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Review

Drugs use among adolescent mothers: a review

Uso de drogas entre mães adolescentes: uma revisão

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Abstract

Objective: to identify the state of the art of knowledge about the inconvenience of drug use among adolescent mothers, published through scientific articles in the period between 2000 and 2019. **Data sources**: a systematic review of the literature was carried out, in which a search was made in the LILACS, MEDLINE, BDENF, IBECS databases and in the SciELO repository, guided by the guiding question: What are the complications/injuries related to pregnancy in adolescence by illicit drugs? Only case-control, cohort, and case report studies published in Portuguese, Spanish, and English that portrayed the theme under study in the referred databases were included and excluded those who escaped the proposed subject. The methodological quality of the selected studies was analyzed using the STROBE instrument. In total, 15 articles made up the review analysis corpus. **Summary of the data**: it was found that the issue of drug-addiction in adolescence, even though pregnant women, is linked to factors of social vulnerability. The limited number of results involving the drugs' use in pregnant adolescents as a public health problem is a possible factor that generates confusing relationships, and that the expansion of such rates highlights the importance of a critical view of public policies. **Conclusion**: problematizing and discussing the theme of drugs in pregnant adolescents, in addition to being essential, is crucial, to provide reflections on the procedures for prevention and health promotion in the context of public health.

Keywords: adolescent; pregnancy; pregnancy in adolescence; drug-addiction; public policies.

Resumo

Objetivo: identificar o estado da arte do conhecimento sobre os inconvenientes do uso de drogas entre mães adolescentes, divulgado por meio de artigos científicos no período entre 2000 e 2019. **Fonte de dados:** foi realizada uma revisão sistemática da literatura, no qual houve uma busca nos bancos de dados LILACS, MEDLINE, BDENF, IBECS e no repositório SciELO, orientada pela questão norteadora: Quais as complicações/agravos relacionados à gravidez na adolescência por drogas ilícitas? Foram incluídos somente estudos do tipo caso-controle, coorte e relato de caso, publicados em português, espanhol e inglês que retratassem a temática em estudo nas referidas bases, excluídos os que fugissem do assunto proposto. A qualidade metodológica dos estudos selecionados foi analisada pelo instrumento STROBE. No total, 15 artigos compuseram o corpus de análise da revisão. **Síntese dos dados**: constatou-se que a questão da drogadição na adolescência, ainda que gestantes, encontra-se muito conexa a fatores de vulnerabilidade social. A quantidade limitada de resultados envolvendo o uso de drogas em adolescentes gestantes, enquanto problema de saúde pública, configura um possível fator gerador de relacionamentos confusos, e que a expansão de tais taxas evidencia a importância do olhar crítico das políticas públicas. **Conclusão**: a problematização e discussão da temática das drogas em adolescentes gestantes para além de essencial, é crucial, de forma a proporcionar reflexões quanto aos procedimentos de prevenção e de promoção de saúde, no contexto da saúde pública.

Palavras-chave: adolescente; gravidez; gravidez na adolescência; drogadição; políticas públicas.

Introduction

Sexual activity in adolescence begins earlier and earlier, with immediate undesirable implications, such as the increase in the frequency of sexually transmitted diseases and pregnancy[1,2], often also undesirable[3], and that, therefore, may end in abortion[4]. Since the 1970s, motherhood in adolescence has been identified as an important public health problem[5]. Obstetric complications with repercussions for the mother and newborn[6], as well as psychological, social, and economic problems have underpind this statement[1,3]. The conduct directed to account for this theme is based on resolutions based on sex education, access to contraceptive methods and even abortion[7,8].

The gradual use of illicit drugs by pregnant adolescents has been pointed out by research as a public health problem, especially about the consequences related to this stage of life[3,9-14]. However, few studies have systematically investigated patterns of substance use among pregnant women[15-17]. On the other hand, as adverse outcomes are found uniformly and systematically for all adolescent mothers, in addition to the fact as a causal link, the use of illicit drugs can be a key factor in the determination of, both mothers and children, serious health involvements[18]. Studies identifying the most frequent causes for the occurrence and recurrence of teenage pregnancy show a continuous relationship between gestational and school dropout, family support and partner support[8,10,12-14].

