

# Risky Sexual Behavior among Adolescents with Borderline Personality Disorder: A Mini Review

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**Abstract.** This mini-review explores various forms of risky sexual behavior (RSB) among adolescents with Borderline Personality Disorder (BPD), emphasizing the neurodevelopmental factors, family dynamics, and peer influences that contribute to these behaviors. Adolescents with BPD often experience emotional dysregulation and impulsivity, which increase their vulnerability to engaging in RSB, including promiscuity, unprotected sex, and sexting. A neurodevelopmental perspective highlights the role of brain immaturity in exacerbating impulsivity and emotional sensitivity during adolescence. Additionally, family structures, particularly emotionally abusive environments and insecure attachments, significantly contribute to the onset of BPD symptoms and related RSB. Peer influence, especially through social networks promoting risky sexual norms, further exacerbates these behaviors. Finally, RSB's detrimental impact on adolescent mental health, including increased emotional instability and vulnerability to victimization, is discussed. Future research should focus on interventions that target both familial and peer-related factors to mitigate RSB among adolescents with BPD.

**Keywords:** Borderline Personality Disorder, Risky Sexual Behavior, Adolescents, Peer Influence, Childhood Trauma

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## 1. Introduction

Borderline Personality Disorder (BPD) is a personality disorder that typically onset during adolescence and early adulthood, characterized by its instability of self-image and interpersonal relationships, emotion dysregulation and behavioral dysregulation, as well as impulsivity [1]. While the core features of BPD remain consistent across adolescents and adults, adolescents with BPD often exhibit more pronounced self-instability, increased self-harm behaviors, and a higher prevalence of Risky Sexual Behaviors (RSB) [1]. RSB refers to sexual activities that increase the likelihood of negative outcomes such as unplanned pregnancy and sexually transmitted infections, which is a major public health problem [2]. Despite the significant impact of RSB on adolescent mental health, there is a relative scarcity of studies focused on adolescents with the disorder. This study will provide an overview of current studies, mention possible linking factors, highlight research gaps, and provide recommendations for future studies.

## 2. RSB among Adolescents with BPD

A recent study supports that among adolescents, individuals with higher BPD features are more likely to engage in RSB [3]. Another study indicates that girls with BPD pathology were at increased likelihood to engage in RSB [4]. A longitudinal study of adolescent girls with BPD over a four-year period, from age 14-18, shows that developed BPD symptoms are associated with the likelihood of engaging in RSB, suggesting that BPD symptoms and RSB may increase over age [5]. However, in another study, adolescents with BPD did not show significantly higher levels of likelihood of engaging in RSB; Instead, they reported more permissive and riskier attitudes toward sexual activity [6]. The types of RSBs include promiscuity, being more sexually active as well as engaging in sex at younger age, more likely to have sex without protection, greater number of sexual partners, having sex under the influence of substance, having casual sexual relationships; Sexting and digital sexual behaviors that eventually lead to RSB [2,3,4,5,7,8,9,10].

### 3. Understanding RSB in a Neurodevelopmental Perspective

Most studies in this field have implied the linking mechanism of RSB as impulsivity and emotional regulation, two core features of BPD [3,4,5]. From a neurodevelopmental perspective, adolescents are at a developmental stage of sexual impulsivity and poor impulse control due to their brain structure, which is different from adults. Namely, the Prefrontal Cortex, which is responsible for regulating behavior and decision-making, is immature [11]; The amygdala, which is responsible for emotional reactivity, tends to be more active in the adolescence stage, leading to increased sensitivity to emotional stimuli [11,12]. In adolescents with BPD, the amygdala's heightened reactivity leads to exaggerated emotional responses, causing emotional dysregulation and impulse control issues [12]. Additionally, the reduced activity in the Anterior Cingulate Cortex, involved in emotional regulation and conflict monitoring, impairs their ability to manage emotional impulses and control behaviors like sexual risk-taking [12]. Current studies also found unique neural patterns among adolescents with BPD compared to adults with the disorder. Alterations in brain morphology, such as reduced local gyrification index in the superior temporal gyrus, are specific to adolescents and contribute to their heightened emotional reactivity and inability to control impulses [13]. Additionally, adolescents with BPD show broader disruptions in brain regions like the precuneus and orbitofrontal cortex, which are not as prominently affected in adults [14]. These changes suggest that the adolescent brain, still in development, is more vulnerable to the effects of BPD, leading to more severe emotional and behavioral dysregulation [14]. These studies will explain the brain abnormality that causes emotional and impulsivity, combined with the undeveloped prefrontal cortex and sexual impulse, which lead to RSB among adolescents with BPD. However, the mechanism is not yet clear. Future research should focus on the exact pathways through which these neural abnormalities contribute to RSB in adolescents with BPD, as well as identifying the specific neurobiological mechanisms that link emotional dysregulation and impulsivity to risky sexual behaviors. Additionally, longitudinal studies are needed to determine how these brain changes evolve over time and whether early intervention can mitigate the long-term impacts of BPD on adolescent behavior and mental health.

