

## **Men's Sexual Life and Repeated Exposure to Pornography. A New Issue?**

**Alin C. Cotigă<sup>xiii</sup>, Sorina D. Dumitrache<sup>\*\*</sup>**

\* Faculty of Psychology and Educational Sciences, Psychology Department,  
University of Bucharest, Bucharest, Romania

\*\* Faculty of Sociology and Social Work, Social Work Department,  
University of Bucharest, Bucharest, Romania

### **Abstract**

**Introduction:** *The effects of pornography consumption among men are revealed by both hundreds of internet testimonies and specialists who deal with such effects. This topic raises strong questions and determines the search for valid answers, as this behavior becomes addictive in some cases. There is a strong consideration among specialists that pornography consumption can be related to other problems.*

**Objectives:** *The present paper aims to clarify some sexuality aspects in the pornography consumption context, in an attempt to understand both the brain mechanisms and the psychological factors involved in it.*

**Methods:** *The method used was the investigation of the literature and the analysis of some clinical cases from our practice.*

**Results:** *Pornography consumption influences the person's behavior as he resorts to this type of stimulation to cope with life dissatisfaction. Even if the compulsive behavior fades to remission, the individual may relapse if the true cause that predisposes him to pornographic material consumption is not found. Therefore, it is needed to identify the psychological mechanisms that cause and maintain this behavior or that can favor relapse.*

**Conclusion:** *Mental health specialists should take in consideration the possible effects of pornography consumption on men sexual behaviors, men sexual difficulties and other attitudes related to sexuality.*

**Keywords:** *pornography consumption, sexuality, brain*

---

<sup>xiii</sup> Corresponding author: Alin C. Cotigă, Faculty of Psychology and Educational Sciences, University of Bucharest, Panduri 90, Sector 5, 050663, Bucharest, Romania. Email: e-mail: alincotiga@gmail.com

## **I. Introduction**

Pornography, also called “visual crack cocaine” or “the drug of the new millennium” (Kastleman, 2007) can be defined as a phenomenon implying the stimulation of desire, sexual arousal and orgasm by means of images (pictures) or audio-visual materials with erotic and sexual content, which may manifest either as solitary sexual experiences or between two or more people in which violence, blamable or psychopathological sexual behaviors may or may not be present. According to other authors pornography consumption is a growing problem in our internet era (Kastleman, 2007; Hilton & Watts, 2011; Hilton, 2013) and affects all age categories.

Kastleman (2007) emphasizes that pornography obsession tends to become an epidemic and mentions some statistics: “‘sex’ is the most searched word on the Internet; pornography is the leader of all online sales categories; over 60 million people access pornographic sites daily (USA statistics only); there are approximately 15 billion pages with pornographic content on the Internet; 1 in 6 women fights pornography addiction usually initialized in chat rooms; 1 in 5 men and 1 in 8 women admitted they had accessed sites with sexually explicit content during work hours; 9 in 10 children aged 8-16 accessed internet pornography due to some sexually explicit sites popped up when they looked up various words or images to do their homework” (Kastleman, 2007).

Pornography consumption resembles a process of self-medication, in which the person experiences intense sexual arousal. In the long term pornography seems to create sexual dysfunctions, especially the individual’s inability to reach an orgasm with his partner. Someone who spends most of his sexual life masturbating while watching porn engages his brain in rewiring its natural sexual sets (Doidge, 2007) so that it will soon need visual stimulation to achieve an orgasm.

Many different symptoms of porn consumption, such as the need to involve a partner in watching porn, the difficulty in reaching orgasm, the need for porn images in order to ejaculate turn into sexual problems. These sexual behaviors may go on for months or years and it may be mentally and bodily associated with the erectile dysfunction, although it is not an organic dysfunction. Because of this confusion, which generates embarrassment, shame and denial, lots of men refuse to encounter a specialist.

### **Organic erectile dysfunction and sexual “dysfunction” induced by pornography**

In neurological terms our brain areas such as

the hypothalamus, hippocampus, amygdala and other regions of the limbic system are linked with neurons, which create synapses in the spinal cord with other neurons in the penis (Toates, 2007). From these synapses and neurons a man gets an erection or not. If there are problems along those pathways (e.g. a spinal cord injury or a poor signal transmission through the synapses), organic issues such as prostatectomy or issues associated with the hemodynamics of the corpora cavernosa and corpus spongiosum, it is likely for a man not to have a normal erection or any erection at all. The brain gets signals from different senses, connects these signals with other experiences and sends the message to the penis to be ready to engage in the sexual act.