Albuquerque Souza *et al.*[19] reveal that there are many factors that can lead to a teenage pregnancy. Among them, we highlight the advance of menarche and early sexual initiation associated with ignorance and/or little use of contraceptives[11], as well as social and cultural changes and the accelerated urbanization process that has occurred in recent decades; exposing them to significant injuries, such as in cases of victimization, domestic violence, sexual abuse, drug use and mental health problems, which are currently precursors studied in public health[20-28].

It reinforces the fact of the absence of programs appropriate to the demand of adolescents in public health services, in which authors also point out as an important factor in the etiology of adolescent pregnancy[22,24]. Nevertheless, it is known that the creation of programs and projects in public health that are specific to adolescents have their importance increasingly highlighted, given the health, social and economic consequences of teenage pregnancy, as well as greater intensity of the damage of precarious care to pregnancy at this stage of life[22]. From the biological point of view, among the consequences of pregnancy for adolescents, higher incidences of hypertensive syndrome of pregnancy, anemia, gestational diabetes, complications in childbirth, determining an increase in maternal and infant mortality are cited[2,24-26]. It is important to note that some studies have demonstrated an increase in the incidence of prenatal, intrapartum, and postpartum complications among pregnant adolescents[27,]

Marijuana is one of the most widely used drugs in the gestational period[5]. Delta-9-hydrocannabiol actives have hallucinogenic action and are highly liposoluble, facilitating their entry into the placenta[15]. Abuse causes behavioral changes in the newborn: restlessness, irritability, indifference, more tremors, and multiple crying crises[18]. However, one drug that is gaining more and more users is cocaine, which acts by blocking the reception of neurotransmitters such as norepinephrine, serotonin, and dopamine. In addition, it crosses the placental barrier without being metabolized, and may cause urogenital, cardiac, and central nervous system malformations. In the mother may cause uteroplacental insufficiency, hypoxemia and fetal acidosis[15].

In fact, about problems with the newborn, pregnancy in adolescents is associated with higher rates of low birth weight, preterm childbirth, respiratory diseases, and birth injury, in addition to a higher frequency of neonatal complications and infant mortality[6]. The objective of this work is to identify the state of the art of knowledge about the inconveniences of drug use among adolescent mothers, disseminated through scientific articles between 2000 and 2019.

Materials and Methods

For the planning of the review, the guidelines formulated by PRISMA were adopted (*Preferred reporting items for systematic reviews and meta-analyses*), due to the clarity of their instructions and the recognized validity in different research areas. PRISMA adopts as a systematic review the one that reviews a relevant issue for a given area, with the use of systematic and explicit methods to qualify, specify and critically determine data from the studies included in the review[29].

Thus, an ordered set of criteria was adopted that determine the scientificity of a systematic literature review, beginning with the creation of a protocol, where the primary function was to ensure the rigor of the research process. For this, the protocol had the following components: review question, inclusion and exclusion criteria, strategies for the screening of the set of articles, guideline for the selection of the material, analysis, and synthesis of the data.

Type of study

This is a systematic review of literature based on: 1) preparation of a research issue; 2) diversity of sources for the localization of studies; 3) definition of inclusion and exclusion criteria; and 4) evaluation of the methodological quality of the recovered productions[30]. By synthesizing similar and good quality primary studies, it is considered the best level of evidence for decision-making on health issues[31]. To avoid analysis bias in systematic review, the methods of data selection and examination are constituted before the review is conducted, in a rigorous and well-defined process[32].

Databases and search strategies

The articles were surveyed on six databases: Scientific Electronic Library Online (SciELO), Medical Literature Analysis and Retrieval System Online (MEDLINE), Latin American and Caribbean Literature on Health Sciences (LILACS), Nursing Database (BDENF) and Spanish Bibliographic Index of Health Sciences (IBECS). The PICO strategy (Patient or Problem, Intervention, Control or Comparison, Outcomes) was used.[33] for the elaboration of the search-guide question. "What are the complications/injuries related to teenage pregnancy by illicit drugs?"

For the location of the articles, the following descriptors of the Medical Subject Headings (MeSH) of the PubMed/MEDLINE database were used: "pregnancy" AND "adolescent" AND "drug use" OR "pregnancy in adolescence".

