Efforts to Deal with the Impact of Adolescent Pregnancy through a Holistic Approach: A Literature Review

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ABSTRACT

Teenage pregnancy, occurring at the age of 15-19 years, is a global public health problem with negative impacts for both mother and baby. The purpose of the study is to analyze the efforts that have been made in various countries in dealing with the impact of adolescent pregnancy to obtain strategies and recommendations that have the potential to create positive changes in handling the problem of adolescent pregnancy globally. This research method uses a literature review. The literature search process carried out in this literature review uses the database Scopus with a range of publication years 2019-2023. The search was conducted using several keywords "Teenage pregnancy" AND "impact". The findings of 10 journals show that teenage pregnancy has significant health and social impacts, including the risk of obstetric complications, high rates of maternal and infant mortality, and long-term consequences for mother and child. Factors such as low access to education, lack of knowledge about reproductive health, peer influence, and family problems trigger teenage pregnancy. The importance of a holistic approach involving collaboration between government, religious leaders, families, and educational institutions to prevent teenage pregnancy, increase knowledge of sexual education, and form positive, preventive attitudes needs to be done to reduce the risks and adverse effects associated with teenage pregnancy.

Keywords: teenage pregnancy; holistic approach; impact of teenage pregnancy

INTRODUCTION

Pregnancy is a natural development in which a woman nourishes and nurtures the fetus that grows in her womb for nine months. This process begins when the sperm fertilize the egg, and the fertilized egg attaches to the uterine lining, eventually forming an embryo (Novelia et al., 2024). Pregnant women may complain of experiencing discomfort that can be annoying such as nausea and vomiting (Hamidah et al., 2022). The pregnancy causes hormonal changes in women due to the increase in estrogen and progesterone hormones and the release of the placental hormone chorionic gonadotropin (HCG) (Azizah et al., 2022). Teenage pregnancy, occurring at the age of 15-19 years, is a global public health problem that harms both mother and baby. Incidence rates tend to be higher in developing countries (Deswinda et al., 2020; Indarti et al., 2020; Nurdiawan et al., 2021; Exarchos et al., 2022; Bitew et al., 2023). Teenage pregnancy is a complex social issue that is influenced by various factors such as education, environment, and cultural norms. (Exarchos et al., 2022).

The prevalence of teen pregnancy varies by country, especially in the Sub-Saharan region and South America, which have the highest rates of teenage pregnancy (Exarchos et al., 2022). In developed countries, the main rates of teenage pregnancy are observed in the United States, the United Kingdom, and Eastern European countries (Bitew et al., 2023). Factors such as immigration, refugee status, living in humanitarian aid settlements, low socioeconomic status, low literacy rates, limited education, and disrupted family structures contribute to teenage pregnancy (Deswinda et al., 2020). In Africa and sub-Saharan Africa, the overall prevalence of teenage pregnancy is 18.8% and 19.3% respectively (Indarti et al., 2020).

The prevalence of teenage pregnancy in Indonesia is quite high compared to other developing countries, with prevalence rates ranging from 0.6% to 15.4% (Deswinda et al., 2020). In a study conducted in Indonesia, the prevalence

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of teenage pregnancy was found to be 10.05% (Nurdiawan et al., 2021). Another study reported a prevalence rate of 11.40% among teenage pregnancies aged 12 to 19 years (Indarti et al., 2020). These findings suggest that teenage pregnancy is a significant health problem in Indonesia. Teenage pregnancy in Indonesia is associated with higher risks, such as eclampsia, premature birth, anaemia, postpartum haemorrhage, and low birth weight babies (Widyaningsih et al., 2021).

Teenage pregnancies face a range of maternal health challenges, including psychosocial challenges, physical violence, human rights violations, lack of legal and cultural protections, inadequate adolescent-friendly services in health facilities, and lack of birth readiness (Apolot et al., 2020; Lastinger et al., 2023) Poor knowledge of sexual and reproductive health has also been identified as a contributing factor (Munakampe et al., 2021). Low family economic status is associated with a higher risk of teenage pregnancy (Tiwari et al., 2022). Peer influence has also been identified as a factor that increases the likelihood of teenage pregnancy (Moshi and Tilisho, 2023).

