

## Review Article

# Adolescent Mothers and Postpartum Depression: A Possible Connection? A Scoping Review

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## Introduction

Adolescence is a crucial phase of life, in which the transition from childhood to adulthood takes place, and is characterised by profound physical, emotional and social changes [55]. The growing concern about the mental health of adolescents is a major issue worldwide. 16% of the global burden of disease is attributable to mental disorders and half of these usually emerge by the age of 14 [28,65]. Depression in particular is ranked as the fourth leading cause of illness and disability in adolescence [65], with 25% of adolescents meeting the criteria for Major Depressive Disorder (MDD) [32]. Nevertheless, many cases remain undiagnosed, unrecognised or untreated as the presentation of symptoms may vary from that of adults [37]. The criteria for major depressive disorder are defined by the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), where at least five symptoms such as insomnia or hypersomnia, loss or increase in appetite, suicidal ideation, depressive feelings and loss of interest or pleasure must be present for diagnosis [3].

## Abstract

Motherhood during adolescence is a sensitive phenomenon that draws attention to the mental health of adolescent mothers, including the risk of Postpartum Depression (PPD). This systematic review explores the correlation between motherhood and the development of PPD in adolescent mothers, analysing the associated risk factors. The included studies investigated the prevalence and risk factors of PPD in adolescent population samples, revealing a significant incidence of depressive disorders among adolescent mothers compared to adult mothers. Among the risk factors identified were low socioeconomic status, limited education and negative family dynamics. These findings highlight the importance of considering teenage pregnancy as a significant risk factor for PPD. Social support and targeted interventions can play a key role in preventing and managing postpartum depression in teenage mothers. Early identification of symptoms related to the mother's mental health during pregnancy and the postpartum period is of paramount importance to ensure the well-being of both mother and child. It is crucial to conduct further research to deepen the understanding of this complex relationship and to develop effective intervention strategies to support young mothers' mental health during the postpartum period. Investing in training health workers to recognise and treat pregnancy- and postpartum-related mental disorders, as well as educating women about available resources and the importance of seeking help when needed, can help reduce the public health burden of these problems.

**Keywords:** Depression; Adolescence; Clinical psychology; Development psychology

This condition not only threatens their physical and psychological well-being [21] but can also negatively affect their academic performance and quality of life [68]. A close relationship between depression and teenage pregnancy has been identified, with estimates ranging from 8% to 51% [8,13,58]. The increased risk of depression among girls compared to boys [19], coupled with the frequency of teenage pregnancy [67]a, highlights the need for more attention to be paid to this issue. Statistical data show that globally since 2000 the rate of births to teenage girls, aged 15 to 19, has dropped from 64.5 births to 41.3 per 1,000 girls in 2023. However, despite the decline in birth rates, teenage pregnancy remains an important public health problem. It is important to note that the least developed countries still present significant pregnancy challenges, with a rate of 94 births per 1,000 adolescents, more than double the global average. In addition to these figures, it should be kept in mind that many adolescent girls are not physically or mentally

prepared for pregnancy and childbirth [7,63,65,72]. Pregnancy is a critical period in a woman's life, during which her body undergoes a series of physical, hormonal and psychological transformations [11]. In particular, many women experience a range of complications during pregnancy and postpartum, including eclampsia, postpartum haemorrhage and anaemia, which can put maternal health at risk [61]. New mothers can face a significant emotional burden as they try to adjust to their new reality as parents. Among the many difficulties is that of having to simultaneously reconcile two tasks of growing up: their adolescence and taking on the responsibility of caring for a child. This double task can lead to a number of negative consequences, including an increased risk of depression [1].

Currently, despite the relevance and significant impact on the mental health of mothers after childbirth, there is still a lack of consensus on a universal definition of Postpartum Depression (PPD) (Wisner et al., 2010).

The DSM-5 classifies PPD as a major depressive disorder with onset during pregnancy or within 4 weeks after delivery [3]. According to epidemiological studies, PPD generally occurs between 6 and 12 weeks after the birth of the child, with a duration that can vary from 2 to 6 months and involves 7 to 12% of women [72].

