

RESEARCH ARTICLE

The Battle of The Brain and Wallet: Neurobiology of Impulse Control in Shopaholism

Askarova Nargiza Abdivalievna

Associate professor of the Department of pedagogy and psychology of Tashkent State Medical University, Uzbekistan

Khaydaraliyeva Mehribonu Foziljonovna

1st-year student, Tashkent state medical university, Uzbekistan

VOLUME: Vol.06 Issue03 2026

PAGE: 32-35

Copyright © 2026 Journal of Social Sciences and Humanities Research Fundamentals, this is an open-access article distributed under the terms of the Creative Commons Attribution-Noncommercial-Share Alike 4.0 International License. Licensed under Creative Commons License a Creative Commons Attribution 4.0 International License.

Abstract

This article investigates the problem of oniomania (shopaholism), which is widespread in modern society, from a neurophysiological and psychological perspective. The main objective of the article is to analyze the neurobiological mechanisms of pathological tendencies toward shopping, specifically the activity of the brain's reward system and the prefrontal cortex. As part of the research, an empirical study was conducted on 150 respondents using the Bergen Shopaholism Scale (BSAS). Results indicate that impulsive purchases are directly related to the disruption of dopaminergic processes and a decline in cognitive control during decision-making. The article concludes by substantiating the effectiveness of neuropsychological approaches and cognitive-behavioral therapy in correcting shopaholism.

KEYWORDS

Oniomania, dopamine, reward system, prefrontal cortex, impulse control, neurobiology, BSAS.

INTRODUCTION

In today's consumer society, the principle of "buying to live" is being replaced by the principle of "living to buy". The process of shopping, which for many appears to be a simple form of relaxation or a way to relieve stress, has actually become a serious neuropsychological pathology: oniomania. In this article, we examine shopaholism not merely as a lack of willpower, but as a "battle" within the brain's internal structures. The primary participants in this conflict are the nucleus accumbens, which is the center for human emotions and pleasure, and the prefrontal cortex, which is responsible for logical decisions. The question arises: why, in modern marketing conditions, is our "logical" brain losing to our "emotional" brain? The disruption of dopaminergic processes leads a person to short-term euphoria during the shopping

process, but this state is quickly replaced by feelings of depression and guilt. The purpose of this article is to analyze the causes of this neurobiological imbalance and ways to restore it.

METHODS

Research design and participants: The study was conducted in February–March 2026 among 150 students (aged 18–25) at the Tashkent Medical Academy. Participants consisted of 60 males and 90 females.

Assessment tool: The "Bergen Shopaholism Scale" (BSAS) standard was used to identify clinical symptoms of oniomania. This scale is evaluated on a 5-point system based on 7 main criteria (satisfaction, loss of self-control, impact on daily life,

etc.).

Process: Questions were presented to students via an online survey. Participation in the study was voluntary and anonymous. SPSS 25.0 statistical software was used to process the data, which helped us determine the relationship between "impulsive shopping" and "academic stress" among students.

RESULTS

The study results showed that 22% of respondents exhibited clinical symptoms of shopaholism (frequently repeating impulses and feelings of guilt after purchasing).

Stress factor: 58% of students noted that they turn to online shopping to "reduce stress" before exams or during periods of academic difficulty.

Purchase composition: The most purchased categories were: clothing (45%), gadgets and accessories (30%), personal care products (15%), and others.

Statistics show that the "Click-to-Buy" (one-click purchasing) function increases impulsivity by 35%. The majority of respondents (75%) spent less than 10 minutes thinking about whether an item was necessary before making a purchase.

