


# Biopsychosocial determinants of selected hypersexual behaviours in adolescents — observations in the context of the COVID pandemic

Anna Gulczyńska 

Faculty of Educational Studies, Adam Mickiewicz University, Poznań, Poland

## Abstract

*The aim of this paper is to reflect on the psychological and biological causes of hypersexual behaviour in a group of adolescents during the COVID-19 pandemic. The paper refers to the definition of these activities in accordance with ICD-11 classification. In the following, an attempt was made to explain why early childhood attachment disorders, traumas, some personality traits, as well as mental disorders and diseases may be associated with uncontrolled, compulsive sexual behaviours in adolescents. Due to the biopsychosocial model of sexuality adopted in the study, the broader context of the undertaken behaviours, i.e. the ongoing coronavirus pandemic, has been taken into account.*

**Keywords:** hypersexuality, adolescence, biopsychosocial causes, COVID pandemic

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## Introduction

The COVID-19 pandemic changed the world. One can get the impression that the conceptualised reality can be divided into what it was like before the pandemic, what it was like during the pandemic, and observing the current state — after a period of prolonged isolation. Analysing the scientific data from various reports, one can venture to say that very significantly the time of the pandemic and its context changed the functioning of adolescents. As it were, they were blocked from fulfilling important tasks for this period — especially in terms of developing personal relationships, functioning in peer groups, or establishing and experimenting with intimate and sexual relationships [1, 2]. The pandemic did not change the needs, generated ultimately by the maturation of the brain, but it did alter or prevent them from being fulfilled in familiar old ways or in ways that most of society was used to. Thus, adolescents (as well as other age groups) faced

the need to activate coping mechanisms. Often, with the Internet at their disposal at all times, they looked to it for rescue, joy, or the fulfilment of a sexual need — by virtue of development, intensely felt, and “demanding” to be satisfied.

The manifestation of sexual behaviour in this work is understood according to the ecological (Whalen and Schmidt) model of sexuality, of which biopsychosocial models are a more contemporary conceptualisation [3–5]. They treat manifestations of sexuality as dispositions arising from a biological basis, modified by psychosocial factors, taking into account a specific context – in this case, the context of a pandemic. The promoters of the above models speak of a certain circularity, i.e. a constant exchange of information (biological and psychosocial) taking place in the individual, as well as in the relationship between the individual and social systems.

## Heterosexual behaviour of adolescents in the pandemic — analyses and interpretations

Problematic, unwanted, impulsive, compulsively recurrent sexual behaviour, also known as addictive behaviour, are quite common synonyms for hypersexu-

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**Address for correspondence:** dr n. hum. Anna Gulczyńska  
Faculty of Educational Studies, Adam Mickiewicz University  
ul. Szamarzewskiego 89, 60–568 Poznań, Poland  
e-mail: anna.gulczynska@amu.edu.pl

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al behaviour [6]. In this paper, the term “hypersexual behaviour” will be used; however, when a passage in the text explicitly refers to the findings of authors who use a different term, then the original terminology will be retained.

According to the specifications of the ICD 11 classification [7], hypersexual behaviour is characterised by a persistent pattern of lack of control over intense, repetitive sexual impulses or urges resulting in repetitive sexual behaviour. Symptoms can range from repetitive sexual activities that become the focal point of an individual’s life to neglect of personal health and care or other interests, as well as activities and responsibilities. The individual makes unsuccessful attempts to significantly reduce repetitive sexual behaviour but continues despite negative consequences or deriving little or no satisfaction from it. The pattern of lack of control over intense sexual impulses or urges and the resulting repetitive sexual behaviour manifests itself over an extended period (e.g. 6 months or longer), causing significant distress or significant impairment of functioning in personal, family, social, educational, occupational, and other areas.

The authors of the classification point out that an individual’s distress, which is solely related to moral judgements and disapproval of these sexual impulses, desires, or behaviours, is not sufficient to meet the requirement of hypersexual disorder. They also remind us of the need to take into account developmentally heightened sexual behaviour (as in adolescence) and to differentiate it from clinically problematic behaviour, which is also extensively discussed in earlier recommendations and scientific publications than the ICD11 [8]. It seems important, therefore, to reflect on the topic of why the pandemic may have become a trigger for hypersexual sexual behaviour in adolescents and, consequently, increased pornography consumption. As scientific reports indicate, excessive pornography use accompanied by compulsive behaviour is one of the most common risk behaviours undertaken among adolescents [9–11].

