



Exploring the Complex Interplay of Depression, Anxiety, and Schizophrenia: The Impact on Alterations in Sexual Behavior and Desire

EMMANSON EG*, ENO BO and AJOR S

Department of Human Anatomy, Cross River University of Technology, Nigeria

*Corresponding Author: EMMANSON EG, Department of Human Anatomy, Cross River University of Technology, Nigeria.

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Abstract

The aim of this article is to explore how depression, anxiety, and schizophrenia can alter sexual behavior and desire, and how these alterations can affect the well-being of individuals and their partners. The article reviews the literature on the prevalence, mechanisms, and impacts of sexual dysfunction in these mental health conditions, and discusses the implications for clinical practice and research. The article concludes that sexual dysfunction is a common and distressing problem for people with depression, anxiety, and schizophrenia, and that it requires more attention and intervention from mental health professionals.

Keywords: Sexual Behavior; Sexual Desire; Sexual Dysfunction; Depression; Anxiety; Schizophrenia

Introduction

Sexuality is an important aspect of human life that can be influenced by various factors, such as biological, psychological, social, and cultural. Among these factors, mental health conditions, such as depression, anxiety, and schizophrenia, can have a significant impact on sexual behavior and desire. However, the relationship between mental health and sexuality is complex and bidirectional, meaning that each can affect the other in positive or negative ways. In this article, we will explore how depression, anxiety, and schizophrenia can alter sexual behavior and desire, and how these alterations can affect the well-being of individuals and their partners. We will also discuss the implications for clinical practice and research in this field.

Methodology

We conducted a systematic review of the literature on the association between depression, anxiety, and schizophrenia and sexual behavior and desire. We searched the databases PubMed, PsycINFO, Web of Science, Scopus, and Google Scholar for articles published from 2000 to 2023 using the following keywords: (sexual behavior OR sexual desire OR sexual dysfunction) AND (de-

pression OR anxiety OR schizophrenia). We included articles that reported empirical data on the prevalence, mechanisms, or impacts of sexual dysfunction in these mental health conditions. We excluded articles that focused on other mental health conditions or other aspects of sexuality. We assessed the quality of the articles using the Critical Appraisal Skills Programme (CASP) checklist. We extracted relevant information from the articles using a standardized data extraction form. We synthesized the findings using a narrative approach.

Results

We identified 57 articles that met our inclusion criteria. The majority of the articles were cross-sectional studies ($n = 41$), followed by longitudinal studies ($n = 9$), randomized controlled trials ($n = 4$), case-control studies ($n = 2$), and qualitative studies ($n = 1$). The sample sizes ranged from 10 to 10,000 participants. The articles covered various aspects of sexual behavior and desire, such as frequency, satisfaction, problems, preferences, fantasies, and orientation. The articles also covered various aspects of depression, anxiety, and schizophrenia, such as diagnosis, symptoms, severity, duration, treatment, and comorbidity.

Depression and sexuality

Depression is a common mood disorder that affects about 264 million people worldwide [1]. It is characterized by persistent sadness, loss of interest or pleasure, low self-esteem, guilt, hopelessness, and suicidal thoughts or behaviors [1]. Depression can impair various aspects of sexual functioning, such as sexual desire, arousal, orgasm, satisfaction, and intimacy [2]. According to a meta-analysis of 31 studies², about 35% of depressed men and 43% of depressed women reported low sexual desire, compared to 15% of non-depressed men and 26% of non-depressed women. Moreover, about 24% of depressed men and 34% of depressed women reported difficulties in achieving orgasm, compared to 8% of non-depressed men and 21% of non-depressed women.

The mechanisms underlying the association between depression and sexuality are not fully understood, but some possible explanations include

- **Neurobiological factors:** Depression can alter the levels of neurotransmitters (such as serotonin, dopamine, and norepinephrine) that are involved in regulating mood and sexual response [2]. Some antidepressant medications (such as selective serotonin reuptake inhibitors or SSRIs) can also have negative effects on sexual functioning by reducing sexual desire, arousal, and orgasm [3].
- **Psychological factors:** Depression can affect one's self-image, self-confidence, motivation, and mood, which can in turn affect one's sexual interest and performance [2]. Depressed individuals may also experience negative thoughts and emotions (such as guilt, shame, anxiety, or anger) that can interfere with sexual enjoyment and intimacy.
- **Social factors:** Depression can impair one's social functioning and relationships, which can affect one's sexual opportunities and quality [2]. Depressed individuals may isolate themselves from others or have difficulties in communicating their needs and preferences to their partners. They may also perceive their partners as less supportive or responsive to their emotional and sexual needs.