The other part of the process is explained by hormones, peptides and other biochemical substances developed inside the brain and in other parts of the body, such as oxytocin (Carter, 1992; Keverne and Curley, 2004; Hiller, 2005), vasopressin (Keverne & Curley, 2004), acetylcholine and dopamine, which could act as neuromodulators or/and neurotransmitters. All of these are involved in the sexual activity and in reaching orgasm.

When pleasure is added to the equation alongside with all the hormones involved, one gets a better picture of what is happening inside the brain engaged in pornography consumption. Basically, the brain does not perceive anymore the difference between a normal and healthy sexual life with a partner and the situation in which the person releases these neurochemical substances by himself/herself in the easiest manner, namely through the exposure to pornographic material. Some specialists (Odent, 2009; Arias-Carrión et al., 2010) emphasize the importance of hormones and natural opiates in the orgasmic states. In the long term, dopamine is probably one of the most renowned substances involved in reaching orgasm, playing a special role in the reward system (Arias-Carrión et al., 2010). Dopamine is released during sexual excitement and it activates the brain’s pleasure centers (Doidge, 2007; Baskerville et al., 2009).

Research has found (Hull et al., 2004) that dopamine has a strong relationship with sexuality, as part of the reward system (Arias-Carrión et al., 2010). Internet pornography provides a rapid sexual arousal, relief and pleasure, without any effort or involvement, when the external circumstances are not favorable for a relationship or when one needs to adjust to different changes in relationship.

A study conducted in China (Liu et al., 2010) has found differences in various regions of the internet

addicted college students' brain compared to a control group, when scanned with fMRI (functional magnetic resonance imaging). This study explores the idea of brain plasticity, which is the brain's ability to reorganize neural pathways based on new long-term experiences. Another recent German study (Kühn & Gallinat, 2014) concludes that there is a strong relationship between the reduced volume and activity in the regions of the men's brain linked to rewards and motivation (e.g. striatum) and the pornography consumed by those men.

The research also established a connection between the striatum and the prefrontal cortex, a region of the brain associated with decision-making, which worsens in the case when the person watches more pornography. The more pornography a person consumes the more likely is to have a decreased activity in left striatum and a decreased of the grey matter volume in the right one (Kühn & Gallinat, 2014). Authors agree that it is unclear if certain types of brain regions are more susceptible to pornography consumption or if pornography alone is involved in decreasing the volume of such brain regions. Therefore, if one takes into consideration brain plasticity the second hypothesis seems to be more valid admit authors of the study (Kühn & Gallinat, 2014).

#### **Other effects on sexual life**

Dopamine, oxytocin, vasopressin and other releasers (e.g. norepinephrine, testosterone and serotonin) are bio-chemical substances which tend to enter the cells' receptors in different regions of the brain and body (Kastleman, 2007). These "natural drugs" (Kastleman, 2007) produce a tremendous rush or make the person feel high. In the particular case of internet pornography consumption, dopamine has an important role. It was found that both sexual desire and erection were caused by dopamine (Hull et al., 2004; Dominiguez & Hull, 2005). Dopamine inside the nerve cells of the reward circuitry activates the sexual centers of the hypothalamus, which activates the erection centers in the spinal cord, sending nerve impulses to the genitalia in order to obtain an erection (Hull et al., 2004; Dominiguez & Hull, 2005).

Long-term internet pornography conditioning cumulated with the hormones and molecules released after reaching the orgasm, encouraged some specialists to admit that internet pornography represents a psychological and organic addiction (Kastleman, 2007; Hilton & Watts, 2011; Hilton, 2013). Kastleman (2007) concludes that pornography addiction can be compared with the bio-chemical alterations caused by the use of amphetamines. For example, satiety effects after

watching pornography are comparable to the effects of opiates use and similar to the effects of some psychedelic drugs such as LSD (Kastleman, 2007).

There are multiple levels of brain plasticity, including myelination, fluctuation of the number of dendrites and synapses, which can weaken or remove old connections as well as strengthen or create new ones. All of them help the brain adapt and comply with new experiences and situations, and with the quality of the change in the nucleus of the cell. Therefore, dopamine – a neurotransmitter that also acts as a neuromodulator – might be the key in understanding the reward system and the arousal obtained after watching pornography.

What happens inside the brain is similar to other addictive behaviors: the search for higher doses of the "drug" in order to obtain pleasure. After years pornography viewers develop new sexuality maps in their brain (Doidge, 2007; Hilton, 2013), according to hebbian learning rule "*neurons that fire together, wire together*". In other words, the "problem" is in the brain which has developed new *sexual maps*, reinforced by the reward circuit through dopamine release after viewing, enjoying pornography and masturbating (Doidge, 2007).

