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Selected aspects of risky sexual behaviour


Wybrane aspekty ryzykownego zachowania seksualnego

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Abstract

Purpose: This article aims to provide a comprehensive overview of risky sexual behaviour, emphasising its multifaceted nature, underlying mechanisms, and effective intervention strategies. It also highlights critical gaps in existing research to guide future inquiry and public health policy development. **Views:** Risky sexual behaviour remains a major global concern, especially among adolescents and young adults, significantly affecting not only individuals but also populations worldwide. Understanding this issue is complicated by the diversity of definitions and the multitude of factors influencing it at the individual, social, and environmental levels. The consequences of such behaviour are serious, impacting not only physical health but also social well-being. This article explores the definitions and multifaceted causes behind risky sexual actions. It also reviews key theories that help explain why individuals engage in such behaviour. **Conclusion:** Understanding and addressing risky sexual behaviour is challenging due to its intricate nature and the diverse range of contributing factors. However, this article underscores that a multifaceted approach, integrating theoretical insights with evidence-based interventions, holds significant potential for mitigating its adverse impacts. The lack of research based on large global datasets leads to interpretive limitations and highlights the need for further research in this area.

Keywords: public health, adolescents, interventions, risky sexual behaviour

Streszczenie

Cel: Celem niniejszego artykułu jest przedstawienie kompleksowego przeglądu ryzykownych zachowań seksualnych, ze szczególnym uwzględnieniem ich wielowymiarowego charakteru, mechanizmów leżących u ich podstaw oraz skutecznych strategii interwencyjnych. Artykuł wskazuje również istotne luki w dotychczasowych badaniach, które mogą stanowić punkt wyjścia dla przyszłych analiz i działań w zakresie kształtowania polityki zdrowotnej. **Poglądy:** Ryzykowne zachowania seksualne pozostają poważnym problemem na całym świecie, zwłaszcza wśród nastolatków i młodych dorosłych, mającym znaczący wpływ nie tylko na jednostki, ale także na populację w skali globalnej. Zrozumienie tej kwestii jest utrudnione ze względu na różnorodność definicji i wielość czynników oddziałujących na poziomie indywidualnym, społecznym i środowiskowym. Konsekwencje takich zachowań są poważne i obejmują zarówno zdrowie fizyczne, jak i dobrostan społeczny. W artykule omówiono definicje ryzykownych zachowań seksualnych oraz ich wielowymiarowe przyczyny, a także sprawdzono główne teorie wyjaśniające, dlaczego ludzie angażują się w takie zachowania. **Wnioski:** Zrozumienie i skuteczne przeciwdziałanie ryzykownym zachowaniom seksualnym jest wyzwaniem ze względu na złożoność zjawiska i różnorodność czynników na nie wpływających. W artykule podkreślono jednak, że wieloaspektowe podejście, łączące perspektywy teoretyczne z interwencjami opartymi na dowodach, ma znaczący potencjał w ograniczaniu ich negatywnych konsekwencji. Jednocześnie wskazano na niedostatek badań obejmujących duże, globalne zbiory danych, co może ograniczać możliwości interpretacyjne i wskazuje na potrzebę dalszych analiz w tym obszarze.

Słowa kluczowe: zdrowie publiczne, młodzież, interwencje, ryzykowne zachowania seksualne

INTRODUCTION

Risky sexual behaviour (RSB) is a widespread public health problem worldwide, disproportionately affecting adolescents and young adults. This demographic group is particularly vulnerable due to the rapid physical, cognitive, sexual, behavioural, emotional and social development characteristic of these formative years (Cicek Ozdemir and Cevik, 2025). This transitional period is marked by physical maturation that often progressed more quickly than psychological and social maturity (Badillo-Viloria et al., 2020). For example, a meta-analysis conducted in Ethiopia revealed a substantial pooled prevalence of RSB, reaching 41% among students at secondary school and higher education levels (Ndagijimana et al., 2023). Globally, young individuals are recognised as being at elevated risk for acquiring human immunodeficiency virus (HIV)/acquired immunodeficiency syndrome (AIDS) (Aynalem et al., 2022).

