The Consequences of Adolescent Pregnancy: A Social, Medical, and Psychological Analysis

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ABSTRACT:

Introduction: Adolescent pregnancy remains a contentious issue despite improvements in quality of life and increased access to sexual education. The average age of first pregnancy has shifted due to financial instability among young people, leading to delayed pregnancies until financial stability is achieved. Teenage mothers face social stigma, and early sexual initiation not only increases the risk of pregnancy but also sexually transmitted infections (STIs). Often, adolescent pregnancies are unwanted, resulting in delayed medical consultation due to fear or ignorance.

Aim of the Study: This study aims to investigate the medical and social implications of adolescent pregnancy, emphasizing the importance of early sexual education and comprehensive healthcare support.

Description of the State of Knowledge: Adolescent pregnancy, defined as pregnancy between ages 10 and 19, is a global concern with millions of cases annually. It poses significant health risks, including premature birth, low birth weight, and intrauterine growth restriction. Socially, it affects educational attainment and financial stability, with adolescents from lower socioeconomic backgrounds facing greater challenges. Early sexual initiation and risky sexual
behaviors further compound the issue, increasing the risk of STIs. Lack of comprehensive sexual education exacerbates these risks, highlighting the need for multidisciplinary support from healthcare professionals.

**Conclusions:** Adolescent pregnancy requires a holistic approach encompassing medical, social, and legal dimensions. Effective sexual education programs, involving gynecologists, pediatricians, and educators, are essential for prevention. Legal frameworks must protect adolescents and address issues of consent and sexual health. Additionally, access to comprehensive healthcare services, including prenatal care and contraception, is crucial for mitigating the adverse effects of adolescent pregnancy on both individuals and society.

**KEY WORDS:** Adolescent pregnancy, Sexual education, Comprehensive healthcare, Risky sexual behaviors

**INTRODUCTION:**

The phenomenon of adolescent pregnancy continues to be a subject of considerable controversy, notwithstanding improvements in quality of life and enhanced access to sexual education [1]. Despite these advancements, there has been a notable shift in the average age at which adolescents experience their first pregnancy, often attributed to the increasingly challenging financial circumstances faced by young individuals contemplating starting a family [2]. This socioeconomic backdrop has resulted in a postponement of parenthood until achieving a certain level of financial stability. Consequently, teenage mothers find themselves subjected to heightened scrutiny from both society and their peers compared to previous decades [1,2,3].

Furthermore, early sexual initiation not only escalates the risk of pregnancy but also increases vulnerability to sexually transmitted diseases (STDs). The prevalence of unwanted pregnancies among adolescents is significant, leading to a tendency for mothers to delay seeking medical care due to fear or a lack of awareness. Addressing this issue requires healthcare professionals to adopt a more empathetic and permissive approach in guiding adolescent women through this critical period [4,6].

It is important to recognize the multifaceted nature of adolescent pregnancy, which presents not only medical challenges but also social and economic implications [5]. By understanding and addressing the underlying factors contributing to this phenomenon, healthcare providers and policymakers can work towards implementing comprehensive
strategies aimed at reducing the incidence of adolescent pregnancy and providing better support for teenage mothers[1,6].

Social Background

Adolescent pregnancy presents challenges not only medically but also socially[1,7]. Currently, a lowered age of menarche is observed, linked to improved nutrition and enhanced standards of living and healthcare accessibility. Unplanned pregnancies are more prevalent in socioeconomically disadvantaged groups, although they impact all strata of society due to limited education access, financial constraints on contraception, and familial influences [5,7].

Additionally, teenagers face elevated risks of malnourishment, delayed pregnancy detection, and restricted prenatal care accessibility. Emotional stress accompanies teenage pregnancy, leading to increased substance use during pregnancy. Teenage mothers exhibit higher rates of tobacco use (36% compared to 7% of adult women) and alcohol and drug consumption (1.1% compared to 0.2%)[1,8,9,10]. They also experience heightened instances of partner violence and abandonment, exposing them to unstable and unsafe home environments [5]. Balancing motherhood with education significantly diminishes the likelihood of completing high school, consequently impeding further educational pursuits for the mother [1,11]. Consequently, many teenage mothers confront exacerbated financial circumstances in the future [11]. Conversely, those who opt to resume schooling postpartum exhibit reduced vulnerability to rapid repeat pregnancies, underscoring the imperative of fostering continued education for teenagers.