Inclusion criteria

I. All selected studies were original articles; made available online; in English, Spanish, and Portuguese; with definition of the method, study scenario, population studied, consistent presentation of the results found. It was decided to focus on this review by evaluating studies conducted from 2000 to 2019.

II. Age: based on World Health Organization criteria[34], adolescents/young people were defined as being between 10 and 19 years old.

III. Studies were researched that included female adolescents, pregnancy and drug use in hospitals, outpatient clinics or obstetric centers.

VI. A clear description of the study methodology was necessary, including study design, sampling strategy and evaluation instruments.

Exclusion criteria

Publications that were not articles were excluded; concomitant indexations; investigations with an unclear description of the methodology applied; review studies; communication; in addition to ambiguity and insufficient presentation of results and manuscripts based on annual statistical reports, such as census information and data obtained in a secondary way through graphs or files and those that did not correspond to the proposed objective.

Procedures

The research strategy of the articles was to read the titles to find articles that investigated the research theme. If they composed the *locus* the research, later, the abstracts were read and, persisting in inclusion, the full article was read. However, for safety, when the title and abstract did not make clear whether the study included a group of adolescent mothers who used drugs, the full text was examined. When there was doubt about inclusion, the article was read by another examiner and, thus, the decision to include or exclude was taken consensually.

Data collection

Data collection was based on three distinct and complementary moments. The relevance test was applied[35], consisting of the analysis and characterization of each category of documents (type of study, scientific issues addressed, methodology, context of analysis, limitations, results) and categorization of the data.

I. Preliminary relevance test: which aims to refine the initial selection of articles. This phase is proceeded with a questionnaire of clear questions that generate affirmative or negative response, created based on the inclusion and exclusion criteria. Operationalized by the responsible researcher, which removes only references that are obviated to exclusion.

II. Relevance test II: operationalized by the researcher who took the preliminary relevance test, who independently analyzed the articles that pass the first Test, and only after finishing the analysis will be defined the articles that will move on to the next phase. Such a posture is taken to verify the objectivity of the method. It is note point that the relevance test II will be applied in full studies, verifying through clear questions the following factors: whether it is directly related to the question studied, whether the methodology is sufficiently described and adequate to achieve the proposed objectives, and whether the results are compatible with the methodology used.

III. Final relevance test: based on previous results. Here are extracted detailed information from each research, such as: data that characterizes authorship, bibliographic reference, type of research, methodological rigor, study scenario, sample size, evidence of the results found and its credibility.

Methodological quality assessment and data management

STROBE (*The strengthening the reporting of observational studies in epidemiology*) recommendations were used to assess methodological quality, inclusion, and exclusion criteria[36,37]. The evaluation was divided into three categories of studies: (A) in the cases of studies that met the ≥80% of the criteria listed for the research; (B) in cases that met 79 to 50% of the criteria; and (C) in cases that met <50% of the criteria set out in[36-38]. Thus, only articles that covered a percentage of >50% (classified as A or B) were considered of good quality and included in the research[39]. The analyzed data were synthesized and organized using figures, tables, and frames.

Results

The universe consisted of 1,274 articles, 202 in PubMed/MEDLINE, 283 in LILACS, 784 in SciELO, 3 in IBECS and 2 in BDENF. After reading the titles and/or abstracts, 1203 articles were excluded because they denoted a different focus from the objective sought. Thus, of the 71 publications read in full, 15 were selected, which met the inclusion and exclusion criteria, according to Figure 1.