Other authors state [12] that there is no consensus on the exact meaning of the term “compulsivity”, which causes confusion in both the fields of psychology and psychiatry, and even more so in sexology. The cited authors, on the basis of conducted meta-analyses, assumed that compulsive behaviours are repetitive activities that cause an individual to feel that he or she has to perform them, knowing that these activities are incompatible with an overarching goal (in the sense: accepted values or values prevailing in a given culture). Moreover, these behaviours are persistent (repeated), dysfunctional, or undesirable, resulting in negative

consequences both for the individual and for other social groups (for example: they contradict the vision of building a career or limit spending time with the family). The authors point out that the person who engages in compulsive activities feels internally compelled to perform the behaviour, which implies a certain level of resistance because, to some extent, he or she does not want to perform the activity. Therefore, a behaviour that is in line with the person’s goals, without causing resistance, conflict, or the experience of being forced to act, will not be called compulsive, no matter how dysfunctional it is.

Many researchers and practitioners (detailed citations below) suggest that one of the main causes of compulsive sexual behaviour is an insecure attachment style. Attachment theory suggests that interpersonal rules formed in early childhood translate into the way intimate relationships are constructed in adulthood [13]. Additionally, it assumes that all romantic feelings are attachment relationships, which excludes the need to have an intimate partner only in difficult situations or to establish sexual relationships without emotional involvement. According to attachment theory, parents/ carers, by responding to the child’s behaviour, teach the child how to alleviate stressful situations in which negative emotions arise. If the child does not receive such support, when they grow up, they will try to control emotions using external stimulants, such as sexual behaviour, including excessive use of pornography on the Internet.

As Paula Hall — a long-time researcher of hypersexual behaviour and author of numerous outreach programmes — notes, “someone with a secure childhood attachment is more likely to grow into an adult with good self-esteem, who is more able to tolerate and cope with difficult emotions and mild trauma. But if attachment is disturbed or disengaged, one is more likely to turn to addiction for comfort rather than relying on the person” [14]. Other researchers [15] indicate that an avoidant attachment style significantly predicted hypersexuality in a sample of 77 adult men, with further researchers reporting that as many as 77% of men treated for excessive pornography use showed an unengaged attachment style [16]. Furthermore, studies conducted on college students indicate a higher degree of anxious attachment among those exhibiting hypersexual behaviour, but the authors point out that the result obtained may be related to the slight overrepresentation of women in this group [17].

During adolescence, young people seek intimate relationships and experiment in the area of romantic and erotic relationships [18–20]. Individuals with a non-secure attachment style are more likely than those with

a secure attachment style to form relationships in which the other person or the relationship itself is meant to fulfil certain needs, to some extent compensating for early childhood deficits. Through so-called working models, which replicate the type of relationship they had with their first caregivers, the relationships they form are usually unstable or unsatisfying. A person with a non-secure attachment style may become a user of pornographic content and/or compulsively use pornography because he or she has limited skills to create a lasting, healthy relationship with another person, and creates one with these activities. In another case — compulsive sexual behaviour may become a kind of remedy to cope with nervous system arousal (perceived as both positive and negative), which explains the dopamine reward mechanism. The attachment style does not determine the new relationships formed because the individual entering into relationships may learn other, more healthy, and safer ways of functioning in intimate relationships, but his or her primary bonding type will often be activated, especially in difficult situations [13].

The pandemic confined adolescents to their homes, preventing them from meeting new people directly, experimenting in relationships, coping with failure or enjoying a personal encounter with another person. Thus, it is likely to have reinforced extra-secure attachment styles through created virtual relationships with other people and/or pornography. Individuals who have experienced an avoidant style do not declare enjoyment of close contact with their partner, and have difficulty trusting them and accepting their dependence, hence the frequent adoption of behaviours manifesting self-efficacy, in this case – reinforced by the self-created use of pornography. Their partner's efforts to make rapprochement and emotional commitment occur often arouse resistance and nervousness in them, and it is virtual sex that allows them to self-regulate (continue, explore, quickly change or break) this arrangement with pornographic content. In interpersonal relationships, individuals with this attachment style tend to be more aggressive and prone to violate socio-legal norms and describe other people as distrustful. Individuals with an anxiety-ambivalent attachment map judge their partner as uninvolved and emotionally withdrawn, which in turn reinforces their distancing process and anxiety about the quality and sustainability of the relationship. This can mean reinforcing, through the use of casual acquaintances, the perpetuation of the maladaptive attachment pattern, quickly breaking off relationships that are not sufficiently satisfying, avoiding emotional involvement, or seeking out criminalised contacts [21].