Recent years have witnessed a noticeable decline in the age of sexual debut. Research findings indicate an average age of sexual initiation at 14.7 years, with 9.2% of fifteen-year-old girls reporting sexual activity [12,13]. Alarmingly, 27% of sexually active fifteen-year-olds acknowledged foregoing contraceptive methods during their most recent sexual encounter. Similarly, among sexually active eighteen-year-olds, one in four individuals reported three or more sexual partners, with 49% resorting to ineffective contraceptive methods such as withdrawal or natural methods. Such unsafe sexual behaviors not only elevate the risk of unintended pregnancies but also heighten susceptibility to sexually transmitted infections (STIs) [12,13].
Sexual education

Sexual education is a comprehensive approach aimed at imparting knowledge about both the physiological and psychological aspects of human reproduction [14,15]. It plays a crucial role in promoting healthy sexual behaviors and relationships among adolescents [16]. However, the absence of a well-defined and comprehensive sexual education curriculum in Poland for the age group most vulnerable to sexual health issues poses significant challenges [17].

Inadequate sexual education often leads to adolescents engaging in risky sexual behaviors, such as unprotected intercourse, which can result in unintended pregnancies and exposure to sexually transmitted infections (STIs) [16]. This highlights the importance of implementing effective sexual education programs tailored to the specific needs and developmental stages of adolescents [14].

Furthermore, the individuals tasked with delivering sexual education programs must possess the requisite knowledge, training, and sensitivity to address the diverse needs and concerns of adolescents. Unfortunately, there is often a lack of qualified educators in this field, leading to ineffective or inconsistent delivery of sexual education in schools and other settings [14].

To address these challenges, it is essential to involve a multidisciplinary approach to sexual education, involving not only gynecologists but also pediatricians. Pediatricians, who are often the primary healthcare providers for adolescents, are well-positioned to provide comprehensive sexual education and counseling, including information on contraception, STI prevention, and healthy relationships [18].

By integrating sexual education into routine healthcare visits and promoting open and nonjudgmental discussions about sexual health, healthcare providers can empower adolescents to make informed decisions about their sexual and reproductive health. Additionally, involving parents and caregivers in sexual education initiatives can help create a supportive environment for adolescents to navigate these sensitive topics [14-18].

Overall, comprehensive sexual education programs, delivered by qualified healthcare professionals in collaboration with educators and parents, are essential for promoting healthy sexual behaviors, reducing the incidence of teenage pregnancies and STIs, and fostering positive relationships among adolescents [18].
Legal Aspect:

Under Polish criminal law, individuals who engage in sexual activity with a minor below the age of 15, or coerce them into participating in such acts, are subject to imprisonment ranging from 2 to 12 years [19].

The legislature contends that any person involved in sexual acts with a minor (<15 years old) infringes upon their sexual autonomy, not because they defy their consent explicitly, but due to the minor's inability to provide a legally valid decision regarding consent to these actions [20].

Consequently, a potential father of a child conceived through intercourse with a minor under 15 years old must acknowledge the potential accusation of pedophilia [19].

It is mandatory for both public and administrative institutions to immediately report any suspicion of the aforementioned prohibited behaviors to law enforcement authorities [19].

Furthermore, Polish law emphasizes the protection of minors from sexual exploitation and abuse, with strict penalties imposed on perpetrators. The legal framework aims to safeguard the rights and well-being of minors, recognizing their vulnerability and the need for enhanced protection against any form of sexual misconduct. This legislative approach underscores the importance of prioritizing the welfare of minors and holding accountable those who violate their rights through unlawful sexual activities [19].

Pregnancy Management:

Navigating adolescent pregnancy entails confronting significant challenges, particularly for girls aged 11-14. The intricate interplay of heightened stress levels, nutritional deficiencies, substance abuse, and financial instability complicates the trajectory of pregnancy. Moreover, pregnant teens may grapple with amplified stressors stemming from housing insecurities, domestic violence, or abandonment by their partners [21]. Hence, early detection of pregnancy becomes pivotal in mitigating perinatal risks.