On the other hand, too much pornography dulls the reward system, i.e. the brain's mechanism of protecting itself from too much dopamine is by decreasing the sensitivity to the pleasure seeking neurotransmitter dopamine (Kühn & Gallinat, 2014). The brain does not have the possibility to reorder itself and to return to the normal sensitivity and to the previous sex-maps. Satisfaction decreases and men want more pornography (Doidge, 2007); hence, the need for more sexual stimuli or for more sexual videos in order to obtain an erection.

Moreover, those effects also desensitize the person to the actual sexual encounters with a partner: the partner is no longer exciting and sex does not involve pleasure anymore – premature or delayed ejaculation may occur. Indirect consequences of the internet pornography consumption include less sexual experiences with a partner and avoiding or not noticing the partner's or a potential partner's sexual signals as revealed by some studies (Zillman & Bryant, 1998a; Zillman & Bryant, 1998b). This is related with the fact that men are generally both visually stimulated and turned-on by many new stimuli offered by the internet pornography. The played images and videos create and improve new sex-maps each time (Doidge, 2007). This was revealed by a study on pornography conducted on college boys. The study concludes that six hours of

exposure to soft-core pornography are enough to destroy the viewer's satisfaction with his partner (Zillman & Bryant, 1998a; Zillman & Bryant, 1998b). This might be the first step in becoming less sexually aroused and less stimulated by the partner. As a hypothesis, the "fear of failure" that occurs after a couple of "sexually unaroused actions" might have an additional role in reinforcing this problem.

### **Is pornography consumption a symptom or a cause?**

Although most pornography addicts are convinced that their main problem is pornography, consumption is often a consequence or a symptom of other individual or couple issues or imbalances and not a cause. Despite the fact that they seek a solution for compulsive consumption and misleadingly believe that they succeed in overcoming this issue, pornography addiction is in fact a shallow manifestation of some much deeper disorders and issues.

Pornography consumption happens among men with a *depressive* core, *low self-esteem* and who find it extremely difficult to express their own sexual needs and desires, with a *rejection* core, or it also can be found at people with different *fears* or *phobias*, such as the fear of contamination or "the fear of expressing love physically, fear of sexual intercourse", erotophobia (Mitrofan & Dumitrache, 2012, p. 184). Moreover, after the first years of relationship the *attraction level* between the two partners in a couple can diminish and it is possible for one or both of them to search for additional stimulation in pornographic material. Other particular couple' challenges, (especially rejection on behalf of the other member of the couple or his/her unavailability) would represent causes for pornography consumption.

Furthermore, *insecure attachment* and *past traumas* are not to be overlooked, as they leave a psychological mark on our sexual behaviors and on the way in which one physically express inner needs and love. We have found pornography consumption could be linked with *previous sexual dysfunctions* (female sexual arousal disorder, erectile dysfunction, female orgasmic dysfunction or delayed ejaculation) in order to obtain pleasure. It is also interesting to observe how such an issue interferes in men's life, as it will be remarked in some examples that we encountered in our clinical practice.

## **II. Case studies**

**Case 1.** M. (29 years old), heterosexual, diagnosed with dysthymic disorder and involved in a co-dependence relationship with his partner, with

whom he has been in a couple relationship for 10 years, compulsively masturbates (at least 3 times a day) by consuming pornographic material on the internet. His behavior has been exacerbated by the loss of his job. The level of sexual attraction has drastically diminished. He feels that the relationship between them is like the one "*between two siblings*" and claims that over the last few years, their sexual intercourse has had an extremely reduced frequency (once every two months, initiated by him). He experiences strong feeling of guilt towards his partner, whom he sees as "*a loving mother, but extremely vulnerable and helpless*" and also because of his recurrent sexual fantasies with other women and the strong attraction he feels towards a woman from their group of friends. He comes to see a psychotherapist not for pornography consumption, but to clarify his desire and to get out of the relationship in which he no longer feels fulfilled. By using pornographic material and excessive masturbation, M. engages himself in fantasy in order to reduce his stress level, and sabotages himself avoiding the real problems and finding concrete solutions.