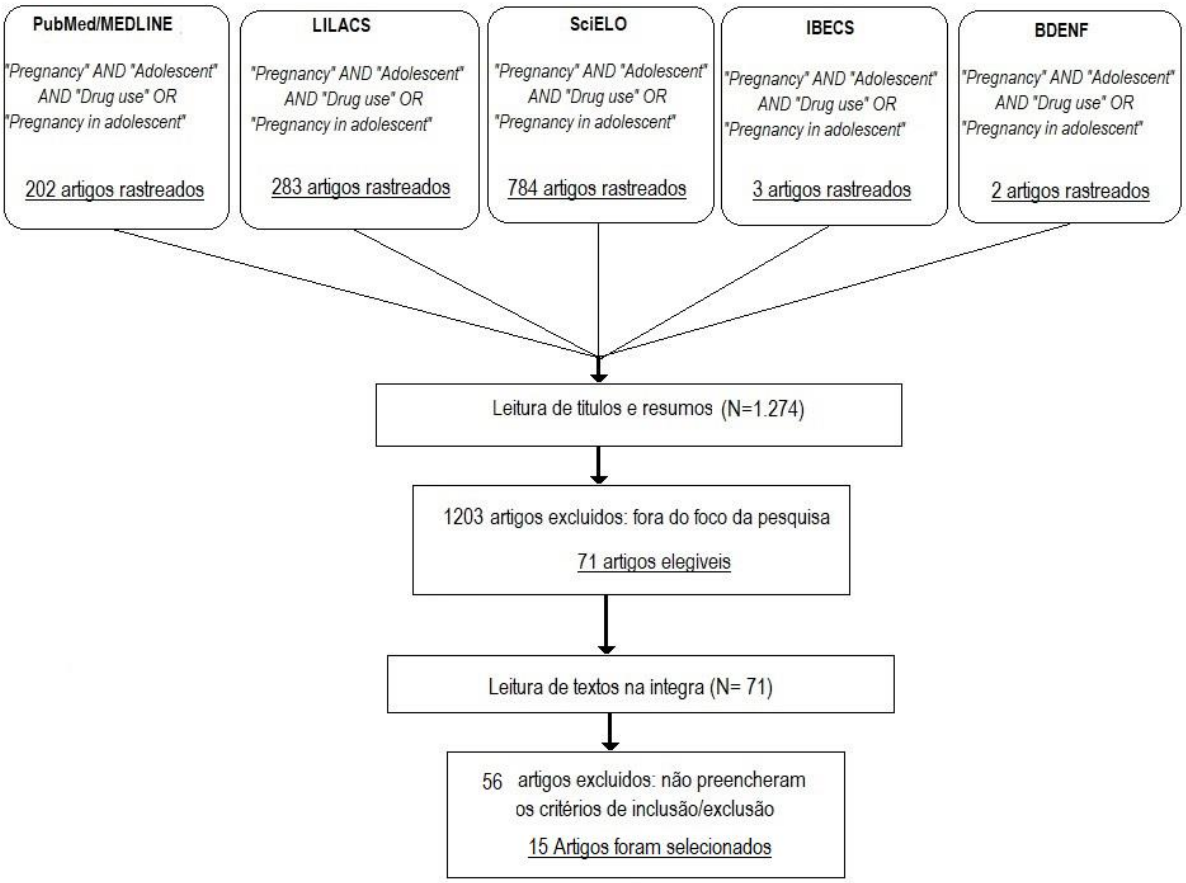

Figure 1. Flowchart of identification and selection of systematic review studies (2000-2019).

Frame 1 presents the countries where the study took place, year of publication and design of the studies included in this review.

Frame 1. List of studies included according to the countries originating in the research and study design (2000-2019).

Reference	Country	Study design	STROBE
Cornelius et al. (40)	USA	Longitudinal	A
Quinlivan; Evans (41)	Australia	Prospective and multicenter cohort	B
Martinez; Ferriani (42)	Argentina	Transversal character	B
Golder et al. (43)			
USA	Longitudinal	B	
De Genna et al. (44)	USA	Transversal character	A
Caputo; Bordin (5)	Brazil	Case-control	B
De Genna et al. (45)	USA	Retrospective cohort	A
Spears et al. (46)	USA	Prospective cohort	A
Cruz et al. (47)	Brazil	Transversal	B
Faler et al. (48)	Brazil	Case-control	A
Miura et al. (49)	Brazil	Case study	B

Schiff et al. (50)	Australia	Retrospective cohort	A
Salas-Wright et al. (51)	USA	Retrospective cohort	A
Hendrick et al. (52)	USA	Longitudinal	A
Mason et al. (53)	Finland	Retrospective cohort	A

Of the 15 selected studies, 4 presented retrospective cohorts, 3 cross-sectional design, 3 longitudinal design, 2 control cases, 2 prospective cohorts and 1 case study. As for the year of publication, most studies were published from 2002 to 2016. The studies were conducted predominantly in Brazil (4) and the United States (7), (2) Australia and (1) in Argentina and Finland, respectively. All articles selected for the systematic review presented STROBE percentages >50%, being 9 classified as STROBE A and 6 as STROBE B. Frame 2 presents the main characteristics of the studies on the impacts/complications of teenage pregnancy by drugs, as well as the typology of drugs.