According to the International Classification of Diseases 10 (ICD-10), postpartum depression is one of the syndromes associated with pregnancy or the postpartum period (starts within about 6 weeks after delivery). It is characterised by significant mental and behavioural manifestations. It is defined by a persistent depressed mood accompanied by other symptoms such as difficulty concentrating, feelings of guilt, hopelessness, recurrent suicidal ideation, changes in appetite or sleep, psychomotor agitation and reduced energy (ICD-11, 2024).

It is common for between 50 and 75 % [50,53] for many women to experience the so-called 'baby blues' after giving birth, experiencing symptoms such as anxiety, fatigue or irritability [30]. Unlike the baby blues, which usually ends within the first two weeks after giving birth [34], PPD does not disappear spontaneously and if left untreated can make it difficult to cope with everyday life and care for one's baby and oneself [4].

Mental health is influenced by a multiplicity of factors. The increase in risk factors to which adolescents are exposed amplifies the possible impact on their mental health [71]. The risk of developing these depressive symptoms is particularly prevalent among these high-risk groups, particularly those who lack social support, have faced previous psychological distress, poverty, have been abused or exposed to violence [33]. Indeed, pregnancy at a young age often prevents many teenage mothers from continuing their education, causing a significant impact on their future path and this situation limits their employment opportunities and earning potential [63]. It has also been reported that pregnant adolescents experience more problems that include a widespread lack of awareness about various aspects of pregnancy and motherhood, making their experiences fraught with difficulties. This lack of knowledge can affect several areas, such as reproductive health, prenatal care, neonatal care practices and contraceptive use [10]. The risk factors that adolescents are exposed to also include negative consequences for their babies, such as the possibility of preterm delivery and low birth weight [73], which can negatively affect their well-being and development [52].

In this context, it is essential to carefully examine the possible correlation between teenage motherhood and a depressive disorder. This phenomenon raises significant questions about the mental health of teenage mothers and the need to fully understand the dynamics and possible implications.

## Materials and Methods

The aim of this review was to investigate the literature on variables that correlate adolescent mothers and depression. Three electronic databases were used for the research. The scientific articles reviewed were within an 11-year research range (2013-2024) on teenage mothers and depression. PubMed, EBSCO and Webofscience were used. The research team considered it necessary to search these three databases. We present the various steps.

### Stage 1: Identify the Research Question

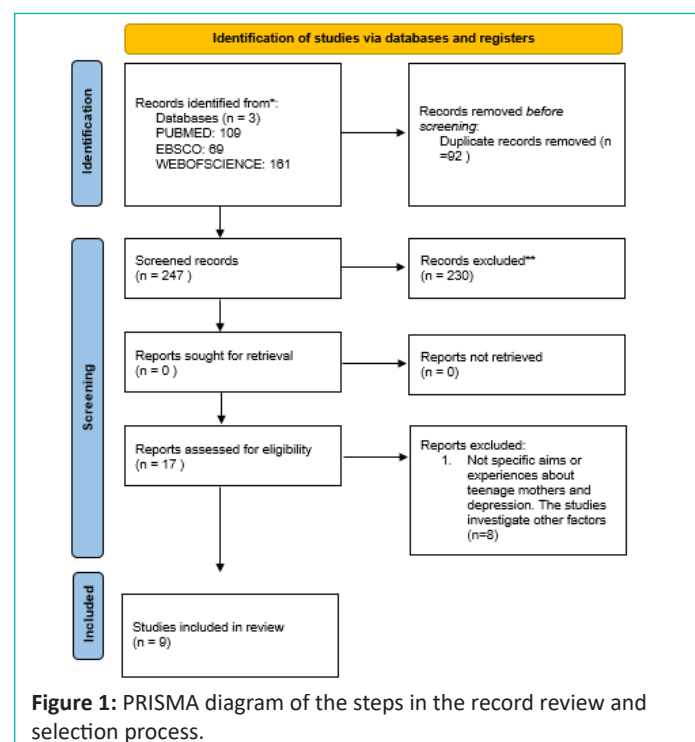
The investigation begins with an overview of the problem at hand and any potential complications. What is the relationship between motherhood during adolescence and the development of postpartum depression in teenage mothers? What are the real variables that correlate teenage pregnancy and depression?