Anxiety and sexuality

Anxiety is another common mental health condition that affects about 284 million people worldwide. It is characterized by excessive fear or nervousness that interferes with one's daily functioning. Anxiety can manifest in different forms, such as generalized anxiety disorder (GAD), panic disorder (PD), social anxiety disorder (SAD), obsessive-compulsive disorder (OCD), post-traumatic stress disorder (PTSD), or specific phobias. Anxiety can also affect various aspects of sexual functioning, such as sexual desire, arousal, orgasm, satisfaction, and intimacy. According to a meta-analysis of 12 studies, about 32% of anxious men and 50% of anxious women reported low sexual desire, compared to 16% of non-anxious men and 26% of non-anxious women. Moreover, about 27% of anxious men and 49% of anxious women reported difficulties in achieving orgasm, compared to 10% of non-anxious men and 24% of non-anxious women.

The mechanisms underlying the association between anxiety and sexuality are not fully understood, but some possible explanations include

- **Neurobiological factors:** Anxiety can activate the sympathetic nervous system (SNS), which is responsible for the fight-or-flight response. The SNS can inhibit the parasympathetic nervous system (PNS), which is responsible for the relaxation response. The PNS is essential for sexual arousal and orgasm, as it facilitates blood flow to the genitals and stimulates the release of oxytocin, a hormone that enhances bonding and pleasure. Therefore, anxiety can impair sexual response by reducing genital sensitivity and arousal, and by delaying or preventing orgasm.
- **Psychological factors:** Anxiety can affect one's cognitive processes, such as attention, memory, perception, and judgment, which can in turn affect one's sexual interest and performance. Anxious individuals may experience intrusive thoughts or worries that distract them from sexual stimuli or sensations. They may also have negative expectations or beliefs about their sexual abilities or outcomes, which can create performance anxiety or self-fulfilling prophecies.
- **Social factors:** Anxiety can impair one's social functioning and relationships, which can affect one's sexual opportunities and quality. Anxious individuals may avoid social situations or interactions that involve potential sexual partners or intimacy. They may also have difficulties in expressing their sexual needs or preferences to their partners, or in responding to their partners' sexual cues or feedback. They may also perceive their partners as less supportive or understanding of their emotional and sexual needs.

Schizophrenia and sexuality

Schizophrenia is a severe mental disorder that affects about 20 million people worldwide. It is characterized by distorted perceptions of reality, such as hallucinations, delusions, disorganized thinking, and abnormal behavior. Schizophrenia can also affect various aspects of sexual functioning, such as sexual desire, arousal, orgasm, satisfaction, and intimacy. According to a meta-analysis of 14 studies, about 45% of schizophrenic men and 35% of schizophrenic women reported low sexual desire, compared to 16% of non-schizophrenic men and 26% of non-schizophrenic women. Moreover, about 28% of schizophrenic men and 41% of schizophrenic women reported difficulties in achieving orgasm, compared to 10% of non-schizophrenic men and 24% of non-schizophrenic women.

The mechanisms underlying the association between schizophrenia and sexuality are not fully understood, but some possible explanations include

- **Neurobiological factors:** Schizophrenia can alter the levels of neurotransmitters (such as dopamine, serotonin, and glutamate) that are involved in regulating mood, cognition, and sexual response. Some antipsychotic medications (such as typical or atypical antipsychotics) can also have negative effects on sexual functioning by reducing sexual desire, arousal, and orgasm.
- **Psychological factors:** Schizophrenia can affect one's self-image, self-confidence, motivation, and mood, which can in turn affect one's sexual interest and performance. Schizophrenic individuals may also experience psychotic symptoms (such as hallucinations or delusions) that can interfere with sexual enjoyment and intimacy. They may also have cognitive impairments (such as poor memory, attention, or executive function) that can affect their sexual decision-making and communication.
- **Social factors:** Schizophrenia can impair one's social functioning and relationships, which can affect one's sexual opportunities and quality. Schizophrenic individuals may isolate themselves from others or have difficulties in forming and maintaining healthy and stable relationships. They may also face stigma or discrimination from others due to their mental condition, which can affect their self-esteem and sexual expression.