Frame 2. Description of the included studies on the type of substance and impacts/complications of pregnancy in adolescents by drugs (2000-2019).

Reference	Objective	Substance	Number of participants and age in years	Main outcomes
Cornelius et al. (40)	Examine long-term effects of prenatal use of alcohol, tobacco, and marijuana among adolescents on the growth of their children up to 6 years old.	Alcohol, cigarettes, cocaine, hashish, marijuana	413 (average 16 years old)	There was a significant adverse effect of prenatal exposure of the offspring. Alcohol use was also significantly associated with the height of babies. Relative to other babies in the control group, the height of the children was reduced by 2.45 inches. The use of marijuana and other licit and illicit drugs was also significant in the lower stature of the offspring. In relation to the control group, the height of the children was reduced by an average of 3.13 inches. Other problems were identified, such as: smaller head size and skin fragility*(p-value*<0.01).
Quinlivan; Evans (41)	Assess the impact of continued drug use on teen pregnancy outcomes.	Alcohol, cigarettes, marijuana	456 (12-17 years old)	In the sample, it was identified that 20.4% used marijuana during pregnancy. However, 33.3% were users of multiple drugs and solvents (amphetamines, *heroin, ecstasy and/or LSD),*in combination with marijuana during pregnancy (p-value<0.0001). And 66.6% of the adolescents participating in the survey used marijuana alone from other illegal drugs.
Martinez; Ferriani (42)	Recognizing the relationship between the characteristics of pregnant adolescents and drug resistance.	Cigarette, marijuana	20 (15-18 years old)	A tendency in this young generation is to start early with sexual relations; mothers at the age of 14, interrupt school ingenuity. Additionally, the physiological anatomical development of adolescents and the presence of menarche at an increasingly young age aroused sexual practice irresponsibly, which would influence pregnancy at an early age.

Golder et al. (43)	Test a hypothesis on the usefulness of attachment theory to help understand drug use.	Alcohol, drugs (marijuana, crack or cocaine, amphetamines, barbiturates, tranquilizers, hallucinogens, inhalants and heroin or other opiates)	232 (13-18 years old)	Aggressive adolescents with manifestations of conduct disorder are at higher risk of becoming pregnant when compared to those with opposite behavior. The same characteristics associated with the problematic behavior of the mother of adolescent mothers can affect their parental abilities, with adverse effects on babies. Their children are more likely to experience poverty, be children of single mothers, mothers with low schooling, mothers with higher depression, generally with poor parents and with increased use of drugs at home.
De Genna *et al.* (44)	Examine the role of the initial and current principles of marijuana use related to the risk of sexually transmitted diseases in a sample of pregnant adolescents.	Marijuana	279 (12-18 years old)	Marijuana use and early initiation were positively associated with sexually transmitted disease infection *(p-value*<0.001). External problems and marijuana use increased number of sexual partners and higher number of sexual diseases in adolescents.
Caputo; Bordin (5)	Assess individual and family factors associated with teenage pregnancy, including frequent use of alcohol and drugs by family members.	Alcohol, marijuana, cocaine	408 (13-17 years old)	Low paternal education, lack of information on sexuality and fertilization, and the use of illicit drugs by a resident family member were *risk factors (p-value*<0.001). Frequent use of illicit drugs by a resident family member is a factor strongly associated with teenage pregnancy, regardless of other risk factors*(p-value*<0.001).
De Genna et al. (45)	Identify risk factors prior to drug use during adulthood; and identify risk factors for regular and persistent tobacco use, excessive alcohol, and marijuana use.	Alcohol, cigarettes, marijuana	292 (12-18 years old)	The adolescents in the sample had higher rates of tobacco use, excessive alcohol consumption and marijuana use compared to a similar sample from the same state who were not adolescent mothers*(p-value*<0.001).