The World Health Organization (WHO) advocates for a minimum of four prenatal visits for uncomplicated pregnancies, strategically scheduled at 16 weeks, between 24 and 28 weeks, at 32 weeks, and at 36 weeks. Essentially, the medical oversight for pregnant adolescents mirrors that of pregnant adults, underscoring the need for comprehensive care [2].
Adolescents may present with hallmark symptoms of puberty during clinic visits, such as irregular menstruation, abdominal discomfort, dizziness, vomiting, or spotting. However, it's imperative to acknowledge that teenagers often withhold information regarding sexual activity, especially when accompanied by their parents during consultations [21,22,23].

The principal complications confronting pregnant minors encompass premature delivery, low birth weight, intrauterine growth restriction, or stillbirth [23]. These adversities are often intricately linked to uterine immaturity [22]. Studies have underscored a correlation between sexual maturation and the volumetric and structural changes in the endometrium, with growth persisting into early adulthood [24,25].

Educational interventions on proper nutrition constitute a cornerstone during the initial prenatal visit. Pregnancy heightens the demand for essential nutrients, including folic acid, iron, and iodine. Dietary guidelines for pregnant adolescents, as delineated by the WHO, encompass [2,26]: Tailored caloric intake ranging from approximately 2200 to 2500 kcal, contingent upon individual nutritional status. Supplementation with 0.4 mg of folic acid and 30-60 mg of elemental iron over a 3-month period. Notably, the Polish Society of Gynecologists and Obstetricians (PTGiP) permits iron supplementation up to 30 mg/day for non-anemic women with ferritin levels below 60 mcg/l after the 16th week of pregnancy, aiming to avert the adverse effects of iron overload. Adequate iodine intake of 200 μg per day. Daily consumption of 200 mg of DHA. Provision of 1500-2000 IU of vitamin D [26].

Subsequently, screening for sexually transmitted diseases (STDs) should be integrated into the visit. Given adolescents' propensity for engaging in risky sexual behaviors, it becomes imperative to rule out potential infections with HIV, Chlamydia trachomatis, Neisseria gonorrhoeae, Treponema pallidum, HPV, or HSV [2].

The delivery of perinatal care for individuals up to the age of 19 should adhere to the guidelines outlined by the Polish Society of Gynecologists and Obstetricians and the Minister of Health's Regulation on the Organizational Standard of Perinatal Care dated August 16, 2018 [2, 27]

CONTRACEPTION

Obstacles hindering access to contraceptive knowledge and resources encompass cultural stigmas, legal constraints, attitudes of healthcare providers (HCPs), and the structure of healthcare systems [28,29]. The accessibility and acceptance of contraception among adolescents fluctuate across regions and even among countries within the same geographic area.
Adolescents may encounter obstacles when seeking contraception. Healthcare providers (HCPs) themselves may exacerbate these obstacles by imposing their own values or moral beliefs, enforcing improper medical contraindications for contraceptive use, needlessly postponing the start of contraception, demanding unnecessary investigations before initiating contraception, or perpetuating misconceptions about contraceptive methods [30].

Adolescents should have unrestricted access to comprehensive and confidential contraceptive services. It's crucial to discuss the extent and boundaries of confidentiality with adolescents and their caregivers, emphasizing it further when the adolescent is alone. Adolescents should also be informed about situations where confidentiality may be breached [31]. Respect for adolescents' contraceptive choices is paramount, and coercion should never be tolerated [32].

Clinics should create a welcoming environment for adolescents, offering flexible scheduling, convenient hours (aligned with school schedules), and age-appropriate educational materials. Scheduled follow-up visits are essential to assess method suitability and ensure ongoing contraceptive compliance [33].

Adolescents should receive counseling on the necessity of using latex condoms consistently to lower the risk of sexually transmitted infections (dual protection). Regardless of the method of contraception chosen, HCPs need to debunk prevalent myths and misunderstandings and discuss potential side effects openly. Age alone should not be considered a reason to avoid any contraceptive method [34].

Adolescents should be informed about emergency contraception (EC) regardless of their chosen contraceptive method and understand its utility in cases of contraceptive failure, such as condom breakage, inconsistent use of hormonal contraception, or lack of contraception altogether. Increased access to hormonal EC does not lead to more instances of unprotected intercourse (UPI), higher risk-taking behavior, or reduced use of effective contraception. Hormonal EC can be taken up to 120 hours after UPI, with LNG-EC being more effective when taken sooner. UPA-EC may be more effective than LNG-EC in obese adolescents and can be used up to five days after UPI [35].