Teenage pregnancy has significant negative consequences on the mental and somatic health of adolescents, especially girls. These consequences include an increased risk of mental health problems, somatic diseases, maternal and infant mortality and morbidity, eclampsia, postpartum hemorrhage, birth defects, newborn mortality, disability, and delayed growth and development (Sezgin and Punamäki, 2020; Anggreni, Notobroto and Soedirham, 2023; Yoosefi Lebni et al., 2023), exacerbated by poverty and limited access to maternal and child health care (Shukla et al., 2023). Teenage pregnancy and its impact on schools in rural Zambia is a significant problem. Research shows that adolescent girls in Zambia face barriers to accessing sexual and reproductive health services, leading to adverse consequences such as early pregnancy and school dropout (Munakampe et al., 2021).

Based on this background, globally it harms adolescent pregnancy, so research on handling the impact of pregnancy on adolescents is important to find out what efforts can be made to deal with the impact of pregnancy on adolescents through the literature review method. The literature review literature provides a comprehensive overview and analysis of research on a particular topic. It aims to identify and synthesize information from multiple sources (Widyaningsih et al., 2021), So this study aims to analyze the efforts made in various countries to deal with the impact of teenage pregnancy. By understanding the various approaches and policies implemented, this research can provide insights to form strategies and recommendations that can potentially create positive changes in addressing adolescent pregnancy problems globally.

METHOD

The literature search process carried out in this literature review uses the Scopus database with a range of published years 2019-2023. The search is done using several keywords in English. In a literature search use the keywords "Teenage pregnancy" AND "impact". The article search process begins with the identification of predetermined keywords. In the initial search stage, 3.581 articles were obtained that matched the keywords. The next stage is to conduct a screening with the year of publication by the research criteria. At the screening stage, 71 articles met the research criteria. After that, articles were filtered based on inclusion and exclusion criteria and obtained 37 suitable articles. The next step is to screen articles based on the title, obtaining 27 appropriate results. Furthermore, the screening of abstracts is carried out to focus on articles according to screening research. In this step, 27 articles fit the research criteria. Then, from 27 selected articles, a re-selection of research design, outcomes, and several other criteria that have been determined. Finally, 10 articles are determined that match the research criteria and can proceed to the analysis stage

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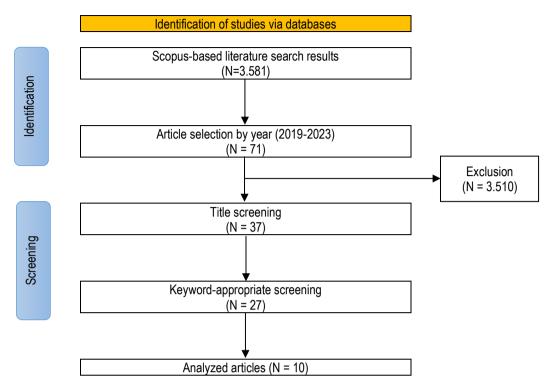


Figure 1. Flow Diagram of Analysis Literature

RESULT

The findings of the research results are described in Table 1 below.

Table 1. Review Journal Years 2019-2023

No.	Author and Journal Identity	Journal Titles	Objective	Population and Sample	Method	Summary of Results
1	Rini R et al. 2021.	Effects of Teenage Pregnancy	This study aimed to investigate	The study included all adolescent mothers under the age of 20	This study was a case-control study conducted at the	The incidence of teenage pregnancy in the study was found to be 2.9%. Adolescent mothers have much higher
	Journal of South Asian Federation of Obstetrics and Gynaecology	on Obstetric and Perinatal Outcomes at a Tertiary Health Institution in Goa	obstetric outcomes from adolescent mothers who gave birth at Goa Medical College.	who gave birth at Goa Medical College over one year. The control group consisted of an equal number of randomly selected adult mothers in the 20-29 age group.	Department of Obstetrics and Gynaecology at Goa Medical College. Maternal and perinatal outcomes of adolescent mothers were recorded and compared with adult mothers.	rates of obstetric complications such as preeclampsia, anaemia, intrauterine growth restriction, meconium-stained amniotic fluid, and preterm labour. Neonates born to adolescent mothers are at risk for complications such as low birth weight, prematurity, hypoglycemia, hyperbilirubinemia, and increased acceptance of neonatal intensive care units compared to those born to adult mothers.
2	Kozue Tabei 1, et al. 2021 Healthcare MDPI	Association between Teenage Pregnancy and Family Factors: An Analysis of the Philippine	This study aimed to investigate the relationship between teenage pregnancy and family	The study included all adolescent women aged 15-19 years (n = 5120) from the 2017 Philippine National Demographic and Health Survey.	The study used data from the 2017 Philippine National Demographic and Health Survey and used multivariable logistic regression to assess the association between pregnancies	Teenage pregnancy in the Philippines has the potential to increase health and social risks, including maternal death, childbirth complications, stunted delivery, stillbirth, preterm birth, and severe neonatal complications. The impact involves limited employment options, low educational attainment, and the risk of dropping out of school,