### Stage 2: Identify Relevant Studies

In order for useful studies to emerge for the study questions posed, the following keywords were used: teen mothers and depression, teenage mothers depression and depression in adolescent mothers. The selection criteria were English language and publication between 2013 and 2024.

### Stage 3: Study Selection (Figure 1)

161 articles were identified from Web of Science, 69 articles from Ebsco and 109 from PubMed. The total number of articles was narrowed down to 9. After reviewing the titles of all articles, those that were clearly not relevant were discarded. During the research work, the main focus was on analysing articles with adolescent mothers with depressive symptoms as the sample. Subsequently, the articles were read in their entirety, paying more attention to the methodology (Figure 1).



**Figure 1:** PRISMA diagram of the steps in the record review and selection process.

**Exclusion Criteria:**

1. Studies concerning only teenage pregnancy;
2. Studies concerning depression only;
3. Studies on teenage mothers and depressive symptoms examining other factors;
4. Studies on adolescent mothers and depression with comorbidity with other disorders.

**Inclusion criteria:**

1. Studies on a sample of adolescent mothers and the use of tests to assess the presence of depressive symptoms;
2. Studies on a sample of adolescent mothers and use of tests to assess factors associated with postpartum depression;
3. Studies on the prevalence and risk factors of postpartum depression among teenage mothers compared to adult mothers.

**Table 1:** Summary of included studies organized in themes.

Authors/ Years	N, Age, Period of life		Measures	Specific findings
Japhet Niyonsenga, Jean Mutabaruka, 2020	120 teenage mothers (ages 15-19)	Identifying factors of postpartum depression among adolescent mothers	-Edinburgh scale of postnatal depression -The eating disorder inventory -The parenting stress index -The Frost Multidimensional Perfectionism Scale -Multidimensional Perceived Social Support Scale.	48% of the sample had clinically elevated levels of depressive symptoms.
Apiradee Uthaipaisanwong , Tassawan Rungruxsirivorn , Chutima Roomruangwong , Nimit Taechkraichana , Surasith Chaithongwatthana	Pregnant teenage women (ages 13 to 19)	This study was conducted to determine the rate of depression among adolescent mothers and associated factors	Edinburgh Postnatal Depression Scale	Ninety-two (46%) pregnant adolescent women suffered from prenatal depression.
Alifa Syamantha Putri , Tri Wuri-sastuti , Indri Yunita Suryaputri , and Rofingatul Mubasyiroh	1285 mothers (ages 15-24)	To determine the extent of postpartum depression (PPD) and factors associated with the incidence of PPD among young mothers	-Mini International Neuropsychiatric Interview -Indonesia Basic Health Survey (RISKESDAS) 2018	4.0% of young mothers with children younger than 6 months experienced depression. The study also revealed that PPD is more common in urban areas (5.7%) than in rural areas (2.9%).
Serap Topatan, Nurdan Demirci	84 teenage mothers of (ages 15-19)	To examine the prevalence, severity and risk factors for postpartum depression among adolescent mothers	Edinburgh Postnatal Depression Scale	The risk of PPD in the adolescent was 22.6%.
Laure Nicolet, Amir Moayedodin, Joel Djatché Miafo, Daniel Nzebou, Beat Stoll, Emilien Jeannot	1344 women (age 20 years old or younger)	The objective of this study was to provide baseline data on the sociodemographic characteristics of pregnant adolescent girls or teenage mothers	-Mixed interviews (both directive and semi-directive). -Edinburgh Postnatal Depression Scale	A 70% prevalence of depressive disorder symptoms among adolescent girls.
Martha Mbawa, Jerneja Vidmar, Constance Chingwaru, Walter Chingwaru	50 teenage mothers and 50 adult mothers	This study showed evidence of a significant prevalence of postpartum depression (PPD) among adolescent mothers (ADLM) compared with adult mothers (ADM)	-Questionnaire to probe risk and protective factors of PPD - Edinburgh Postnatal Depression Scale	This study thus unequivocally demonstrates a higher incidence of PPD among ADLMs than among ADMs
Anthony P. Nunes, Maureen G. Phipps	676 adolescents (ages 15 to 19) 1,387 young adults (ages 20 to 24) 1,735 adults (age 25 to 29 years) 3,161 adults (age over 30 years)	Our objective was to assess whether risk factors for postpartum depression differed between adolescent and adult mothers	Rhode Island Pregnancy Risk Assessment Monitoring System (2004-2008)	Higher prevalence of postpartum depressive symptoms among adolescent and young adult mothers compared with mothers older than 25 years of age
Getachew Kassa, Anne Batchelder, Debora Grosso	374 teenage mothers (10-19 years old) 760 adult mothers (20-34 years old)	Examining the prevalence and determinants of PPD among adolescent and adult mothers	- Edinburgh Postnatal Depression Scale - Maternity Social Support Scale - The Rosenberg self-esteem tool - questionnaire developed by the maternal and newborn programme of JHPIEGO - Edinburgh Postnatal Depression Scale	Teenage mothers had a significantly higher percentage of PPD (37.4 percent) than adult mothers (20.1 percent)
Bibilola D Oladeji, Toyin Bello, Lola Kola, Ricardo Araya, Phyllis Zerkowitz, Oye Gureje	8,580 adults and 772 adolescents	How adolescents differ from adults in the occurrence and correlates of depression	- WHO Disability Assessment Schedule - Maternal Adjustment and Maternal Attitudes - Home Inventory for Measurement of the Environment	Of the 8,580 adults, 6.9% had Major Depression, compared with 17.7% of the 772 adolescents (p < 0.001)