### 4. RSB under Family and Peer Influence

The family environment is where an individual's emotional and behavioral development is shaped. According to Biosocial theory, an invalidating environment, which includes a series of childhood negative experiences such as parent separation and childhood emotional abuse (CEA), can lead to the development of BPD [15,16]. CEA, characterized by parenting patterns that harm a child's emotional well-being, is significant in this context. Research identifies CEA as the unique trigger to the onset of BPD [17]. CEA also has the strongest association with emotional dysregulation, along with other BPD features such as identity disturbance and negative interpersonal relationships [18,19]. Among adolescents with BPD, CEA is linked to RSBs, serving as a maladaptive coping mechanism that reflects increased impulsivity and emotional dysregulation [7,8]. Emotional dysregulation acts as a mediator between RSB and CEA, particularly in the context of negative emotions [18], suggesting that intense emotions, driven by heightened impulsivity and emotional dysfunction formed in invalidating environments, increase the likelihood of RSB. Insecure attachment also mediates between CEA and BPD features, which further complicates emotional regulation in adolescents with BPD [19,20]. In addition, the research found that individuals with insecure attachment tended to have a strong desire for intimacy and a greater likelihood of engaging in RSB, suggesting that BPD adolescents with insecure attachment can be driven to engage in even more impulsive sexual behaviors [21].

Social Influence Theory suggests that BPD adolescents' risky behaviors are shaped by peer norms and pressure to conform within their social group [22]. Research has indicated that adolescents who are a part of social networks that endorse risky sexual norms are more likely to engage in RSB, as adolescents are often influenced by the behaviors and attitudes of their peers, suggesting the risk of social network patterns which adolescents with BPD may involve [22,23]. Moreover, homophilic Social Selection refers to the tendency for adolescents to form friendships with peers who share similar traits and behaviors with them, suggesting that risky sexual activity can be repeated and reinforced in adolescents with BPD under social groups where their peers exhibit similar BPD features [22]. Moreover, adolescents with BPD tend to be sensitive to rejection and abandonment, having higher personal distress when peer pressure is displayed, can further increase their vulnerability to engage in RSBs in the context of following risky sexual peer norm [1,24]. For example, sexting, defined as sharing sexual components through digital platforms, can lead to RSBs, and adolescents who engage in sexting tend to show typical BPD features, as well as a tendency to seek approval and a sense of belonging within their peer groups [9,10]. Likewise, adolescents are more likely to adopt the substance use behaviors of their peers when their friends are popular within the peer groups [22]. Substance use can lower inhibitions, impair decision-making, as well as increase the likelihood of impulsive sexual behaviors, especially in peer settings. Substance use has been associated with poor sexual decision-making and an increased likelihood of impulsive sexual behavior among adolescents, especially when influenced by peers, underscoring the potential risk among adolescents with BPD [23]. Overall, adolescents with BPD who are under sexual risk-taking peer norms are more likely to engage in risky behavior, more likely to use substances if their peers do so, and more vulnerable to engage in such activities due to their interpersonal distress and peer pressure. Therefore, Future research should focus on how peer influence interacts with neurobiological and emotional vulnerabilities to further clarify the pathways leading to RSB in adolescents with BPD. Additionally, intervention strategies should include components that address peer dynamics and substance use, aiming to mitigate the influence of harmful social environments on these adolescents.

## 5. Impact on Mental Health

Research indicates that adolescents with higher BPD features are more likely to have higher levels of depressive symptoms and mental destabilization after engaging in RSB, suggesting that youth with BPD who engage in such activities may show an increase in BPD symptoms such as emotional instability over [3]. Adolescent girls with BPD tend to have lower self-efficacy in sexual decision-making, higher mental distress, are more likely to experience sexual coercion as well as engaging in unwanted sex, and are more likely to have sexual trauma after unwanted sex, suggesting that adolescent girls with BPD are more vulnerable to RSB and may be at risk of experiencing victimization [4,6]. Moreover, adolescents with BPD who engage in RSB are at significantly higher risk for STIs, which can cause ongoing emotional distress, fear, and shame [2]. Adolescents with BPD who engage in substance use during sexual activity are at an even greater risk for emotional instability and impulsivity [5]. Early interventions aimed at improving emotional regulation and self-efficacy are important for mitigating these negative mental health outcomes in adolescents with BPD.