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		National Demographi c and Health Survey 2017	factors, particularly parental structure, in the Philippines.		Adolescents and family factors, after adjusting to potential confounders.	which can lead to financial hardship and poverty. Teenage pregnancy can also lead to physical impairment, infertility, mental trauma, and even death, as well as lifelong consequences such as decreased productivity and income. In the Philippines, adolescent fertility rates are high, and this study highlights the relationship between teenage pregnancy and family factors.
3	Diyan, M. et al. 2021. Rural and remote health	Adolescent pregnancy prevention in rural Indonesia: participatory action research.	This study aimed to identify factors associated with adolescent pregnancy in rural Indonesia and formulate intervention actions to reduce adolescent pregnancy rates.	This research was conducted in a rural area of Mesuji Regency, Lampung Province, Indonesia. The population of interest is adolescents in rural Indonesia who are at risk of teenage pregnancy. The sample included participants from focus group discussions (FGDs) and local collaborators involved in formulating community-based actions to reduce Teen Marriage and Pregnancy Rates.	Participatory action research (PAR) was used as a method for this study. The PAR method focuses on partnerships between researchers and research participants in a collaborative effort to address a specific problem. The study included six meetings, including four focus group discussions (FGDs), about factors contributing to teen pregnancy and for triangulation data.	Teenage pregnancy brings negative consequences such as school dropout, social isolation, poverty, high fertility with short birth intervals, and poor mental health. Determinants of adolescent pregnancy involve low uptake of reproductive health services, low educational attainment, juvenile delinquency, poverty, and social and cultural norms. Lack of knowledge about reproductive health and the ideal age for first pregnancy can lead to permissive attitudes towards early marriage and pregnancy among adolescents. Overall, adolescent pregnancy has significant health and social impacts, including increased maternal and infant mortality rates, educational and economic challenges, and poor reproductive health knowledge and practices.
4	Samikshya Poudel, et al, 2023. International journal of environment al research and public health	Adolescent Pregnancy in South Asia: A Pooled Analysis of Demographi c and Health Surveys	The study aimed to identify factors associated with teenage pregnancy across South Asia.	The study used the latest Demographic and Health Survey (DHS) data from six countries in South Asia: Afghanistan, Bangladesh, India, Maldives, Nepal, and Pakistan. The sample consisted of 20,828 nevermarried women aged 15-19 years.	The study used multivariable logistic regression analysis, informed by the World Health Organization's framework on social determinants of health, to examine factors associated with teenage pregnancy.	Teenage pregnancy can potentially lead to health risks such as low birth weight, prematurity, stillbirth, congenital anomalies, infant mortality syndrome, and neonatal health problems. In addition, adolescent mothers tend to experience psychological problems such as depression, anxiety, conduct disorders, and post-traumatic stress disorder. Children born to adolescent mothers may face health and social complexities, including lower cognitive stimulation, behavioural problems, lower academic performance, and an increased risk of dropping out of school.
5	Junita Indarti,et al. 2020 Hindawi Obstetrics and Gynecology Internationa	Teenage Pregnancy: Obstetric and Perinatal Outcome in a Tertiary Centre in Indonesia	The purpose of this study was to evaluate the obstetric and perinatal outcomes of adolescent pregnancy in the	The study involved pregnant women who delivered their babies at Dr Cipto Mangunkusumo Hospital in Jakarta, Indonesia in 2013. The population consists of two groups: the average age of	The study was conducted retrospectively, analyzing data from single pregnancies over one year in 2013.	Teenage pregnancy is linked to a higher risk of obstetric complications, including eclampsia, premature birth, anaemia during delivery, postpartum haemorrhage, and low birth weight. Factors such as poor antenatal care, low nutritional status, lack of paternal involvement, being single, and inadequate prenatal care contribute to an increased risk of adverse pregnancy