An adolescent with a non-secure attachment style, just at the time of pandemic isolation, may have formed

a particular attachment relationship with hypersexual behaviour and pornography, which are in effect escape strategies, ambivalent or related to coping with anxiety and other emotions. The relationship with pornography appears safe to the adolescent because, at the first stage of viewing it, he or she controls the frequency of its use and the type of sites visited — he or she can abandon, avoid, be afraid, and then, through pornography, alleviate anxiety by seeking increasingly non-normative content, show apparent courage and even a kind of perseverance. Over time, however, dependence progresses and pornography use and autoerotic behaviour begin to take control of the adolescent's life. This means that reducing or stopping the hypersexual behaviour provides negative emotional states and sometimes physical discomfort. To function as before, he or she needs to engage in sexual activity, but — according to the positive feedback mechanism — the need to do so again will quickly increase. Yasuhiro Kotera and Christine Rhodes [21] conclude that both sexuality and the attachment relationship are strongly linked, as both contribute to the regulation of stress reactions. The majority of individuals exhibiting compulsive sexual behaviour, according to the studies cited by the authors, had either an anxious or an avoidant attachment style. Adults with adverse childhood experiences tend to have an anxious attachment style and compulsive sexual behaviour. Individuals with an anxious attachment style are more likely to perceive sexual behaviours as stress coping strategies, suggesting correlations between compulsive sexual behaviour, anxious attachment, and unhealthy motivation to engage in sexual behaviour. These authors also highlight findings indicating that compulsive sexual behaviour is associated with narcissism, leading to increased number of sexual partners and online pornography use. They conclude that attachment anxiety moderates the relationship between adverse childhood experiences and compulsive sexual behaviour and narcissism and compulsive sexual behaviour. A narcissistically and egoistically oriented culture often reinforces behaviours aimed at self-exposure, creating a new or different self through social media. However, the cult of enjoying life, collecting experiences, and learning all one can is a kind of facade for the many anxieties experienced by narcissistic people [22].

Moreover, young adults who were sexually abused as children and grew up in poor family environments are more likely than others to seek sexual sensations and to display compulsive sexual tendencies [23]. Heterosexual men reported greater exposure to violence, as well as so-called "adversity" in childhood. The interpersonal violence they experience may be related to

suicidal behaviour in this group [24, 25], which is also highlighted by the history of sexual abuse confirmed in a group of hypersexual men. Childhood sexual abuse contributes to high levels of psychological and physical suffering for the abused person [26]. By sexualising their behaviour and externalising, the child tries to cope with this chaos, which is a mixture of suffering, fear, feeling shrouded in secrecy, shame, or participating in a forbidden act. Often, sexual behaviour is learnt to bring relief because it becomes a way of relieving internal tensions. The link between sexual harassment and so-called compulsive sexual behaviour is consistent not only with research, but also with theoretical models (traumatogenic dynamics, self-trauma, or repetition compulsion), both indicating the cause of such relationships and proposing helping strategies [27]. Adolescents are all the more vulnerable to stress and difficult experiences. Sexual behaviour can become a kind of escape from what once was. They bring an unwinding of tensions, oblivion in compulsive activity, or foster a sense of dissociation from the current situation. Pornography viewing and autoerotic behaviour closes one off to others, to outside experiences. Generalising, practically everything becomes less important than the sexual activities performed in a peculiar diad: man — screen. On the other hand, confinement in homes, or spatial and relational constraints, may have exacerbated the experience of sexual violence in the pandemic, making it difficult to escape or isolate, often becoming the cause of further trauma and exploitation or secondary traumatising, due to the need to stay in a confined, enclosed area.

Another group of factors are personality traits. A tendency towards impulsivity and problematic sexual activity online contributed to higher levels of engagement in compulsive sexual behaviour, similarly: higher levels of openness to experience — correlated positively with hypersexuality [28]. The tendency towards impulsivity is inherent in this developmental stage; hence, among other things, a certain predisposition to engage in risky behaviour in adolescents. Impulsivity in the context of autoerotic behaviour with pornography means that emerging stimuli — both objectively and subjectively sexual in nature — trigger the activity of seeking pornographic content. The processes responsible for inhibition are impaired, requiring higher activity of the cerebral cortex, but at this point the dopamine reward system is physiologically faster and subjectively more pleasurable. It both ensures the realisation of this — preceded by a thought or sensation from the body and/or an emotion — impulsive behaviour and provides pleasure. Thus, there is — common in sexual behaviour — an experience of double relief, reinforcing the ple-