## 6. Discussion

The gap between the study of RSB in adults and adolescents with BPD has several areas for further research and intervention development. Current research about RSB is very limited. Although BPD has homogeneity in pathology across adolescents and adults, adolescents with BPD are in the stage of neurodevelopmental immaturity, making it more difficult to control impulses. Additionally, a recent study has found unique brain activity among them, suggesting that adolescents with BPD may have different coping mechanisms based on neurodevelopment compared to adults with BPD [13]. Under the family background, adolescents with BPD are in the early stage of processing childhood emotional trauma; RSB may be considered as an initial response to traumatic experience under the influence of insecure attachment, though the linking mechanism is currently unclear. For those who experienced childhood sexual abuse, RSB may lead them to experience revictimization and further psychological harm [19]. While adults often engage in RSB due to longstanding emotional patterns and relationship instability, adolescents are more affected by social influences and peer influence, where early intervention could make a significant difference. Furthermore, substance use and RSB usually happen in peer settings among adolescents; it is important to prevent such behavior by avoiding adolescents from risk-taking social groups. Although this review provides a perspective from family and peer influence, RSB still holds complex coping mechanisms within. In developmental countries, RSBs may be worse due to many factors, such as the lack of sex education, the affordability of protection, and different cultural values on adolescent sex. For example, China does not offer mandatory and sufficient sex education in schools, which may increase the likelihood for girls with BPD to engage in unwanted sex [4]. In addition, China usually diagnoses BPD as impulsive personality disorder (IPD), which will lead to incorrect prescription as well as worsening BPD symptoms for adolescents with BPD [25].

## 7. Conclusion

RSB in adolescents with BPD is multifaceted, shaped by neurodevelopmental immaturity, family dynamics, and peer influences. Emotional dysregulation, rooted in early emotional abuse and insecure attachments, drives impulsive behaviors that manifest as RSB. Additionally, adolescents with BPD are often embedded in peer networks that endorse risky sexual norms, further amplifying their vulnerability to RSB. These behaviors not only increase the risk of physical consequences, such as sexually transmitted infections but also significantly impact mental health by heightening emotional instability and the risk of victimization. Future research should prioritize understanding the neurodevelopmental underpinnings of impulsivity and emotional dysregulation in BPD while also developing culturally sensitive interventions that address both family and peer influences. Early interventions aimed at improving emotional regulation and social decision-making are crucial for preventing the long-term negative effects of RSB in this vulnerable population.

## References

- [1] American Psychiatric Association (2000). *Diagnostic and Statistical Manual of Mental Disorders*, 4th Edn, Washington, DC: American Psychiatric Association.
- [2] Chang, C. C., Chen, M. H., Bai, Y. M., Tsai, S. J., Chen, T. J., & Liou, Y. J. (2024). Elevated risk of sexually transmitted infections among adolescents and young adults with borderline personality disorder: a retrospective longitudinal nationwide population-based study. *European child & adolescent psychiatry*, 10.1007/s00787-024-02464-0. Advance online publication.
- [3] Bégin, M., Ensink, K., Bellavance, K., Clarkin, J. F., & Normandin, L. (2022). Risky Sexual Behavior Profiles in Youth: Associations With Borderline Personality Features. *Frontiers in psychology*, 12, 777046.
- [4] Thompson, K. N., Betts, J., Jovev, M., Nyathi, Y., McDougall, E., & Chanen, A. M. (2019). Sexuality and sexual health among female youth with borderline personality disorder pathology. *Early intervention in psychiatry*, 13(3), 502–508.
- [5] Choukas-Bradley, S., Hipwell, A. E., Roberts, S. R., Maheux, A. J., & Stepp, S. D. (2020). Developmental Trajectories of Adolescent Girls' Borderline Personality Symptoms and Sexual Risk Behaviors. *Journal of abnormal child psychology*, 48(12), 1649–1658.