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			Indonesian population.	mothers (AMA), women (20-34 years) and adolescents (12- 19 years).		outcomes among adolescents.
6	Windi Nurdiawan, et.al. 2021 Scientific Foundation SPIROSKI, Skopje, Republic of Macedonia	Comparison of Maternal and Neonatal Outcomes in Teenage and Reproductive Age Pregnancy at Tertiary Hospital in West Java, Indonesia	This study aimed to compare maternal and neonatal outcomes between adolescent and reproductive pregnancies in a tertiary hospital in West Java, Indonesia.	The study involved pregnant women who gave birth at Hasan Sadikin General Hospital in West Java, Indonesia. The total number of patients recruited for the study was 3810. Among them, 522 were adolescent mothers (15-20 years) and 3288 were mothers of reproductive age (20-35 years).	Cross-sectional research conducted at Hasan Sadikin General Hospital	Teenage pregnancy is associated with a higher risk for conditions such as eclampsia, anaemia, premature birth, and low birth weight babies compared to pregnancies of reproductive age. Adolescent mothers also experience a higher incidence of complications, including postpartum endometritis, systemic infections, preterm labour, malnutrition, respiratory distress, birth trauma, and jaundice in their neonates.
7	Deswinda Deswinda et al. 2020; Scientific Foundation SPIROSKI, Skopje, Republic of Macedonia	Adolescent Pregnancy Prevention Behavior in Indonesia: Internal and External Factors Influencing	The purpose of this study is to identify internal and external factors that influence adolescent pregnancy prevention behaviour in Indonesia	The study recruited 398 adolescents using a multistage sampling technique.	The study used a quantitative approach with a cross-sectional design. Chi-square tests and logistic regression tests are used to analyze the data.	Teenage pregnancy is associated with high maternal and infant mortality rates and a high risk to infants. This article emphasizes the importance of preventing teenage pregnancy to reduce those risks. Studies show that peers have the greatest influence on teen pregnancy risk, with an odds ratio of 3.84, highlighting an important role in prevention. Prevention strategies include knowledge enhancement, positive attitude building, and personal development.
8	Hoko Horii. 2019 The Journal of Legal Pluralism and Unofficial Law	The pluralistic legal system, pluralistic human rights?: teenage pregnancy, child marriage and legal institutions in Bali	The purpose of this article is to examine how the existence of multiple legal orders can impact the defence of human rights, particularly in cases related to teenage pregnancy outside marriage in Bali.	The study focuses on Balinese Hindu practices in Bali, particularly in cases involving premarital sexual relations and teenage pregnancy. The author collected about 30 court rulings from three different civil courts in Bali, that is PN Bangli, Semarapura, and Denpasar	The authors conducted empirical research by analyzing court rulings, conducting interviews with various informants, and participating in focus group discussions. Court rulings were collected from three civil courts in Bali, and interviews were done with hakim, painters, marriage clerks, common law scholars, and individuals involved in legal cases	regarding the complexity of the issue of teenage pregnancy out of wedlock in Bali, involving aspects of culture, law, and child protection. Handling such cases requires good collaboration between families, customary authorities, and state agents to find solutions that respect local norms while ensuring the protection of children's rights.
9	Desalegn Anmut Bitew et al. 2023 Scientific report	Predictors of underage pregnancy among women aged 15–19 in highly	This study aimed to assess individual and societal level predictors of	The study involved a weighted sample of 2397 adolescents aged 15 to 19 years from areas particularly prevalent in Ethiopia.	The study used a stratified logistic regression model to analyze data from the fourth dataset of the 2016 Ethiopian Demographic and	Teenage pregnancy carries a risk of obstetric and perinatal complications, potentially having long-term health impacts on both mother and child. The findings emphasize the importance of universal access to education, particularly for women, as a way to

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		prevalent regions of Ethiopia: a multilevel analysis based on EDHS, 2016	adolescent pregnancy in areas that are particularly prevalent in Ethiopia.		Health Survey (EDHS).	improve educational attainment and potentially reduce the risk of teenage pregnancy. Collaboration between government and religious leaders is suggested as a joint effort to address reproductive and sexual issues, including early marriage and sexual initiation associated with teenage pregnancy.
10	Lida-Maria Exarchos et la. 2022 hormones	Teenage pregnancies in Western Greece: experience from a university hospital setting	The purpose of this study was to evaluate perinatal outcomes and the risk of perinatal and obstetric complications of adolescent pregnancy.	The study involved 959 pregnancies of women who gave birth at the Department of Obstetrics and Gynecology of Patras University Hospital, Greece, in 2019	The study was conducted retrospectively, using data collected from maternity ward archives.	Teen pregnancies represented 6.7% of all pregnancies recorded in hospitals in 2019. Teen pregnancies have rates of preterm labour.