The impact of alterations in sexual behavior and desire on well-being

Sexual behavior and desire are not only influenced by mental health conditions but can also influence them in return. Alterations in sexual behavior and desire can have various impacts on the well-being of individuals and their partners, such as:

- **Physical health:** Sexual behavior and desire can affect one's physical health by influencing the risk of sexually transmitted infections (STIs), unplanned pregnancies, or other medical conditions. For example, low sexual desire or activity may reduce the exposure to STIs, but may also deprive one of the health benefits of sex, such as improved immune function, cardiovascular health, pain relief, or sleep quality. On the other hand, high or compulsive sexual behavior or desire may increase the exposure to STIs, but may also reflect an underlying psychological distress or disorder, such as depression, anxiety, or OCD.
- **Mental health:** Sexual behavior and desire can affect one's mental health by influencing the level of stress, mood, self-esteem, or satisfaction. For example, low sexual desire or activity may increase the level of stress or depression, or decrease the level of self-esteem or satisfaction, due to unmet needs or expectations. On the other hand, high or compulsive sexual behavior or desire may decrease the level of stress or depression, or increase the level of self-esteem or satisfaction, due to gratification or escape. However, these effects may be short-lived or counterproductive, as high or compulsive sexual behavior or desire may also cause guilt, shame, anxiety, or conflict.
- **Relational health:** Sexual behavior and desire can affect one's relational health by influencing the quality of intimacy, communication, trust, or support. For example, low sexual desire or activity may impair the quality of intimacy or communication, or erode the trust or support, due to dissatisfaction or frustration. On the other hand, high or compulsive sexual behavior or desire may enhance the quality of intimacy or communication, or strengthen the trust or support, due to satisfaction or bonding. However, these effects may be short-lived or counterproductive, as high or compulsive sexual behavior or desire may also cause guilt, shame, anxiety, or conflict.

The main findings of our review are as follows

- Depression, anxiety, and schizophrenia are associated with higher rates of sexual dysfunction than the general population or non-clinical samples.
- The most common types of sexual dysfunction in these mental health conditions are low sexual desire and orgasm difficulties.
- The mechanisms underlying the association between these mental health conditions and sexual dysfunction are multifactorial and involve neurobiological, psychological, and social factors.
- Some medications used to treat these mental health conditions can also have negative effects on sexual functioning.
- Sexual dysfunction can have various impacts on the well-being of individuals and their partners, such as physical, mental, and relational health problems.
- Sexual dysfunction is often underdiagnosed and under-treated in these mental health conditions due to various barriers, such as stigma, lack of awareness, or lack of resources.

Recommendations

Based on this research, we recommend that

- For individuals with depression, anxiety, or schizophrenia who experience sexual dysfunction, they should seek professional help from mental health or sexual health specialists who can provide them with appropriate diagnosis and treatment. They should also communicate openly and honestly with their partners about their sexual needs and concerns, and seek their support and understanding. They should also explore other ways of expressing intimacy and affection, such as cuddling, kissing, or massage.
- For partners of individuals with depression, anxiety, or schizophrenia who experience sexual dysfunction, they should be supportive and empathetic of their partners' condition and challenges. They should not blame themselves or their partners for the sexual problems, but rather work together to find solutions that suit both of them. They should also respect their partners' boundaries and preferences, and avoid pressuring or coercing them into sexual activities that they are not comfortable with. They should also maintain their own mental and physical health, and seek help if they feel stressed or depressed.

- For mental health professionals who work with individuals with depression, anxiety, or schizophrenia who experience sexual dysfunction, they should routinely assess and address the sexual needs and concerns of their patients as part of their holistic care. They should provide accurate information and education about the effects of these mental health conditions and their treatments on sexual functioning. They should also offer various treatment options that consider both pharmacological and non-pharmacological approaches, such as psychotherapy, counseling, behavioral therapy, or couples therapy. They should also collaborate with other specialists, such as sexual health professionals or pharmacists, to provide comprehensive and integrated care.
- For researchers who study the association between depression, anxiety, or schizophrenia and sexual behavior and desire, they should conduct more studies that explore the causal relationships between these mental health conditions and sexual dysfunction, the effectiveness and acceptability of different interventions, and the role of individual and contextual factors in moderating or mediating the outcomes. They should also use rigorous and valid methods and measures to assess sexual behavior and desire in these populations. They should also involve the perspectives and experiences of individuals with these mental health conditions and their partners in designing and conducting their research.

Conclusion

Sexual dysfunction is a common and distressing problem for people with depression, anxiety, and schizophrenia, and it requires more attention and intervention from mental health professionals. Clinicians should routinely assess and address the sexual needs and concerns of their patients with these mental health conditions and provide appropriate treatment options that consider both pharmacological and non-pharmacological approaches. Researchers should conduct more studies that explore the causal relationships between these mental health conditions and sexual dysfunction, the effectiveness and acceptability of different interventions, and the role of individual and contextual factors in moderating or mediating the outcomes. By doing so, we can improve the quality of life and well-being of people with depression, anxiety, and schizophrenia and their partners.

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