Spears et al. (46)	Examine the changes among adolescent girls in drug use during pregnancy and the postpartum period.	Alcohol, cigarettes, marijuana	305 (13-18 years old)	Substance use increased postpartum and resumption was predicted by variables that indicated a high level of vulnerability*(p-value*≤0,001).
Cruz et al. (47)	Identify the knowledge of pregnant adolescents about the risks related to drug use during pregnancy.	Alcohol, cigarette, marijuana, crack, solvent	30 (13-19 years old)	Regarding the risks to the mother, 43.3% of the adolescents could not report it; 36.6% stated difficulty breathing; 16.6% complications in childbirth; 10% hypertension; 6.6% diabetes and maternal death. Regarding the risks to the fetus, 50% mentioned respiratory problems; 46.6% congenital malformation; 20% abortion and 6.6% mental retardation.
Faler et al. (48)	Study the association between demographic factors, family psychosocial characteristics, tobacco, alcohol and other drug use, and teenage pregnancy.	Alcohol, cigarette, and other drugs	431 (14-16 years old)	Lower economic insertion; not having lived with parents between 10 and 14 years old; experience in the care of children; brothers who had children before the age of 20; experimentation with tobacco, alcohol and other drugs were associated with teenage pregnancy (*p-value*≤0.05).
Miura *et al*. (49)	Present and analyze the case of a drug-addicted, pregnant, and lifelong victim of domestic violence.	Alcohol and other drugs	1 (17 years old)	The domestic violence experienced at the beginning of the relationships severely affected the emotional maturation of the adolescent, triggering the development of psychopathologies, providing to become more susceptible to the use of drugs.
Schiff *et al*. (50)	Assess the exposure of pregnant adolescents to conflict and violence of parents' intimate partners.	Alcohol, marijuana	619 (13-19 years old)	Adolescents were more likely to manifest anxiety, nicotine, alcohol and marijuana and depressive disorders (*p-value*<0.01).
Salas-Wright *et al*. (51)	Provide a comprehensive examination of drug use among pregnant adolescents.	Alcohol, marijuana	810 (12-17 years old)	Pregnant adolescents were significantly more likely to try a variety of alcohol, marijuana, causing other drug-related disorders.

Hendrick *et al.* (52)	Assess the impact of drug use with older sexual partners.	Alcohol, marijuana	2066 (12-14 years old)	The findings indicate that programs to identify drug use in adolescence act as an important mechanism of control, as they enable specific interventions in the prevention of health, as well as in the prevention of sexual diseases and early pregnancy (*p-value*<0.005).
Mason e*t al*. (53)	Examine cumulative contextual risk at birth as a predictor of adolescent drug use to determine the degree to which cumulative contextual risk predicts such specific results beyond their effect on overall behavior.	Cigarette, marijuana	6963 (15-16 years old)	This study documented the general and specific effects of cumulative contextual risk on the birth of babies of adolescent *drug-using mothers (p-value*<0.05).

Discussion

The present study dealt with a current, worrying, and urgent phenomenon of care, constituting a systematic review of studies of pregnant adolescents who use drugs. The search resulted in 15 articles. All of them directly addressed the theme, contributing to our understanding of the problem, revealing facets and characteristics of this population that, when viewed in its contextual complexity, seemed interconnected: drug use, complications in sexual behavior, lack of social support, physical and sexual violence, premature pregnancy, and school dropout.

The results acquired in this research emerge that it is not possible to describe pregnancy during adolescence in a deterministic and causal way, since it is the product of conjunction of multiple variables[1,3,54]. According to the data obtained and the diversity of results collected, the position of the authors who describe adolescent pregnancy as a phenomenon involving different risk factors is confirmed[2,55,56].

Maternal use of illicit drugs is a critical problem, and adolescent mothers seem to be at high risk for such behaviors[5,40-44]. Research shows a positive association between pregnancy before the age of 15 and problematic behaviors such as drug use[45-47,54]. In general, maternal drug use is a critical social and clinical problem[47]. Although drug use patterns are different among adolescents and adult women[45]. The use of most substances is started before the age of 16 (e.g., marijuana)[47], and differences in usage patterns suggest that adolescents are at even greater risk than adult women for drug use when their children are born[46].