DISCUSSION

Articles 1,3,6,10 (research at Goa Medical College, Indonesia, Hasan Sadikin Hospital Bandung, Greece) show that teenage pregnancy can cause prematurity due to various factors. Studies have shown that adolescents have a higher rate of preterm labour compared to women of reproductive age (Exarchos et al., 2022). This increased risk of preterm birth among adolescents has been supported by several studies (Deswinda et al., 2020). Other risk factors such as low educational attainment, previous abortions, and previous preterm births have also been found to contribute to a higher incidence of preterm birth in teenage pregnancy (Nurdiawan et al., 2021). In addition, adolescent mothers are more likely to experience complications such as eclampsia, anaemia, and premature birth, which can further increase the risk of prematurity (Indarti et al., 2020). The exact mechanism behind the link between teenage pregnancy and prematurity is not fully understood but is believed to be a combination of biological, social, and behavioural factors (Widyaningsih et al., 2021). Overall, teenage pregnancy poses a higher risk of prematurity, highlighting the importance of prevention efforts and providing appropriate care for adolescent mothers.

Article 7 (research in Indonesia) shows that peer factors can influence teen pregnancy. Peer influence can affect teen pregnancy because peers play an important role in shaping teen sexual behaviour (Widyaningsih et al., 2021). Studies have shown that adolescents who receive negative influences from their peers are more likely to conceive at a young age compared to those who do not receive such influences (Widyaningsih et al., 2021). Peers can influence adolescent attitudes toward pre-marital sexual behaviour, and those with negative attitudes are more likely to have teenage pregnancies. In addition, peer influence can lead to the early debut of sexual intercourse, which increases the risk of teenage pregnancy. Therefore, peer influence on adolescent sexual behaviour and decision-making can contribute to teen pregnancy.

Article 4 (research in South Asia) shows that teenage pregnancy has an impact on psychological problems such as depression, anxiety, and conduct disorders. Studies have shown that adolescent mothers are at higher risk of mental health problems compared to adult mothers. Factors such as the stress of early motherhood, social stigma, lack of support, and financial difficulties contribute to the development of this psychological problem (Deswinda et al., 2020; Exarchos et al., 2022; Bitew et al., 2023). Teenage mothers face challenges in coping with the demands of parenthood can exacerbate psychological distress (Nurdiawan et al., 2021). It is important to address these mental health issues and provide appropriate support and interventions for adolescent mothers to reduce the long-term impact on their well-being and the well-being of their children (Indarti et al., 2020).

Articles 2.5.8 and 9 (research in the Philippines, Indonesia, Bali, Ethiopia) suggest that This comprehensive approach needed to address adolescent pregnancy requires the involvement of multiple stakeholders and the integration of various strategies. Governments play an important role in implementing effective policies and programs that promote comprehensive sexual education, access to contraception, and support for young parents. Religious leaders can contribute

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by promoting responsible sexual behaviour and providing guidance on reproductive health in the context of their beliefs. Families play an important role in providing support, open communication, and positive role modelling. Educational institutions have the opportunity to incorporate comprehensive sexual education into the curriculum They equip young people with the knowledge and skills to make decisions about their sexual health. By working together, stakeholders can create a supportive environment that reduces the risks and adverse effects associated with teen pregnancy (Horii, 2019; Exarchos et al., 2022; Bitew et al., 2023).

Combined with sexuality and life skills education, it has been found to improve access to education and reduce teen pregnancy and school dropouts (Austrian et al., 2020). It is critical to strengthen strategies that keep girls in school and deliver comprehensive reproductive health interventions that address economic insecurity and access to information (Phiri et al., 2023). In addition, community dialogue programs have been effective in addressing social and cultural norms surrounding teen pregnancy and school dropouts, leading to improved communication about sexual and reproductive health between parents and children (Zulu et al., 2022).

This holistic approach can provide a comprehensive picture of the problem of teenage pregnancy, covering psychological, social, and economic aspects. With a deep understanding, this research has contributed to formulating recommendations for comprehensive improvement of policies and intervention programs. Through analysis of the best strategies from different countries in addressing the impact of adolescent pregnancy, it provides comprehensive guidance for the prevention and management of adolescent pregnancy globally.

CONCLUSION

The results of the literature study showed that teenage pregnancy has significant health and social impacts, including the risk of obstetric complications, high rates of maternal and infant mortality, and long-term consequences for mothers and children. Factors such as low access to education, lack of knowledge about reproductive health, peer influence, and family problems trigger teenage pregnancy. The importance of a holistic approach involving collaboration between government, religious leaders, families, and educational institutions to prevent teenage pregnancy, increase knowledge of sexual education, and form positive, preventive attitudes needs to be done to reduce the risks and adverse effects associated with teenage pregnancy.

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