



## From Cart to Conscience: Exploring the Mental Health Effects of E-commerce Addiction

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### ABSTRACT

*The inclination toward shopping addiction is characterized by an obsession with shopping to the point where individuals have uncontrollable cravings to purchase. As a result, they had to face poor psychological, social, and financial consequences. Various key factors including escapism, hedonistic shopping, and negative mood have a substantial impact on shopping addiction. This review study offers new insights into analysis of psychological effects of shopping addiction affecting overall health status of an individual.*

*The research analysis shows that online shopping has all the makings of an addictive behavior, according to research, and can develop into a psychiatric issue that needs treatment. Stress, relationship dissatisfaction, rejection sensitivity, resilience, loneliness, lower self-efficacy has been found to be linked with mental health of individuals leading a healthy lifestyle.*

**Key words:** Online shopping, addiction, mental health, psychological effects

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### 1. INTRODUCTION

Due to its accessibility and ease, online shopping has become a double-edged sword with possible addiction risks in addition to advantages. Compulsive shopping behavior might arise from the ease of making purchases from home and the attractiveness of having countless possibilities. Psychologically, the availability of internet shopping sites all the time sets off the brain's reward system, which releases dopamine with every purchase. Like other addictions, this reinforcement may set off a vicious cycle of buying one's way to pleasure. Because internet transactions are anonymous, people may feel less accountable for their behavior, which encourages impulsive purchasing [1]. Excessive internet shopping has been linked to behavioral addictions including gambling disorder, according to research. Accessibility combined with alluring discounts and tailored suggestions may lead to the formation of bad purchasing habits. This obsessive loop is further fueled by social factors, such as peer pressure and the need to display things on social media [2].

To solve this problem, people, and society as a whole need to acknowledge the potentially addictive nature of internet buying and put policies in place that encourage responsible consumption. Setting spending limits, developing healthy purchasing habits, and getting treatment, when necessary, can all help lessen the harmful effects of an online shopping addiction [3].

This study aims to investigate adult consumers' preference for online shopping and possible links between factors that contribute to online shopping addiction and their effects on the mental health. The Centers for Disease Control and Prevention (CDC) and other surveys present data that indicates significant rises in self-reported behavioral health complaints. Therefore, it would fill research gaps with future recommendation for those struggling with mood disorders and substance misuse to improve mental health status.

## 2. LITERATURE SURVEY

Online purchasing has not received much attention because most studies have solely looked at traditional retail. It is possible to list several reasons why consumers purchase online, including the convenience of searching, affordable costs, variety, time, availability, entertainment, promotions, and incentives. Online shopping makes shopping easier for customers by giving them access to rich product and service information as well as the ability to compare prices without being limited by location or time. Furthermore, customers differ in a few ways. Hedonist shoppers engage in experiential buying. Currently, social media apps like Instagram, laptops, and smartphones are used to do online purchasing. Online shoppers may engage in some impulsive and poorly thought-out online purchase behaviors.

Individuals who engage in compulsive buying face severe repercussions, which can have a significant impact on society and the environment. Anxiety, depression, and low self-worth can also affect the compulsive buyer's interpersonal relationships. It is thought that compulsive shopping significantly reduces anxiety. It is evident that compulsive shopping affects every member of a society. Anxiety, despair, and stress are common causes of compulsive purchasing. High levels of stress, despair, and worry among consumers may lead them to engage in compulsive purchasing as a coping mechanism. It is impossible to describe a standard CBD treatment. CBD is treated with psychopharmacology, cognitive behavior therapy, bibliotherapy, financial counselling, and marital therapy; however, research on psychopharmacological therapies has produced inconsistent findings [4].

### A. Symptoms and determinants of online shopping addiction

The determinants of online shopping addiction are multifaceted and may involve various psychological, social, and environmental factors.

1) *Personality Traits & Psychological Factors*: People with high levels of impulsivity might be more likely to shop online compulsively without giving the consequences much thought. Addictive behaviors, like the incapacity to resist the need to shop online, can exacerbate addiction [5]. An addiction may develop if someone uses online shopping as a coping mechanism for stress, boredom, or other unpleasant feelings. Online shopping's quick pleasure when paired with positive reinforcement has the potential to strengthen addictive behavior [6]. Determinants are shown in the Table 1.

