are some common factors that results in adolescent pregnancy. <sup>11-17,19-32</sup>

Globally 1 in 3 women experience sexual violence in their lifetime mostly by an intimate partner and 7% by a non-partner.<sup>33,34</sup> Sexual violence is defined as any sexual act or an attempt to obtain a sexual act or an unwanted sexual comment directed against a person's sexuality using coercion, by any person regardless of their relationship to the victim, in any setting, including but not limited to home and work.<sup>33</sup> Sexual violence includes variety of acts and forms depending upon the circumstances. It includes rape within marriage or by stranger, unwanted forced sex, sexual harassment, forced marriage, forced abortion, sexual abuse and denial of right to take sexual and contraceptive decisions.<sup>33</sup> 15% of sexually experienced adolescents have reported their first sexual experience to be forced or coerced.<sup>35</sup> Sexual

violence is more prevalent in young adolescent girls involved with older men as their control to take decisions regarding contraceptives use is compromised.<sup>34</sup>

Sexual violence is often reported as a factor to unintended adolescent pregnancy but specific studies of it as a factor is scarce and whatever present is very dispersed and often mixed with other factors of adolescent pregnancy. A comprehensive review literature is lacking especially for lower middle-income countries. Association between gender-based violence (including intimate partner violence and non-partner sexual violence; dating violence) and adolescent pregnancy is extensively studied in upper middle-income countries and high-income countries as most of these cases in low and lower middleincome countries go unreported. With rising cases of sexual violence and adolescent pregnancy amidst COVID-19, it becomes much more important to comprehensively review and present the association between the two. 36,37

The objective of this study was to systematically review sexual violence as a factor contributing to adolescent pregnancy in lower middle-income countries. Furthermore, this study aims to present and compare severity of other factors to adolescent pregnancy with sexual violence. This unique study also tries to outline the underlying root cause of adolescent pregnancy, report the interventions suggested by the studies included in this review and describe the existing knowledge gaps for further research.

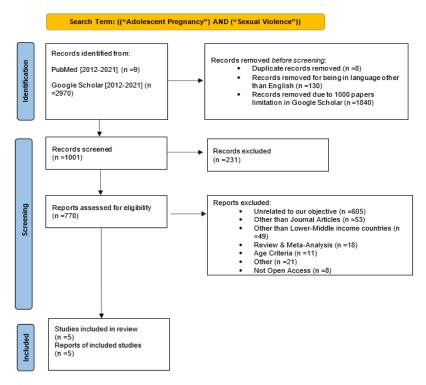


Figure 1: PRISMA flow diagram of study selection process. Initially 2979 studies were identified. The review process resulted in 5 studies included in this systematic review.

#### **METHODS**

This systematic literature review was performed in accordance with the PRISMA guidelines.<sup>38</sup> Our literature review focused on the adolescent pregnancy and the role of sexual violence in contributing to the adolescent pregnancy. Our first step was to search for relevant literature articles related to the adolescent pregnancy and sexual violence as a contributing factor to adolescent pregnancy. PubMed and Google Scholar were used for the search. The search term "Adolescent Pregnancy" AND "Sexual Violence" was used to identify relevant papers. The search was performed on 16 July 2021 with date restrictions (2012-2021) imposed. All identified papers (after language restriction: only English) were imported to excel sheet (manually by copy and pasting the title links). Before manual screening, 8 duplicates were removed that had exact same titles with authors. Based on our exclusion and inclusion criteria (Table No.1), 5 studies were included in this systematic review out of 1001 identified papers. Details of study selection process is mentioned in the PRISMA flow diagram (Figure 1).

Table 1: Inclusion and exclusion criteria.