**Stage 4: Chart the Data**

The fourth step concerns the organisation of the data from the identified articles. Microsoft Excel was used in this step. The data collected are as follows: authors, year of publication, title, purpose, research setting, country of affiliation of the first researcher's university, research methods, interventions, participant demographics, important findings and limitations. A summary of what was done can be seen in Table 1: authors, participants, objectives, measures and conclusions.

**Stage 5: Collate, Summarize, and Report Results**

Finally, the following actions were carried out: the results were organised into themes, the focus was on the results according to their applicability to the research objectives, with particular emphasis on the type of intervention. The most important information was: sample size, participants, procedures and results. Within the results space, there is a comprehensive account of all data (Table 1).

## Results

Serap Topatan and Nurdan Demirci [62] surveyed 84 adolescent mothers in Turkey, aged between 15 and 19 years. The aim was to examine postpartum depression, its prevalence, severity and associated risk factors. The new mothers were questioned about PPD at 3 periods after birth, after 4 weeks, then 6 months and finally after 1 year, respectively. A descriptive information form and the Edinburgh Postnatal Depression Scale (EPDS) (Cox et al., 1987), one of the most widely used screening instruments to assess the symptoms of perinatal depression, were used to assess the risk of PPD. The EPDS is a questionnaire consisting of 10 questions, each rated on a 4-point Likert scale with scores between 0 and 3 for each question. The score on the EPDS scale can vary from a minimum of 0 to a maximum of 30. A score of 0 indicates the complete absence of depressive symptoms, while a score of 30 suggests the presence of the maximum depressive symptoms as measured by the EPDS. The results showed that 22.6% of the new mothers were at risk of depression. In addition, there were several factors that had a statistically significant association with PPD: the age, level of education of teenage mothers, problems and quarrels with spouse and family, problems with sexual relations after pregnancy and actively making decisions about one's child.