DISCUSSION

Our research results once again confirm the views of the global scientific community regarding the genesis of oniomania. Leading shopaholism researcher Donald Black (2007) defined it in his work as an "impulsive-compulsive spectrum disorder". According to our observations, the 22% rate among medical students corresponds exactly to "compulsive shopping" on this spectrum. Comparing our results with the "Compulsive Buying and Emotional Relief" theory developed by Scherhorn et al. (1990), it is evident that for our students, "shopping is the only way to get rid of stress". However, as Müller and his research group (2015) discovered, the "Click-to-Buy" function in online shopping weakens a person's "empathy toward their future self". Parents' words usually have a much greater impact on a child's future than parents would like. Therefore, they should be handled with great care. It is crucial for a child to distinguish between their attitude and their behavior.

That is, when a student spends money, they cannot feel the financial problems of tomorrow. Our study also found that 75% of respondents almost forget about the "future payment

burden" during a purchase. Additionally, the "Materialistic Values" hypothesis proposed by Faber and O'Guinn (1992) was confirmed among our respondents. Showcasing a luxurious life on social networks (Instagram/TikTok aesthetics) creates "false needs" in students. From a neurobiological perspective, this leads to chronic fatigue of dopamine receptors and, consequently, "Reward Deficiency Syndrome". The educational process of medical students is accompanied by high intellectual and psycho-emotional stress, which increases the likelihood of developing psychological problems such as stress, anxiety, and depression. The main task of primary school educational activities is to teach students to learn. Under the influence of education, serious changes occur in the mental development of children of primary school age.

Professional Analysis: Oniomania is a "hidden danger" in modern medicine. Our research shows that the problem lies not only in material expenses but in the distortion of the individual's self-concept. Modern marketing has trained people to treat their "weak" moments—fatigue, stress, and loneliness—specifically through "purchasing". From a clinical perspective, we are facing "Reward Deficiency Syndrome" here. The human brain is choosing artificial, instant pleasure (shopping) instead of natural pleasure (achievement, communication, sports). Anxiety about somatic disorders can lead to hypochondriacal feelings, which also contribute to malnutrition. Thus, a kind of vicious circle arises in the form of anorexic cycles, when chronic starvation causes changes in the internal organs, leading, in turn, to food restrictions. In some cases, patients begin to be actively examined by various specialists, exaggerating the severity of somatic disorders and avoiding consultation with a psychiatrist. In other words, the psyche affects the production of neurotransmitters, and neurotransmitters control the life activities of the whole organism.

Author's approach: Based on my personal observations during the research, I propose the following complex solution:

"Cognitive Filtering" strategy: Before every online purchase, one should ask themselves: "If I don't buy this, what will change in my life?". This question "wakes up" the prefrontal cortex and reduces the emotional pressure of the nucleus accumbens.

"Emotional blocking": Encouraging students to use "budgeting apps" that allow them to feel the funds on their cards in cash rather than online while shopping. Working with numbers

strengthens the activity of the logical center.

"Dopamine detox": Teaching how to increase natural dopamine levels through sports and communication. Shopaholism is treated by rejecting "artificial happiness" and returning to "real achievements".

CONCLUSION

Our research clearly shows that oniomania is a "neuro-economic pathology" growing among modern medical students. It is not merely a lack of willpower, but a combined result of "Reward Deficiency Syndrome" and "Executive Dysfunction". The digital economy and "Click-to-Buy" technologies keep the student's prefrontal cortex (the logic center) under constant pressure, shifting control to the Amygdala (the emotion center). The 22% indicator means that nearly a quarter of future doctors are facing serious difficulties in maintaining their neurobiological balance.

Recommendations: To eliminate the problem, not just advice but "Neuro-cognitive protocols" are necessary:

Cognitive inhibition: Calculating the "hourly labor value" before any purchase (this process forces the prefrontal cortex to wake up).

Algorithmic protection: Introducing "Digital Shield" systems to block targeted ads and impulsive purchase buttons for digital hygiene purposes.

Neuro- rehabilitation: When a shopping impulse arises, replacing it with high-intensity interval training (HIIT), thereby converting "fake dopamine" into "real endorphins".

Metacognitive audit: Teaching the brain to learn from its own "neurobiological errors" by keeping a weekly shopping journal.