Inclusion criteria	Exclusion criteria		
Year: 2012-2021	Unrelated to Adolescent		
	pregnancy		
	Reports, Editorials,		
Language: English	Conference proceedings,		
	books, Thesis		
Geographic area: lower			
middle- income countries	systematic review & meta-analysis		
(based on the classification			
of the World Bank)	·		
Related to adolescent	Unrelated to our objective		
pregnancy	Officiated to our objective		
Study population: study			
group includes adolescents	Duplicates and Pre-prints		
aged 10-19			
Qualitative, quantitative	Country Of Origin (All		
or mixed method	except LMIC)		
Access: open access			

#### **RESULTS**

The search was performed on 16 July 2021 with date restrictions (2012-2021) imposed. A total of 9 papers from PubMed and 2970 search results from google scholar were identified. Out of 2970 search results, first 1000 papers were included. 8 duplicate studies were removed; 130 non-English papers were removed. Furthermore, non-journal articles, books, reports, conference proceedings, reviews and meta-analysis and others were also removed. Papers from countries other than lower middle-income countries (Table 3) were excluded. Details of study selection process is mentioned in the PRISMA flow diagram (Figure 1).

This review finalized 5 studies whose results are presented in Table 2. Out of the 5 included studies, 2 are from Kenya and 1 each from Philippines, Haiti and Sri Lanka.

One Kenyan qualitative study on 40 respondents published in the year 2021 found that 12.5% of the cases of adolescent pregnancy were attributed to sexual violence mostly in form of rape.<sup>39</sup> In 2021 published qualitative study conducted on 24 adolescent women aged 15-19 years in Philippines, 3 out of 10 young mothers reported unintended pregnancy to be directly or indirectly linked to sexual violence.<sup>40</sup> First sex was reported to be forced in 3 participants and 2 young mothers reported of being raped. A qualitative study conducted in Haiti 41 reported 94% teens being forced to give proof of virginity and if refused were raped. It also reported non-partner sexual violence as a direct contributing factor to unintended pregnancy among adolescents.

Another 2020 Kenyan study included 105 male and female adolescents aged 15-19 years. Sexual violence was found to be a major contributing factor to adolescent pregnancy other than poverty. This study also found sexual violence to be associated with alcohol and drug abuse resulting in unprotected sexual intercourse that finally leads to adolescent pregnancy.

Table 2: Results of 5 studies included in the review.

Title	Country	Year	Study design	Sample characteristics	Findings	Limitations	Suggestions
Causes of teenage pregnancy in Kakamega Central Sub- County, Kenya <sup>39</sup>	Kenya	2021	Qualitative Purposive sampling	40 respondents Out of which, twenty-five= expectants and teen mothers	12.5% of cases of adolescent pregnancy were attributed to sexual violence (rape)	No limitations mentioned	Peer Pressure awareness Sexual Education in both schools and homes
Early union, 'disgrasya',	Philippines	2021	Semi- structured	24 adolescent women (aged	In 3 out of 10 young	Non- Random	Address Gender

Continued.

Title	Country	Year	Study design	Sample characteristics	Findings	Limitations	Suggestions
and prior adversity and disadvantage: pathways to Adolescent pregnancy among Filipino youth <sup>40</sup>			Qualitative non- random sampling	15– 19 who had experienced pregnancy or were pregnant at the time of data collection, as well as seven young men (aged 15–24) who had an adolescent partner/girlfriend (aged 15–19) who was pregnant at the time of data collection or had experienced pregnancy in the last few years.	mothers, unintended pregnancy was directly or Indirectly linked to sexual violence 1st sex was forced in 3 participants 2 young mothers reported of being raped	Sampling Small number of participants Recall Bias may be present Does not capture experiences of young mothers who opted to abort their pregnancy	inequalities and poverty that makes young girls vulnerable to sexual violence and leave them with NO Sexual choices
"Give me proof": A covert but coercive form of non-partner sexual violence contributing to teen pregnancy in Haiti and opportunities for biopsychosocial intervention <sup>41</sup>	Haiti	2020	Qualitative purposive sampling	Key stakeholders=23 Pregnant teens: 13–17-year-olds (n=8) 18-19-year-olds (n=8) and health providers (18 or older, n=7)	94% admitted to being forced to give proof of virginity & if refused were raped. Non-partner sexual violence (NPSV) directly contributes to unintended pregnancy	Small exploratory study Findings are NOT generalized	To implement WHO Guidelines on adolescent sexual and reproductive health and rights in user friendly format Economic self-sufficiency to reduce their socioeconomic vulnerability  To educate adolescent girls on their rights to safely refuse sex
Adolescents' narratives of coping with unintended pregnancy in Nairobi's informal settlements <sup>6</sup>	Kenya	2020	Formative study descriptive research design and qualitative, case study approach	105 male and female adolescents aged 15–19 years	Adolescents attributed unintended pregnancy to: Poverty Sexual Violence Inconsistent contraceptive	Study is limited to 2 informal settlements Respondents recruited for study might not have experienced unintended	Enhance access to health information and services Programs to support adolescent mothers and adolescent