A convergent point in the results points out that adolescent pregnancy, drug use and other behavior patterns seem to be strategies for overcoming a chaotic family context[3,5,8,10,12,14,15,17,24,57,58]. Quinlivan; Evans[41] reinforce that drug use is an escape mechanism for an adolescent girl, who is confronted with an environment with lack of support and abuse, which makes her more likely to be socially isolated, or to be a victim of domestic violence than those who are not users. Therefore, the adolescent mother under the influence of drugs, and with little social support, will be unable to safely care for the baby and thus a continuous cycle of neglect sets in[48,50,53]. These findings are consistent with behavior theory, externalizing risky sexual behaviors[59,60].

It is also noteworthy that drug use and early initiation were positively associated with behavioral problems, a greater number of sexual partners and infection with sexually transmitted diseases, with emphasis on *Chlamydia trachomatis, Neisseria gonorrhoeae, Genitalium mycoplasma* and HIV[61-66].

The use of drugs during prenatal care confers multiple potentially long-lasting adverse effects on the newborn[67,68]. Thompson *et al*.[67] inspected animal and human studies that studied the effects of the use of prenatal substances on fetal brain development. These effects varied according to substance and frequency of use. Exposure to alcohol can have severe neurodevelopmental consequences and result in fetal alcohol syndrome. Prenatal exposure to cigarettes is positively associated with *Deficit* hyperactivity, antisocial behavior, and learning difficulties. Children exposed to cocaine in utero may exhibit behaviors that mirror the disorder of the *Deficit* attention and hyperactivity.

In addition, maternal drug use persists in having significant consequences after birth. For example, alcohol can pass through breast milk and complicate child development[69]. Exposure to secondhand smoke is positively associated with respiratory infections, ear infections and asthma[70]; and has been suggested to be a primary risk for sudden baby death syndrome[60,70]. Mothers who use substances may have difficulty meeting children's interaction needs[71,72]. In addition, the use of alcohol and drugs contributes to child neglect and abuse and, as child abuse can be a precursor to drug use and can even create generational cycles of consumption[73,74].

In this study, an association was found between the recurrence of adolescent pregnancy and some specific variables, such as age, schooling, occupation, type of delivery, number of prenatal visits and birth weight[1,3,5,11,23,40]. The comparison between primiparous and multiparous adolescents indicates a picture of greater social vulnerability among

the second[49], who have less access to education, health services and the labor market, which is evidenced by lower schooling, greater dropout of school, higher proportion of young people who, in addition to being out of school, are also not in the labor market, and lower frequency of prenatal care[34]. Moreover, variables related to school performance (low level of education, repetition, interruptions, and school dropout) have been strongly associated with the occurrence of adolescent pregnancy, successive pregnancies, and quick-recurrent pregnancies during this period of life[5].

As an inherent limit to the study, it can be pointed out that only two longitudinal studies were obtained, which, if there were more of such studies, one could have more effective responses to the problem studied here. This limit does not compromise the results found, as it brings elements of a population that requires many studies and intervention, especially in adolescents with lower purchasing power.

The consistent finding that drug use rates increase after the birth of babies represents a failure in the opportunity for intervention. Better knowledge of factors that increase the problematic risk of drug use and patterns of use among adolescent mothers is the first step in developing effective interventions to solve this problem.

Finally, many of the conceptions of being adolescent today reflect static and ambivalent views among the discourse about adolescents as protagonists of development or subjects of rights, hiding their vulnerability. Consequently, there is a gap between the formal recognition of adolescents as subjects of rights and the sociocultural conceptions and evaluations of adolescence, which increases situations of vulnerability and risk in relation to teenage pregnancy[58].

Conclusion

Based on the biographical trajectories of the participants, the studies sought to address the way in which adolescents give meaning to their experiences of pregnancy, motherhood, sexuality, and reproduction and why pregnancy continues to be a constant rise, as the studies analyzed denote.

This review revealed several areas that need further research. Considering the effects that the growing and worrying use of illicit drugs and the brevity of initiation in young people today may have a significant impact on the development of adolescents, the characteristics of interactions between family and society. Topics such as the stigma associated with being an adolescent, without study, without profession, alien to society, invisible to public policies and pregnancy outcomes, remain obscure and should be the subject of future investigations, preferably in multicenter studies.

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