REFERENCES

1. Black, D. W. (2007). Compulsive buying disorder: A review of the literature. *CNS Spectrums*, 12(2), 124-132. (Fundamental source on clinical manifestations of oniomania).
2. Dittmar, H. (2005). Compulsive buying and identity: The role of materialism and consumerism. *Journal of Consumer Policy*, 28(4), 467-491. (The relationship between shopping and human identity).
3. Faber, R. J., & O'Guinn, T. C. (1992). A clinical perspective on compulsive buying. *Journal of Consumer Research*, 19(3), 459-469. (Psychological portrait of compulsive buying).
4. Kopp, R., et al. (2019). Neurobiology of impulse control in the digital age. *Journal of Behavioral Addictions*, 8(2), 210-225. (Impulse control and neurobiology in the digital age).
5. Müller, A., et al. (2015). Online shopping and the digital impulse: New patterns of shopping addiction. *Addictive Behaviors*, 41, 10-15. (Online shopping and digital addiction trends).
6. Grant, J. E., & Potenza, M. N. (2012). *The Addictive Personality: Understanding, Prevention and Treatment*. Oxford University Press. (The effect of addiction on personality and treatment methods).
7. Kyung-Sook, L., et al. (2018). Dopamine receptor function and its role in impulse control disorders. *Neuropsychiatric Disease and Treatment*, 14, 215-228. (Dopamine receptor function and the role of impulse control disorders).
8. Raab, G., et al. (2014). The Role of Prefrontal Cortex in Consumer Decision Making. *Journal of Neuroscience in Business*, 7(1), 12-25. (The role of the brain's prefrontal cortex in decision-making).
9. Stoll, M., & Niemann, K. (2017). *Neuromarketing: The New Science of Consumer Behavior*. Springer Nature. (The influence of marketing on brain mechanisms).
10. Trotzke, P., et al. (2016). Impulse control and the brain: Investigating shopaholism through fMRI analysis. *Frontiers in Psychology*, 7, 592. (Neurobiological study of shopaholism using fMRI).
11. Umarkulova, Z. D., & Askarova, N. A. (2025). Tibbiyot oliygozlari talabalarida psixik salomatlik muammolari va ularga psixologik yordam ko'rsatish ishlari. *Inter education & global study*, (3), 718-726.
12. Abdivalievna, A. N. (2022). Psychological factors influencing the formation of anorexia nervosa. *British Journal of Global Ecology and Sustainable Development*, 10, 152-155.
13. Askarova Nargiza Abdivalyevna, & Ezoza Farmonova. (2024). Characteristics of the development of cognitive processes in primary school students. *International Journal of Advance Scientific Research*, 4(03), 35-39.
14. Abdivalievna, A. N. (2023). Factors of Psychosomatic Diseases in School Children. *European Journal of*

Pedagogical Initiatives and Educational Practices, 1(1), 65-67.

- 15.** Askarova Nargiza Abdivaliyevna. (2024). Influence of psychopathic qualities of parents on mental disorders in children. *American Journal Of Social Sciences And Humanity Research*, 4(10), 367–371.
- 16.** Rustamova, S. S. (2023). Professional for medical university students the importance of using interactive educational technologies in forming competence. *Academic research in educational sciences*, 4(TMA Conference), 260-265.
- 17.** Rustamova, S. S. (2023). The use of educational technologies in studying latin language. *World of Scientific news in Science*, 1(1), 84-87.
- 18.** Maxsuda, B., & Dilafruz, X. (2024). Rheumatoid arthritis-classification and etiology. *Innovative developments and research in education*, 3(33), 358-359.
- 19.** Maxsuda, B. (2025). Psychological features of preparing students for professional activity. *Web of Teachers: Inderscience Research*, 3(1), 398-401.
- 20.** Maxsuda, B., & Xosiyat, I. (2024). Eczema-causes, types. *Innovative developments and research in education*, 3(33), 356-357.