- [6] Penner, F., Wall, K., Jardin, C., Brown, J. L., Sales, J. M., & Sharp, C. (2019). A study of risky sexual behavior, beliefs about sexual behavior, and sexual self-efficacy in adolescent inpatients with and without borderline personality disorder. *Personality disorders*, 10(6), 524–535.
- [7] Zashchirinskaia, O., & Isagulova, E. (2023). Childhood Trauma as a Risk Factor for High Risk Behaviors in Adolescents with Borderline Personality Disorder. *Iranian journal of psychiatry*, 18(1), 65–71.
- [8] Lanfredi, M., Macis, A., Ferrari, C., Meloni, S., Pedrini, L., Ridolfi, M. E., Zonca, V., Cattane, N., Cattaneo, A., & Rossi, R. (2021). Maladaptive behaviours in adolescence and their associations with personality traits, emotion dysregulation and other clinical features in a sample of Italian students: a cross-sectional study. *Borderline personality disorder and emotion dysregulation*, 8(1), 14.
- [9] Brinkley, D. Y., Ackerman, R. A., Ehrenreich, S. E., & Underwood, M. K. (2017). Sending and receiving text messages with sexual content: Relations with early sexual activity and borderline personality features in late adolescence. *Computers in Human Behavior*, 70, 119–130.
- [10] Sesar, K., Dodaj, A., & Vučić, M. (2023). The relationship between sexting, risky sexual behaviour and features of borderline personality disorder. *Mediterranean Journal of Clinical Psychology*, 11(1).
- [11] Victor, E. C., & Hariri, A. R. (2016). A neuroscience perspective on sexual risk behavior in adolescence and emerging adulthood. *Development and psychopathology*, 28(2), 471–487.
- [12] Hughes, A. E., Crowell, S. E., Uyeji, L., & Coan, J. A. (2012). A developmental neuroscience of borderline pathology: emotion dysregulation and social baseline theory. *Journal of abnormal child psychology*, 40(1), 21–33.
- [13] Xiao, Q., Wang, X., Yi, X., Fu, Y., Ding, J., Jiang, F., Wang, J., Han, Z., & Chen, B. T. (2023). Alteration of surface morphology and core features in adolescents with borderline personality disorder. *Journal of affective disorders*, 333, 86–93.
- [14] Yi, X., Fu, Y., Zhang, Z., Jiang, F., Xiao, Q., & Chen, B. T. (2023). Altered regional homogeneity and its association with cognitive function in adolescents with borderline personality disorder. *Journal of psychiatry & neuroscience : JPN*, 48(1), E1–E10.
- [15] Linehan, M. M. (1993). *Cognitive-Behavioral Treatment of Borderline Personality Disorder*. New York: Guilford Press.
- [16] Zanarini, M. C. (2000). Childhood experiences associated with the development of borderline personality disorder. *The Psychiatric Clinics of North America*, 23(1), 89–101.
- [17] Bozzatello, P., Rocca, P., Baldassarri, L., Bosia, M., & Bellino, S. (2021). The Role of Trauma in Early Onset Borderline Personality Disorder: A Biopsychosocial Perspective. *Frontiers in psychiatry*, 12, 721361.
- [18] Kuo, J. R., Khoury, J. E., Metcalfe, R., Fitzpatrick, S., & Goodwill, A. (2015). An examination of the relationship between childhood emotional abuse and borderline personality disorder features: the role of difficulties with emotion regulation. *Child abuse & neglect*, 39, 147–155.
- [19] Schulze, A., Cloos, L., Zdravkovic, M., Lis, S., & Krause-Utz, A. (2022). On the interplay of borderline personality features, childhood trauma severity, attachment types, and social support. *Borderline personality disorder and emotion dysregulation*, 9(1), 35.
- [20] Peng, W., Liu, Z., Liu, Q., Chu, J., Zheng, K., Wang, J., Wei, H., Zhong, M., Ling, Y., & Yi, J. (2021). Insecure attachment and maladaptive emotion regulation mediating the relationship between childhood trauma and borderline personality features. *Depression and anxiety*, 38(1), 28–39.
- [21] Gentzler, A. L., & Kerns, K. A. (2004). Associations between insecure attachment and sexual experiences. *Personal Relationships*, 11(2), 249–266.
- [22] Matusiewicz, A., Hopwood, C. J., Banducci, A. N., & Lejuez, C. W. (2014). The behavioral phenotype of disrupted interpersonal relationships in BPD. In C. Sharp & J. L. Tackett (Eds.), *Handbook of borderline personality disorder in children and adolescents* (pp. 185–214).
- [23] Asrese, K., & Mekonnen, A. (2018). Social network correlates of risky sexual behavior among adolescents in Bahir Dar and Mecha Districts, North West Ethiopia: An institution-based study. *Reproductive Health*, 15(61).
- [24] Pourmohammad, P., Imani, M. & Goodarzi, M.A. Personal distress mediates the relationship between childhood trauma and interpersonal vulnerabilities in individuals with borderline personality disorder. *Curr Psychol* 42, 30449–30460 (2023).
- [25] Zhao, D. (2023). Cultural Differences, Diagnosis, and the Intervention in Adolescence in Borderline Personality Disorder. *Lecture Notes in Education Psychology and Public Media*, 19, 65-73.