Continued.

Title	Country	Year	Study design	Sample characteristics	Findings	Limitations	Suggestions
					use Sexual Violence was found to be associated with alcohol and drug abuse resulting in unprotected sexual intercourse	pregnancy	girls are required
Vulnerability of adolescents in their sexual Behaviour <sup>42</sup>	Sri Lanka	2017	Cross- sectional exploratory study	- Pregnant adolescent = 450 Partner of pregnant adolescent = 150 School adolescents = 2020	1% reported forced sex 23% reported non-consensual sex Underage pregnant adolescent had three times higher odds of having nonconsensual first intercourse compared to older group and three times higher chances of unintended pregnancy	No limitations mentioned	Appropriate policy formulation in Empowering adolescents against sexual abuse and violence

Table 3: List of lower middle-income countries according to the World Bank group.

Africa	Asia	Oceania	North America	South America	Europe
Algeria	Bangladesh	Kiribati	Belize	Bolivia	Ukraine
Angola	Bhutan	Micronesia	El Salvador		
Benin	Cambodia	Papa New Guinea	Haiti		
Cabo Verde	India	Samoa	Honduras		
Cameroon	Indonesia	Solomon Islands	Nicaragua		
Comoros	Iran	Vanuatu			
Congo	Kyrgyz Rep.				
Cote D'Ivoire	Lao PDR				
Djibouti	Mongolia				
Egypt	Myanmar				
Eswatini	Nepal				
Ghana	Pakistan				
Kenya	Philippines				
Lesotho	Sri Lanka				
Mauritania	Tajikistan				
Morocco	Timor-Leste				

Continued.

Africa	Asia	Oceania	North America	South America	Europe
Nigeria	Uzbekistan				
Sao Tome & Principe	Vietnam				
Senegal	West Bank & Gaza				
Tanzania					
Tunisia	•			·	
Zambia					
Zimbabwe					

In a cross-sectional exploratory study conducted in Sri Lanka on 450 pregnant adolescents and 2020 school adolescents, 1% reported forced sex and 23% reported non-consensual sex.<sup>42</sup> Underage pregnant adolescent reported three times higher odds of having non-consensual first intercourse compared to older group and three times higher chances of unintended pregnancy.

#### **DISCUSSION**

This review described the prevalence of adolescent pregnancy and the role of sexual violence in contributing to adolescent pregnancy in lower middle-income countries. The review found poverty and lack of knowledge about sexual and reproductive health and rights to be the most striking and common factor contributing to adolescent pregnancy apart from sexual violence.