The consequences of RSB are extensive and severe, encompassing a broad spectrum of adverse outcomes. Physically, these include unwanted pregnancies, unsafe abortions, induced and unhealthy miscarriages, the illicit sale of infants, sexually transmitted infections (STIs) such as HIV/AIDS, gonorrhoea, chlamydia, trichomoniasis, and hepatitis B, and even maternal mortality (Cicek Ozdemir and Cevik, 2025). Beyond physical health, the psychological and social repercussions are profound, manifesting as depression, suicide attempts, academic disengagement, school dropout, and broader academic and labour-market impacts (Badillo-Viloria et al., 2020). The consequences of RSB extend not only to individuals, but also negatively affect the development of societies globally. Effective prevention requires comprehensive, multisectoral interventions that recognise the intergenerational and systemic nature of the problem, reaching beyond direct health effects to encompass broader developmental and socioeconomic consequences. The morbidity and mortality associated with STIs also have financial implications for the state, or impose a burden on the health system (Tekletsadik et al., 2021).

METHODS

When conducting this systematic review, a significant focus was placed on the synthesis of evidence based on recent and high-quality studies. The time frame was selected with the view to capturing the most contemporary epidemiological trends, theoretical developments, and emerging intervention approaches to risky sexual acts among youth (Tab. 1). At the same time, acknowledging the foundational value and continued relevance of earlier research, selected earlier studies were also incorporated. These analyses contribute essential theoretical grounding, historical rates of prevalence, and context to enrich longitudinal understanding within the field. Their integration gives a complete picture that situates current results within the broader trajectory of research development.

Database/source	Number of articles
PubMed	20
NCBI (non-PubMed)	1
SciELO	1
Other repositories/sources	10
Total	32

Tab. 1. Number of articles retrieved from individual databases and other sources

By integrating rigorous contemporary evidence with pioneering works of paramount significance, this review offers a modern snapshot of RSB among adolescents and a contextualised vision of how it has evolved. Such integration enhances the robustness and practical utility of the inferences drawn, thereby informing present-day policy and guiding future research priorities.

DEFINING RSB

RSB is broadly defined as any activity that increases a person's vulnerability to sexual and reproductive health problems. This definition includes both a person's own actions and those of their sexual partners. The changing nature of sexual interactions, especially with the advent of digital platforms, has expanded the definition of RSB beyond traditional physical acts to include online behaviours such as sexting, exposure to pornography, and unwanted online sexual contact. This evolution underscores the critical need for public health interventions adapted to new technologies, which will address problems that are destroying societies from inside (Aynalem et al., 2022).

Examples of RSB include:

- Unprotected intercourse refers to any sexual activity including vaginal, anal, oral, or manual contact that takes place without the consistent use of condoms or other reliable protective methods to prevent infections or unwanted pregnancy (Rodríguez-García et al., 2025).
- Sexual activity before the age of 18 is considered very risky, with possible disruptions in educational trajectories, etc. (Jaworska and MacQueen, 2015).
- Having multiple sexual partners or frequently changing partners substantially increases the risk of adverse outcomes (Tilahun and Mamo, 2020).
- Engaging in sexual activity under the influence of alcohol or illicit drugs is a major risk factor, as it impairs judgment and reduces the likelihood of using protective measures. One study found that alcohol use and smoking had the most pronounced effect on premarital sexual behaviour scores (Cicek Ozdemir and Cevik, 2025).
- Unwanted online sexual exposure, sexting, and exposure to pornography. These online behaviours have been linked to increased engagement in condomless sex and coercive sexual behaviours offline. Viewing pornography specifically has been identified as a significant factor associated with RSB (Chou et al., 2024).

- Engaging in sex work is also recognised as a form of RSB (Siegler et al., 2019).

DETERMINANTS AND ASSOCIATED FACTORS OF RSB

Individual characteristics play a pivotal role in predisposing individuals to RSB. Adolescence is a particularly vulnerable period for many reasons, including changes in the body, family problems, and peer groups that exert pressure (Surace, 2015). Substance use is consistently and strongly associated with increased engagement in RSB. The consumption of alcohol and illicit drugs, and tobacco, significantly impairs judgment and reduces the likelihood of using protective measures during sexual activity. Research clearly shows that the use of psychoactive substances is very often associated with reduced caution during sexual encounters (Kaggwa et al., 2022). Comprehensive strategies that raise public awareness of the dangers of RSB can yield enormous benefits on many levels (Benchamas et al., 2024; Jepsen et al., 2024; Settheekul et al., 2019).