– Alifa Syamantha Putri et al. [49] investigated several PPD risk factors in young mothers in Indonesia. Data were obtained from the Indonesia Basic Health Survey (RISKESDAS) 2018, which is a national health survey of the Indonesian Ministry of Health [23]. The sample surveyed by RISKESDAS included girls aged between 15 and 24 years with children aged  $\leq 6$  months. In total, data from 1285 young mothers were considered. The Mini International Neuropsychiatric Interview [54] was used to assess the symptoms of depression, which showed that 4.0 per cent of the new mothers were prone to depression in the 6 months following birth. Furthermore, a higher percentage of depressive symptoms was found in urban areas (5.7%) than in rural areas (2.9%). With regard to risk factors for postpartum depression, the authors employed multivariate logistic regression and statistical analyses were conducted. The results of the research showed that the factors associated with depression were: In rural areas: a large family, an unwanted pregnancy and complications during pregnancy;

– In urban areas: having a premature birth, complications during pregnancy, post-partum health problems and not having a marital partner. In these areas the age of the mother was also found to be a significantly correlated trait with depression.

Japhet Niyonsenga and Jean Mutabaruka [39] conducted a study of 120 adolescent mothers aged between 15 and 19 years, with the aim of identifying factors and the highest incidence of postpartum depression among adolescent mothers. The authors selected potential factors commonly reported by adolescent mothers in Rwanda and used various instruments. The Edinburgh Scale of Postnatal Depression was used to assess maternal depression. They measured the different factors with a variety of instruments: the source and magnitude of stress in the parent-child relationship with the Parenting Stress Index/Short Form (PSI) [2], two scales from the Eating Disorder Inventory [15] were used to measure a dimension of food and weight concerns, the Frost Multidimensional Perfectionism Scale [14] (parental criticism of parenting) and the Multidimensional Scale of Perceived Social Support [74] to detect social support. As the results show, 48% of the sample had clinically elevated levels

of depressive symptoms. Depressive symptoms were significantly correlated with parental stress, weight/shape disorders, economic income, dysfunctional parent-child interaction and chronological age. The authors' findings are consistent with the vulnerable nature of adolescent mothers.

Apiradee Uthaisaisanwong and co-workers [66] examined the rate of depression among teenage mothers and associated factors. Two hundred pregnant adolescent women aged between 13 and 19 years and with an average gestational age of 23 weeks took part in the study. The Thai Edinburgh Postnatal Depression Scale (EPDS) [48] was used, using the cut-off score of 11 to screen for depression, and it was found that 46% of the adolescents suffered from depression. The results showed no significant association between prenatal depression and an unplanned pregnancy, unemployment status or dropping out of school. However, logistic regression analyses showed that a history of abortion attempts and inadequate income were significantly associated with prenatal depression.

Laure Nicolet and co-workers [38] examined adolescent and pregnant mothers from Yaoundé (Cameroon). Perinatal depression in low- and middle-income countries is often overlooked, so the authors' objective was to investigate the socio-demographic characteristics of this population and the risk factors, i.e. the prevalence of depressive symptoms. The population considered included 1,307 adolescents in the perinatal period, 48.4 per cent were pregnant and 51.6 per cent in the postpartum period. The method of the study consisted of four steps: a questionnaire on sociodemographic characteristics, the Edinburgh Postnatal Depression Scale (the translated and validated French version) [8], an interview according to DSM 5, and finally, we focused on depression risk factors. 70.0% of the adolescent girls scored  $\geq 12$ , which shows a prevalence of depressive disorders in the investigated sample. Significant risk factors that emerged were: absence of a partner, pregnancy-related circumstances (e.g. unwanted pregnancy), depression/anxiety before birth, abortion and domestic violence.

Martha Mbawa and co-workers [35] in their study focused on the prevalence and its risk factors of postpartum depression among adolescent mothers compared to adult mothers. Fifty adult mothers and 50 adolescent mothers who had been pregnant before reaching the age of majority were considered. A questionnaire was used to probe risk and protective factors for PPD and the Edinburgh Postnatal Depression Scale (EPDS) (Cox et al., 1987), which showed a prevalence of 13% of postpartum depression among adolescent mothers compared to 7.2% in adult mothers. Risk factors associated with depressive symptoms in adolescents include pregnancy-related factors such as: being left by a partner during pregnancy, unplanned pregnancies, negative perception of pregnancy and depression during pregnancy. Other factors that have emerged that are linked to depression are: lack of access to social needs during childhood, poor relationships within families, misinformation about contraception and the absence of both parents during childhood.