**Case 2.** P. (39 years old), married, father of two children, with an unsatisfying job, asks for help dealing with the exacerbated desire of exposing himself (exhibitionism). He answers the questions of the initial evaluation via e-mail, but never came to see a specialist. He describes the relationship with his wife as being "*faulty*" and regarding his sexual functioning, he reports: "*functionally speaking, I think everything is ok*", but expresses dissatisfaction towards the frequency of the sexual intercourse, which generates distress and tension within the couple ("*once every three or four months... maybe even rarely... I am trying hard to remember the last night we spent together... and I cannot remember*"). Regarding the consumption of material with pornographic content, P. claims that he accesses pornographic sites daily, sites with quite various themes and mostly pictures: "*upskirt, BDSM, shemale, ENF, artistic nudes, I watch xxx movies quite rarely*". He mentions that most of the time he is the one who initiates sexual intercourse, but often encounters rejection. He claims that if the frequency of the sexual intercourse had happened at least once a week then he would not have felt the need for additional stimulation or exhibitionism.

Pornographic material consumption is frequently associated with helplessness, feelings of culpability or rejection. Moreover, according to Kastleman (Kastleman, 2007) the pornography user can become extremely cold and impersonal in intimate

relationships – if there are any – and can experience major emotional mood changes, irascibility, moments of depression and loneliness. There are situations where *past psychological trauma* is related with compulsive pornographic use.

**Case 3.** A. (42 years old), has been married for 19 years, father of 3 children, a socio-professionally integrated person, heterosexual, bigot, with strong feelings of guilt related to pornographic material consumption (“issue-addiction” as he calls it). He came to see a psychotherapist after some recurrent visits to different clerics who ultimately advised him to seek psychological counselling. He is focused on finding a solution to the problem he is dealing with and mentions: *“I could have understood more what is happening to me if I had known how specialists approached this issue”*. He has been masturbating ever since puberty. Over the last years the frequency has increased and he started using pornographic material from the internet (daily or a few times a day, when the context is favorable). *“At first, I masturbated quite rarely, but over the time it has turned into a discharge of dissatisfactions, frustrations and desires, which insistently demanded to manifest, to take shape because of the pressure”*.

A. is a victim of physical and emotional abuse in his family of origin and therefore an introverted person, with a low self-esteem and a negative body image, extremely shy and with a strong fear of not rising to others’ expectations. *“It has always been a chain, a circle of weaknesses. I often felt inadequate in front of others, powerless, fearful, and ugly and waited in the corner of my room and in my imaginary world in which I rewarded myself in a way. I satisfied myself away and independently from others’ looks and rejection. For a few moments, I immersed myself in the maddening state of carnal pleasure”*. He often takes refuge in fantasy and scrupulously prepares his daydreaming moments, accompanied by scenes and sequences with pornographic content. Those moments are always followed by intense feelings of guilt: *“I have always prepared that world of images (...) dreaming by myself, being extremely sensitive to the sensations that came from the sexual part of the body. It has become an addiction. This circle closed when I was once again tied up and frozen in front of others by the shame, guilt, fear and repulsion for the filth I felt inside my own being, enslaved by those seconds of lone pleasure”*.

Over time A. approached more and more spiritual practices, hoping that this way he *“can get*

*away, replace the pleasure from the act with special fulfillments and satisfactions”*. According to A., it was only an ideal, because the body had its needs, which - rejected and repressed - would only come back in a much more acute and destabilizing form. After marriage, the exacerbated preoccupation for carnal desires and the guilt for masturbation were replaced with the expression of his sexuality within a romantic relationship. The relapse occurred when he felt strongly *neglected* and *rejected* by his wife. A. says that the only reason he consumes pornography is that his partner deprives him of sex and avoids sexual intercourse almost every time. He does not have difficulties in performing sexual intercourse and he even describes it as much more pleasant than the solitary sexual activity.

When A. came to see a psychotherapist, the strong feelings of guilt were related to the fact that sometimes he felt attracted to other women as well: *“many times I was forced to bow my head and take my eyes off the bodies of the ones around me. Obviously, guilt and the feeling of inner filth and submission to some altered senses increased enormously”*. He is looking towards positive and fulfilling activities both professionally and spiritually, and wants to improve his self-esteem and to achieve the feeling of self-worth.

### III. Conclusions

Medical practitioners, psychologists and mental health specialists should take in consideration the possible effects of pornography consumption on men sexual behaviors, men sexual difficulties and other attitudes related to sexuality. In long term, pornography consumption influences the person’s behavior as he resorts to this type of stimulation to cope with life dissatisfaction. Even if the compulsive behavior fades to remission, the individual may relapse if the true cause that predisposes him to pornographic material consumption is not found. Therefore, it is needed to identify the psychological mechanisms that cause and maintain this behavior or that can favor relapse.