Impulsivity, characterised by a lack of foresight and a tendency to make hasty decisions or act without deliberation, is strongly associated with both passive and active risky sexual practices. The role of self-esteem and self-perception, however, is more nuanced. While one study found no significant association between self-esteem and premarital RSB (Cicek Ozdemir and Cevik, 2025), other studies suggest that lower self-esteem may lead to earlier sexual initiation (Inanc et al., 2020; Spencer et al., 2002). These contradictory results regarding the association between self-esteem and RSB, as well as the unclear association with sexual health knowledge, indicate that such psychological factors may be highly dependent on the immediate environment. Future research needs to examine potential mediating or moderating variables to clarify these relationships and inform more targeted interventions. Similarly, the association between sexual health knowledge and RSB remains insufficiently studied. In addition, mental health conditions such as depression and anxiety have been identified as contributing factors to RSB (Chou et al., 2024; Inanc et al., 2020).

Interpersonal relationships have a substantial impact on an individual's involvement in RSB. The family environment in particular plays a key role. Factors such as parental education and family status are associated with premarital RSB. Single-parent homes increase the likelihood that a child will engage in RSB. A lack of positive parental involvement and open family communication are significant risk factors; conversely, strong and supportive family relationships have been shown to reduce the risk of active online sexual behaviour (Dittus et al., 2023). Parental monitoring and values that discourage teenage sex function as protective factors. Therefore, children living away from their parents are more likely to be exposed to RSB. Violence from close relatives or abuse in a broader sense should also be recognised as risk factors. Bullying or exclusion from

a peer group is associated with attempts to seek acceptance elsewhere, thereby increasing the likelihood of RSB (Dittus et al., 2023). A recent study by Toboła (2025) conducted in Polish youth care centres confirms this vulnerability. It highlights that socially maladjusted adolescents in institutional care face unique risks driven by the specific environment and structural barriers. Despite having a relatively high awareness of STDs, 36% of participants reported not using condoms due to lack of availability (pp. 64–65). Peer influence is another powerful interpersonal determinant. Peer pressure is a frequently cited factor compelling adolescents toward RSB. Having sexually active friends and perceived peer norms regarding condom use strongly predict actual condom use. Association with peers who engage in substance use also increases an individual's risk of RSB (Peçi, 2017).

Socioeconomic status, unemployment, and residing in unsafe or high-poverty neighbourhoods are associated with earlier sexual initiation and poorer sexual health outcomes. Urban residence, for instance, has been linked to higher rates of RSB. Cultural and traditional rules, along with existing prejudices or misconceptions, can also significantly shape sexual behaviour patterns. The school environment may contribute to RSB; however, strong school connectedness, where students feel supported by adults, acts as a protective factor against risky behaviours (Muchimba, 2019; Underwood, 2019).

Exposure to sexual content on the Internet, television, or in films can lead to an earlier sexual initiation, more frequent sexual activity, and a more permissive approach to sex. Internet pornography has a particularly strong influence, as it is associated with a more liberal attitude to intimate matters. Similarly, frequenting nightclubs is linked to a greater tendency to engage in RSB (Aynalem et al., 2022).

Daily attendance at religious services has been shown to reduce the likelihood of RSB. Similarly, active participation in social activities, such as volunteering or extracurricular involvement, is associated with lower rates of sexual activity and RSB. The social ecological model (SEM) provides a solid essential framework for understanding the multifaceted aetiology of RSB, showing that such behaviour is not solely an individual choice but is significantly shaped by complex interactions across multiple social strata. This multi-level perspective emphasises that effective prevention and intervention strategies must be holistic, taking into account not only individual vulnerabilities but also complex interpersonal interactions as well as the environment in which young people live (Andayani et al., 2022).

THEORETICAL FRAMEWORKS FOR UNDERSTANDING RSB

The biopsychosocial model provides a comprehensive perspective through which to understand RSB, explaining it as a dynamic interaction of biological, psychological, and social factors. This model goes beyond simplistic, single-factor

explanations. From a biological perspective, factors such as puberty and increased levels of sex hormones during adolescence are understood to influence risky behaviour. These hormonal changes may affect brain development, particularly the reorganisation of dopaminergic neurons in the motivational system, which may lead to increased sensation seeking (Andayani et al., 2022).