EC serves as a backup method for condom use, providing an additional layer of protection in case of condom failure or non-use. However, the efficacy of hormonal EC is lower than regular contraceptive use, and its preventive efficacy should not be overestimated. In most cases, EC provision should be viewed as an opportunity for counseling and prompt initiation of continuous and effective contraception [36].
Intrauterine Contraception

Intrauterine Contraception it’s a highly effective and suitable for all ages, intrauterine contraception (IUC) represents a safe option for adolescents. Despite increased expulsion rates among adolescents compared to older women, IUCs are endorsed by numerous international societies as a primary contraceptive choice for adolescents [37]. With a 99% efficacy rate and over 80% continuation at one year, both copper and levonorgestrel intrauterine devices (Cu-IUD, LNG-IUS) offer reliable pregnancy prevention [37]. While Cu-IUD users may experience heavier menstrual bleeding and dysmenorrhea, LNG-IUS users may appreciate reduced menstrual bleeding and non-contraceptive benefits such as treatment for heavy menstrual bleeding. Regardless of the type chosen, IUC insertion success rates in adolescents are high at 96% [38].

LNG-IUS may be preferred by adolescents for its non-contraceptive benefits, although some may experience hormonal side effects. Handouts outlining important considerations, such as the need for ongoing condom use for STI protection and common side effects, can aid in patient education [37,38].

Progestin-Only Contraceptive Options

Progestin-only contraceptives offer a hormone-based alternative suitable for adolescents unable to use estrogen-containing methods. The contraceptive implant, a WHO Tier 1 method, provides discreet, long-term protection with minimal user action required. Depo-medroxyprogesterone acetate (DMPA) injections, although effective, may lead to weight gain and reversible bone mineral density loss, particularly in adolescents. The progestin-only pill (POP) requires daily adherence and may result in unscheduled bleeding, making consistent use challenging [39].

Combined Hormonal Contraception

Combined hormonal contraception (CHC), comprising estrogen and progestin, is a versatile option for adolescents. While CHC users may experience side effects such as unscheduled bleeding and headaches, extended cycle use offers benefits such as reduced menstrual symptoms. Methods like the contraceptive patch and vaginal ring provide discreet,
user-friendly alternatives to oral pills. Despite concerns about venous thromboembolism and mood changes, CHC remains a safe and effective choice for many adolescents [40].

Barrier Contraception

Male condoms, widely used among adolescents, offer affordable and accessible protection against pregnancy and STIs. While dual method use remains a challenge, HCPs play a crucial role in promoting consistent condom use alongside other contraceptive methods. Regardless of the chosen method, encouraging adolescents to prioritize condom use for STI prevention and contraceptive backup is essential [32].

CONCLUSIONS

Adolescent pregnancy presents multifaceted challenges that necessitate comprehensive intervention strategies. The intricate web of socioeconomic disparities, educational deficiencies, and inadequate access to reproductive health services underscores the urgency of addressing this public health issue.

Effective management of adolescent pregnancy demands a multidisciplinary approach, encompassing robust educational initiatives, accessible healthcare services, and targeted interventions to mitigate social determinants of health.

Furthermore, legal frameworks must be reinforced to safeguard the rights and well-being of pregnant adolescents, while stringent measures are warranted to address instances of sexual exploitation and abuse.

In conclusion, concerted efforts are imperative to empower pregnant adolescents with the necessary resources, support, and education to navigate pregnancy successfully and ensure optimal maternal and child health outcomes. By fostering a conducive environment for adolescent health and well-being, we can strive towards a future where every young person has the opportunity to thrive.
Author's contribution

Conceptualization KB, PF; methodology, BB,KŻ-K; software,AP,MM; check,SB-Z,SB, and KK; formal analysis, MN-J, KB, BB; investigation, PF, KŻ-K, AP; resources, SB-Z, MM; data curation, KK,MN-J; writing-rough preparation, KB; writing-review and editing, KB,PF,BB; visualization, KŻ-K, AP; supervision, MM, SB-Z, SB; project administration, SB. All authors have read and agreed with the published version of the manuscript.

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[27] Annex to the Regulation of the Minister of Health of 16th August 2018 (pos. 1756)