Bibilola D. Oladeji and collaborators [41] focused on rates of perinatal depression and differences between adolescents and adults in the occurrence and correlates of depression. The data considered came from the EXPONING Care for Perinatal Women with Depression (EXPONATE) study [17,18], a follow-up study on psychosocial interventions for perinatal depression, where initial screening to pregnant women was conducted using the Edinburgh Postnatal Depression Scale (EPDS) (Cox et al., 1987). A to-

tal of 772 adolescents and 8,580 adult women were compared during pregnancy and followed up until 6 months after delivery. Subsequently, the WHO Disability Assessment Programme [43], the Discrimination and Stigma Scale and Adaptation and Attitudes towards Pregnancy with Maternal Scale [31], the Maternal Adaptation and Attitudes Questionnaire (MAMA) [12,29] and the Home Inventory for Measurement of the Environment (IT-HOME) [6] were used. The results showed that 17.7% of adolescents had depression, compared to 6.9% of adults, and at 6 months postpartum, no significant differences in depression remission rates were found between the two groups.

Anthony P. Nunes and Maureen G. Phipps [40] assessed the risk factors for postpartum depression, particularly the differences between adolescent and adult mothers, and evaluate the need for specific screening tools for adolescents. They performed a retrospective cohort study using data from the Rhode Island Pregnancy Risk Assessment Monitoring System (PRAMS) [56], examining data from 2004 to 2008. 676 adolescents (age 15-19 years), 1,387 young adults (age 20-24 years), 1,735 adults (age 25-29 years) and 3,161 adults (age 30+ years) responded to RI PRAMS. The depression scale used by RI PRAMS is a modified version of the Patient Health Questionnaire-2 [24]. This study found a higher prevalence of postpartum depressive symptoms among adolescent mothers than among mothers over 25 years of age. The highest rate of prenatal depression, 11%, was found among those aged between 20 and 24 years and the lowest, 7%, among women over 30 years. Weighted logistic regression was used for risk factors associated with depression and predictive models were developed using forward-selected weighted logistic regression. The risk factors for postnatal depression among adolescents identified were: smoking and alcohol before pregnancy and stress factors (e.g. quarrels, divorce or separation). Among adult mothers over the age of 25, on the other hand, race was associated with depressive symptoms, minority women were more likely to experience postpartum depressive symptoms. Intention of pregnancy was also significantly associated with postpartum depressive symptoms among adults. Stressors were strongly associated with postpartum depressive symptoms in each of the age groups.

Getachew Kassa and co-workers (Getachew Kassa et al., 2024) examined the prevalence and determinants of postpartum depression among 374 adolescent and 760 adult mothers in north-western Ethiopia.

The authors employed an interview-based data collection method. Different instruments were used: the Edinburgh Postnatal Depression Scale (EPDS) (Cox et al., 1987), the Maternity Social Support Scale (MSSS) [69] to assess the presence or absence of social support, The Rosenberg self-esteem [51] for self-esteem and finally the questionnaire developed by the JHPIEGO Maternal and Newborn Programme [25]. The results show that factors associated with PPD among adolescent mothers included: higher likelihood of household food insecurity, low self-esteem, low knowledge of postpartum complications and agricultural work or professional/technical work. For adult mothers, on the other hand, factors associated with PPD included social support, inadequate dietary diversity and food insecurity.

## Discussion

This review aims to take stock of the possible correlation between adolescent mothers and postpartum depression and the associated risk factors. In total, 9 studies met all eligibility criteria. Studies on the prevalence and risk factors of postpar-

tum depression in an adolescent population sample and studies on the prevalence and risk factors of postpartum depression among adolescent mothers compared to adult mothers were considered.