asure derived from self-stimulation. Compulsive sexual behaviour was also predicted by lower extraversion and agreeableness and higher neuroticism [29]. The pandemic situation and its unknown consequences, reinforced anxiety. It was and still is statistically elevated in the adolescent group. It is anxiety that forms the basis for the obsessive-compulsive behaviour that emerges. Therefore, performing so-called intrusive activities is intended — by the persons performing them — to contribute to lowering the level of anxiety. Resorting to autoerotic behaviour with pornography, as described earlier, has the hallmarks of compulsion. When anxiety levels are elevated, these behaviours are more numerous and therefore undertaken more often, last longer, and over time determine the schedule of daily activities. According to the mechanism of compulsive behaviour, a certain conditioning is created: if the individual does not do a certain activity, he/she will not be able to do the next activities. The described mechanism tends to generalise, meaning that it covers more and more areas of a person's life, functioning, and activities. In the case of adolescents, whose brains are still in the pubertal stage, the habitual pathways produced by the brain's behaviour are extremely strong and persistent. The pandemic has limited and, in a sense, taken away the freedom of choice and the possibility of diverse experimentation, so the formation of so-called 'addictive brain connections' has been even more persistent.

It is also important to point out that psychiatric disorders such as affective disorders [30, 31], anxiety disorders [32, 33], obsessive-compulsive disorders [34, 35], and other addictions have been indicated as co-occurring or likely to lead to compulsive sexual behaviour [36]. For example, researchers in Brazil identified alcohol dependence as co-occurring with supra-normal sexual behaviour in a sample of more than 7000 people from the Brazilian population. Other studies indicate that women's problematic hypersexual behaviour was correlated with a history of drug and alcohol abuse [37]. Cross addictions further reinforce each other. A part of the frontal cortex, weakened by one addiction in its control processes, is more likely to make another unhealthy accommodation. The aforementioned cross-modality in addictions also stems from the need for even stronger sensations when these begin to wane. The teenager is the person seeking these sensations, seeking novelty. Pandemic and confinement have changed the way these are delivered and experienced. An example — a rather glaring one, although it is difficult to say whether it is isolated — is teenagers sneaking alcohol or psychiatric drugs to their parents and then indulging in sexual experiences on the Internet.

The last mentioned determinant is family factors; family dysfunction has been found to be more often associated with high-risk behaviours in adolescents, including sexuality, if the adolescents came from lower socio-economic strata [38]. Other researchers [23] concluded that a poor family environment in childhood may increase the risk of developing both low self-esteem and a weaker ability to self-regulate, which can lead to psychological problems, including a tendency towards uncontrolled sexual behaviour. It was also shown that perceived family cohesion and adaptability were inversely correlated with compulsive sexual behaviour in the female group. Thus, lack of family cohesion and low family adaptability, rigidity, and all-or-nothing behaviour were more frequently observed in families of women displaying hypersexual behaviour [39].

Other results indicate that for girls, higher maternal self-esteem and lower levels of psychopathology were associated with better communication about sexuality-related issues and lower levels of compulsive sexual behaviour. For boys, only parental religiosity was associated with higher quality communication related to sexuality and to compulsive sexual behaviour, with religious parents having better communication than secular parents [40]. The timing of the pandemic may have become a trigger activating the difficulty in families, exacerbated troubles that often progressed to a chronic phase. Tired and themselves left in a pandemic crisis, parents would often wish for help from almost-adult — or demanding adult treatment — teenagers. Even more so in parent-adolescent systems, conflicts may have escalated and hypersexual behaviour may have been a way of coping with difficult thoughts, emotions, or situations.

## Conclusions

This paper seeks to present some insight into the biopsychosocial determinants of selected hypersexual behaviours in adolescents, taking into account the context of the COVID-19 pandemic.

Increased sexual activity in adolescents is often a normative, developmental behaviour. However, it is important to observe when it becomes excessive and takes the form of a dominant form of activity, disorganising the functioning of the individual. The very process of development of a hypersexual disorder involves denial, concealment, and secrecy, which seems to coexist more with the processes of individuation and separation so characteristic of the adolescent stage.

The social context of reference in which the selected hypersexual behaviour was attempted to be described

was the pandemic. It caused a narrowing of the adolescents' real-life environment and functioning, thus legitimising its transfer to the virtual world. Transferred to the Internet, the realisation of sexual need may have been reinforced by the reactivation of traumatic experiences, attachment disorders, or psychological problems.

In conclusion, the COVID-19 pandemic may have had an impact on hypersexual behaviour in adolescents. It seems important to understand some of the determinants of these behaviours, to offer dedicated support and assistance to adolescents.

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