Social cognitive theory (SCT), developed by Albert Bandura in 1986, posits that human behaviour is influenced by behavioural, personal, and environmental factors in a reciprocal and interactive manner. A central tenet of SCT is that behaviour is largely contingent on expected outcomes, which serve as powerful motivators guiding individuals' actions (Sirianni and Vishwanath, 2012). Key constructs within SCT that are relevant to understanding RSB include self-efficacy, observational learning, and outcome expectations (Graf et al., 2021).

SCT has found broad applications in the field of sexual health. Traditionally, it has been used to explain how exposure to pornography may influence aggression, adolescent sexual behaviour, and contraception use. More recently, SCT has been applied to understand the motivations behind creating and sharing sexually explicit user-generated content (SEUGC). Motivations for engaging in SEUGC may include entertainment, arousal, social incentives, and self-evaluative incentives, while anticipated adverse social outcomes can act as deterrents. For instance, perceived peer norms regarding condom use have been shown to predict actual condom use, aligning with SCT's emphasis on social influences. Furthermore, SCT has been extended to examine sexual risk behaviours in older adults, demonstrating that self-efficacy and sexual health conversations with healthcare providers indirectly influence sexual risk through sexual wellness goal motivation. SCT's emphasis on reciprocal determinism and the role of expected outcomes makes it a highly versatile and enduring framework for understanding RSB across diverse populations and evolving contexts. Its successful application to both traditional sexual health behaviours and contemporary phenomena such as SEUGC and sexual health decisions in older adulthood highlights its continued relevance in a rapidly changing social and technological landscape, providing a robust foundation for intervention design (Graf et al., 2021; Sirianni and Vishwanath, 2012; Surace, 2015).

The health belief model (HBM), conceptualised in the 1950s, was developed to understand and predict preventative health behaviours. It posits that an individual's engagement in health-related actions is primarily influenced by their beliefs about perceived health threats and the perceived benefits and barriers associated with taking action (Alyafei and Easton-Carr, 2026).

SEM explains RSB by looking at how different levels of influence interact. It does not attribute behaviour to one single cause. Instead, it shows that behaviour is shaped by a mix of factors: personal traits, relationships with others, the community someone lives in, institutions like schools

or workplaces, and broader social norms and policies. All these levels are interconnected and affect each other (Muchimba, 2019).

It is also crucial to address the nosological challenges recognised by clinicians when classifying RSB. Distinguishing between RSB and clinical conditions requires careful consideration of diagnostic frameworks such as ICD-11 and DSM-5. Terms related to "sexual deviance" or paraphilic disorders in ICD-11 represent distinct medical diagnoses and should not be conflated with voluntary risky behaviours. Furthermore, identifying conditions that may predispose individuals to RSB presents significant diagnostic challenges. Understanding these distinctions enhances conceptual clarity and prevents the stigmatisation of non-pathological sexual behaviours (Schippers et al., 2025).

Comprehensive sexuality education (CSE) is an educational process designed to increase understanding of the functional, structural, and behavioural dimensions of human reproduction. It encompasses a curriculum that addresses the cognitive, emotional, physical, and social dimensions of sexuality, with the aim of providing individuals with the knowledge, skills, attitudes, and values necessary for healthy sexual development. CSE interventions have consistently demonstrated significant effectiveness in reducing RSB among adolescents. These programmes have been shown to improve knowledge, skills, attitudes, and self-efficacy regarding condom and contraceptive use. They also increase awareness of access to contraceptives, strengthen intentions to purchase and use condoms, and promote sexual assertiveness. Most importantly, CSE has been shown to result in positive behavioural changes, including delaying sexual initiation, reducing the number of sexual partners, and lowering rates of STIs and unplanned pregnancies. Beyond direct effects on sexual health, CSE can also improve communication about sexual health between parents and adolescents, and has been linked to reduced rates of intimate partner violence. Notably, research indicates that CSE does not increase sexual activity, risk behaviours, or the incidence of HIV or other STIs, contrary to common misconceptions. While many positive effects of CSE persist over time in intervention groups, some studies have shown that these benefits may gradually wane (Rodríguez-García et al., 2025).