In a normal sexual relationship numerous factors are involved in sexual intercourse, including touching and being touched by another person, smelling and reacting to pheromones, connecting and emotional interaction with the other person by using verbal and non-verbal communication, while in the internet pornography there are less factors involved in obtaining an erection. Pornography offers a very simple alternative to obtain pleasure without implying other factors that were involved in human’s sexuality along the history of mankind. The brain develops an

alternative path for sexuality which excludes “the other real person” from the equation. Furthermore, pornography consumption in a long term makes men more prone to difficulties in obtaining an erection in a presence of their partners. Thus, there are frequently intimacy issues among pornography consumers, as the incapacity to interact with a potential partner, the impossibility to connect to the partner in order to experience intimacy or the difficulty to obtain arousal in the presence of the partner. It is still very hard to appreciate what is the amount of time that one is spending watching pornography which may induce effects on a long-term on brain activity.

In the understanding of the compulsive pornographic material consumption may be an effect of deeper individual or couple issues. This compulsive behavior together with the individual’s frequent irrational beliefs that maintain this behavior may be effects of profound psychological issues, the causes of which must be identified. The ability to have authentic and efficient communication with the partner, flexibility in relationship, openness towards the partner and his/her needs, emotional intelligence along with deep emotional self-understanding are key-elements in maintaining both a healthy emotional relationship and a sanogenous manifestation of sexuality where pornography does not represent a threat.

#### References

- Arias-Carrión O., Stamelou M., Murillo-Rodríguez E., Menéndez-González M., & Pöppel, E. (2010). Dopaminergic reward system: A short integrative review. *International Archives of Medicine*, 3:24. doi: 10.1186/1755-7682-3-24.
- Baskerville, T.A., Allard, J., Wayman, C., & Douglas, A. J. (2009). Dopamine-oxytocin interactions in penile erection. *European Journal of Neuroscience*, 30(11):2151-2164. doi: 10.1111/j.1460-9568.2009.06999.x.
- Carter, C.S. (1992). Oxytocin and sexual behavior. *Neuroscience and Behavioral Reviews*, 16(2):131-144.
- Doidge, N. (2007). *The brain that changes itself: stories of personal triumph from the frontiers of brain science*. New York: Viking.
- Dominiquez, J. M., & Hull, E. M. (2005). Dopamine, the medial peoptic area, and male sexual behavior. *Physiology & Behavior*, 86(3):356-368.
- Hiller, J. (2005). Gender differences in sexual motivation. *The Journal of Men’s Health & Gender*, 2(3):339-345. doi:10.1016/j.jmhg.2005.05.003.
- Hilton, D. L., & Watts, C. (2011). Pornography addiction: A neuroscience perspective. *Surgical Neurology International*, 2:19. doi: 10.4103/2152-7806.76977.
- Hilton, L. D. (2013). Pornography addiction – a supranormal stimulus considered in the context of neuroplasticity. *Socioaffective Neuroscience & Psychology*, 3:20767. doi: 10.3402/snp.v3i0.20767.
- Hull, E. M., Muschamp, J. W., & Sato, S. (2004). Dopamine and serotonin: influences on male sexual behavior. *Physiology & Behavior*, 82(2):291-307.
- Kastleman, M. B. (2007). *The drug of the new Millennium: The Brain Science behind the Internet Pornography Use*. U.S.: Power Think Publishing.
- Keverne, E. B., & Curley, J. P. (2004). Vasopressin, oxytocin and social behaviour. *Current Opinion in Neurobiology*, 14(6):777-783.
- Kühn, S., & Gallinat, J. (2014). Brain Structure and Functional Connectivity Associated With Pornography Consumption. *JAMA psychiatry*, 71(7):827-834. doi: 10.1001/jamapsychiatry.2014.93.
- Liu, J., Gao, X. P., Osunde, I., Li, X., Zhou, S. K., Zheng, H. R., & Li, L. J. (2010). Increased regional homogeneity in internet addiction disorder: a resting state functional magnetic resonance imaging study. *Chinese Medical Journal*, 123(14):1904-1908.
- Mitrofan, L., & Dumitrache, S. D. (2012). *Compendium of phobias*. Bucharest: SPER.
- Odent, M. (2009). *Fonctions des orgasmes. L’origine de l’amour en question*, France: Jouvence.
- Toates, F. M. (2007). *Biological psychology*. 2<sup>nd</sup> ed.. UK: Pearson Education Ltd.
- Zillman, D., & Bryant, J. (1988a). Effects of Prolonged Consumption of Pornography on Family Values. *Journal of Family Issues*, 9(4):518-544. doi: 10.1177/019251388809004006.
- Zillman, D., & Bryant, J. (1988b). Pornography’s Impact on Sexual Satisfaction. *Journal of Applied Social Psychology*, 18(5):438-453. doi: 10.1111/j.1559-1816.1988.tb00027.x.