- All results showed a prevalence of depressive disorders in the adolescent sample investigated. Below we highlight the most significant risk factors for PPD: In 3 studies: the age of the mother. This result is in line with other studies in which young age was a risk factor for PPD [27,40,60];
- In 4 studies: stress factors such as quarrels, dysfunctional relationships in the family and divorce;
- From 1 study: Domestic violence was found to significantly increase the likelihood of depressive disorders. This result is consistent with other studies showing an increased risk of postpartum depression in victims of domestic violence [20,46];
- In 3 studies: pregnancy-related circumstances such as premature birth, unwanted pregnancy, complications during pregnancy and health problems after delivery;
- In 2 studies: misinformation about possible postpartum complications;
- In 2 studies: a previous history of prenatal depression;
- In 2 studies, negative socio-economic conditions, including a low level of education, unemployment and limited income as factors associated with PPD. The results are in line with a recent study by Farnaz Mohammadian and co-workers who investigated health consequences in teenage pregnancy. The results showed that teenage mothers have a higher propensity for postpartum depression, a lower level of education and hold unprofitable jobs [36];
- In 3 studies: the absence of a partner;
- In 2 studies: a history of abortion. This finding seems consistent with previous studies [5,26];
- From 1 study: substance abuse such as alcohol and/or tobacco. Considering the particular vulnerability of teenage mothers during pregnancy, it is essential to recognise and try to prevent risk behaviours, which can have a significant impact on the onset of PPD. Depression and alcohol consumption are frequently linked in adolescents, with research showing a two-way relationship between the two. Adolescents with depression may turn to alcohol to manage their emotional distress, while excessive alcohol consumption may contribute to the onset or exacerbation of depressive symptoms in predisposed individuals (Gómez-Peresmitré & Platas-Acevedo, 2023). This complex interaction emphasises the importance of addressing both problems comprehensively, providing emotional support and promoting healthy behaviour among adolescents.

## Conclusions

Teenage pregnancy is a health problem worldwide. Adolescents themselves represent a high-risk group in need of high-priority interventions that has received limited attention to date.

Dealing with teenage pregnancy also requires a great deal of effort on the part of families and the healthcare system. It is crucial that adolescents are adequately informed about the negative consequences of teenage pregnancy, both through education provided by their parents and through targeted pro-

grammes. This knowledge is crucial to enable them to make informed and responsible decisions about sexuality and contraception.

It has been observed that lack of knowledge about the use of contraceptives is one of the most common causes of early pregnancy [57]. Lack of adequate information about contraceptive methods and their proper use can increase the risk of unplanned conception among adolescents.

Comprehensive and accessible education is essential to promote adolescents' sexual and reproductive health and to reduce the risk of unplanned pregnancies and their consequences. When people feel empowered and autonomous, they are more inclined to take care of their health and pursue healthy lifestyles. Empowerment plays a crucial role in health promotion as it promotes self-empowerment, intrinsic motivation, autonomy and the development of decision-making and planning skills [47].

Identifying and addressing possible mental health problems early is also crucial to ensure a safe pregnancy and delivery and to promote healthy child development. A recent study showed that 17% of pregnant women and 18% of those screened in the postpartum period had significant depressive symptoms in the final stage of pregnancy. It is therefore essential to pay particular attention to the early diagnosis and timely treatment of perinatal depression. Early identification of symptoms and access to appropriate support and treatment can significantly contribute to mitigating the negative effects on the mother's mental health and the child's development [42].

### Limits

This study also has several limitations.

Methodological limitations: these relate to the inherent limitations of the methods used in the study. For example, in 1 study, although a validated French version of the EPDS is available, this instrument has not been validated for use in developing countries.

Cultural limitations: the studies involve populations from different cultures (Yaoundé, Rwanda, etc.) so it is important to consider limitations related to cultural interpretation or differences in social context that might influence the results.

### Data Sharing

Data sharing not applicable – no new data generated, or the article describes entirely theoretical research.

### Author Statements

#### Declaration of Interest

The authors declare that they have no conflicts of interest regarding this article. They have not received funding from organizations that could benefit from or be influenced by the results presented in this study. Additionally, they have no financial or personal relationships with companies or entities that could benefit from or be harmed by the information contained in this article.

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