PRE-EXPOSURE PROPHYLAXIS

Pre-exposure prophylaxis prep (PrEP) constitutes a significant development in HIV prevention strategies. Clinical evidence indicates that consistent adherence to the medication regimen provides up to 99% efficacy in reducing the risk of HIV acquisition. It is imperative to note, however, that PrEP is a specialised pharmacological intervention rather than a supplementary health measure (National Institutes of Health, 2025). The key moment in the interaction with the patient is the selection of an appropriate dosage regimen. The physician, acting as a guide, helps the patient choose between the routine of daily dosing and the flexibility of an on-demand

regimen. The latter, although economically and psychologically attractive, requires a high degree of discipline and the ability to plan one's sexual activity, which for many individuals may be an insurmountable barrier (Molina et al., 2017). These recommendations are based on hard empirical data. The groundbreaking ANRS IPERGAY study, conducted among men who have sex with men, provided irrefutable evidence for the effectiveness of intermittent PrEP use. In its initial randomised phase, the study reported an 86% reduction in the risk of infection in the group using the drug on demand compared with placebo. Subsequently, in the open-label phase, effectiveness increased to 97% (Molina et al., 2017).

Equally important conclusions can be drawn from studies involving specific populations that are often overlooked in standard prevention programmes. Pregnant women are a group at increased biological risk, where the likelihood of HIV acquisition more than doubles. Research by Davey et al. (2020) confirms that the use of PrEP during this period is safe for both mother and child, with no negative impact on the course of pregnancy or infant development. Nevertheless, concerns about drug therapy and pregnancy-related symptoms such as nausea often lead to discontinuation, making the supportive role of the physician indispensable. An analysis of youth behaviour conducted by Koppe et al. (2021) in Germany further illustrates why young adults abandon preventive measures. It turns out that it is not only financial or systemic barriers, but above all changes in personal life. Young people do not want to "medicalise" everyday life, which prompts them to stop taking medication. This often happens without consulting a physician, which leaves them vulnerable to a return to risky behaviour.

In Poland, the framework for action is set by the recommendations from the Polish AIDS Scientific Society and the Government Health Policy Programme. The specificity of the Polish system is largely based on a network of consultation and diagnostic centres. This requires physicians to possess not only clinical knowledge, but also an understanding of reimbursement pathways and the availability of generic drugs. The guidelines clearly define the procedures for qualification, monitoring the safety of therapy, and its safe termination to prevent infections during the drug washout period (Ministerstwo Zdrowia, 2022).

CONCLUSIONS

RSB represents a complex, multidetermined public health issue with significant and lasting consequences for individuals, families, and society at large. Its prevalence, particularly among adolescents and young adults, underscores the urgent need for comprehensive and evidence-based interventions. Understanding RSB requires a multifaceted approach, drawing upon theoretical frameworks such as the biopsychosocial model, SCT, HMB, and SEM, each offering unique insights into the interplay of individual, interpersonal, and socio-environmental determinants.

The introduction of PrEP adds a powerful biomedical tool to traditional educational initiatives such as CSE. Yet high clinical efficacy does not automatically translate into real-world success. As this review indicates, reluctance among young adults to medicalise their daily routines, or the discipline needed for on-demand dosing, proves that the human element remains the decisive factor. The physician is no longer just a prescriber but a guide helping patients navigate the trade-off between safety and spontaneity.

Despite these advances, significant research gaps persist. The reliance on self-reported data limits certainty, necessitating better verification methods. Moreover, under-represented groups must be included to ensure that treatments are not just available, but accessible and culturally appropriate. Ultimately, the most effective approach is not singular. It is based on the integration of pharmacological advances with a deep understanding of behavioural mechanisms, ensuring that medical progress is supported by adequate psychological and social care.

Conflict of interest

The authors do not report any financial or personal connections with other persons or organisations which might negatively affect the content of this publication and/or claim authorship rights to this publication.

Author contribution

Original concept of study; collection, recording and/or compilation of data; analysis and interpretation of data; writing of manuscript: KŻ. Critical review of manuscript: ŁŚ. Final approval of manuscript: KŻ, ŁŚ.

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