The country-wise analysis of sexual violence as contributing factor to adolescent pregnancy is presented below. Africa is the world's youngest continent with almost 60% of its population below the age of 25.43 Overall pooled prevalence of adolescent pregnancy in Africa is reported to be 18.8%.44 During our review, no specific country data on association between adolescent pregnancy and sexual violence was found for Algeria, Angola, Benin and Cabo Verde. However, 2016 survey in Angola reported adolescent pregnancy to increase with age (2.9% for 15-year-old to 51.5% for 19-year-old) and more prevalent in rural area (72%) than urban area (28%).45 Some studies have reported that 10.69% of women in Benin are adolescent girls aged 15-19 years. 15.4% of adolescents and young people in Benin had their first sexual intercourse before 15 years of age and 48.7% before their 18th birthday with 30.2% being pregnant for the first time. 46 Cape Verde is a young country in Africa with 26.2% of young people aged 15-19 years being pregnant.<sup>47</sup> In Tanzania, 23% of total population are adolescents and 28% of women gave birth before 18 years. 48 A systematic literature review study done in urban slums in sub-Saharan Africa reported gender-based violence (GBV) among adolescents, intimate partner violence (IPV) and sexual violence being the most common form reported.<sup>11</sup> The main reason found was cultural belief of male being more powerful than women. Unintended pregnancy was one of the highlighted consequences of GBV among others reported. Ghana has one of the highest child marriage prevalence rates in the world with 12% girls aged 15-19 years being pregnant. 11,24 In a qualitative study conducted in suburb of Accra, Ghana, two out of ten participants reported of being sexually abused by the people in authority which resulted in pregnancy.<sup>24</sup> In the same study, rape was also reported to be a cause of pregnancy. A thesis reported that many adolescent girls in lower Manya Krobo municipality of Ghana fall victim to sexual abuse following which some become pregnant.<sup>15</sup> In the same study, one key informant reported that most of the sexual abuse are connected to very close relatives like stepfather, long distance uncles and family friends. In Kenya, 25% of the adults report having experienced some form of sexual violence before 18 years. 25 A qualitative study done in Kilifi County, Kenya, revealed the prevalence of sexual violence leading to adolescent pregnancy.<sup>25</sup> A thesis report also addresses the fact that pregnancy among 15-19 years in Kenya are significantly unintended and mainly due to sexual violence by peers, parents and other adults.<sup>26</sup> A meta-analysis study report of young sex workers aged 14-24 years in Mombasa, Kenya, found 24.8% of participants to experience sexual violence at least once by age 18.28 A study found unplanned pregnancy to be the most notable and well documented consequences of sexual victimization apart from poor pregnancy outcomes, sexually transmitted infections (STIs) and HIV infection.<sup>31</sup> A study that used the Zimbabwe Demographic and Health Survey (ZDHS) of 2005-2006 involving women aged 15-49 years reported 15.37% of sexual violence and 30.67% of unintended pregnancy. The study confirmed association between gender-based violence and unintended pregnancy through the bivariate and multivariate analyses. The findings show that women who have experienced gender-based violence in any form are 1.53 times more vulnerable to report unintended pregnancy.

More than 350 million adolescents live in South Asia and more than half of all adolescents globally live in Asia. 49 Adolescent birth rate in South-Asia varies from as low as 4-5% in Maldives, Myanmar and Sri Lanka to 21% in Nepal, 17.9% in India, 16.9% in Bangladesh, 13.3% in Bhutan, 10.8% in Indonesia and 9% in Timor-Leste. 50

Much study in these countries is done on the consequences of adolescent pregnancy and papers studying association between sexual violence and adolescent pregnancy is scarce.

### **CONCLUSION**

The available literature exploring association between sexual violence and adolescent pregnancy is scarce. However, the few that are present report existing association between sexual violence and adolescent pregnancy. In our review, we found direct or indirect association between sexual violence and adolescent pregnancy to be present. Hence policy makers must ensure safety for women and girls in society, schools and work spaces. The concern over poverty, barriers in seeking and providing sexual and reproductive health services and barriers to comprehensive sexuality education in schools must be addressed. The adolescents and youth must also be involved in policy making process and in program implementation related to sexual and reproductive health and rights.

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