**Table -1 Determinants of Online Shopping Addiction**

Psychological Factors	Escapism Gratification
Personality Traits	Impulsivity Compulsivity
Social Factors	Social Comparison Social Influence
Environmental Factors	Marketing Strategies Accessibility
Technological Factors	Mobile Accessibility
Cognitive Factors	Cognitive Biases Reward Processing
Personal History and Experiences	Past Trauma or Stress

Online shopping can become even more addicting when it is done on well-designed and user-friendly platforms. The risk of making frequent and impulsive purchases rises when mobile devices are used to conveniently access online shopping platforms [7].

### 2) *Social & Environmental Factors*:

Online buying as a means of keeping up with friends or social trends might result in compulsive behavior. Adverse social pressure and cultural expectations may contribute to compulsive internet purchasing. The availability of a large selection of goods and the convenience of access to online shopping platforms can both lead to compulsive behavior. Personalized recommendations and time-limited sales are examples of aggressive marketing strategies that can encourage compulsive buying [8].

### 3) *Cognitive Factors*:

Addiction can be caused by biases like confirmation bias, which is the tendency to find evidence to support one's buying decisions, and cognitive dissonance, which is the tendency to explain excessive shopping. Addiction-related behavior may be influenced by anomalies in the brain's reward system [9, 10]. People who have experienced trauma or high levels of stress in the past may use internet shopping as a coping strategy, which can result in compulsive behavior.

Addiction may develop because of positive reinforcement from prior shopping experiences that were entertaining. Researchers, psychologists, and legislators can create therapies and methods to address and lessen online shopping addiction by having a better understanding of these variables. It's crucial to remember that every instance is unique, and that this addictive behavior most likely develops as a result of a number of circumstances [11].

The signs of shopping addiction shown in Fig. 1.



Fig. 1 Signs of shopping addiction

#### 4) *Technological & Environmental Impact:*

It has been suggested that a few societal, familial, and personal traits as well as a few internet-related elements are contributing factors to internet addiction. Researchers have been attempting to identify the determinants or risk factors linked to internet addiction. A few factors that have been linked to internet addiction include male gender, early course years, permanently logged in status, peer influence, preference for virtual interaction with friends, and using the internet for shopping, chatting, pornography, forming new friendships, and forming relationships. Other factors include the amount of time spent on the internet each day, the mode of access, speed of internet, accessibility, and intensity of information accessed online.

People may experience guilt and eco-anxiety because of the environmental effects of excessive consumerism, which includes internet shopping, as they become more conscious of the effects of their consumption habits. It's critical to acknowledge these psychological effects and, when necessary, seek support or expert assistance. A more balanced and contented lifestyle can be achieved through cultivating sound coping strategies, financial knowledge, and mindful consumption practices. [12–14]

An addiction to online shopping might interfere with day-to-day obligations, such as work and school. Reduced performance and productivity may arise from shopping-related distractions and obsessions. Relationship problems may arise because of the financial hardship that excessive internet shopping causes. Interpersonal dynamics may become strained because of worries expressed by friends, family, or partners [15, 17].

### 3. PSYCHOLOGICAL IMPACT OF ONLINE SHOPPING ADDICTION

Online shopping has encouraged a growing number of internet users to spend money online as well as conduct their shopping on e-commerce websites over time. However, it is still premature to say that excessive or problematic internet buying has spread throughout every community. However, information about the effects of internet buying will start to surface when it starts to become an issue in different societies.

#### 1) *Compulsive Buying Disorder*

Significantly, a new category of "behavioral addictions" has been included to the Diagnostic and Statistical Manual for Mental Disorders-5. It suggests that "compulsive online shopping" could fall under this category. "Being overly concerned about shopping, driven by uncontrollable shopping motivation, and to investing so much time and effort into shopping that it impairs other important life areas" is the definition of compulsive shopping, which is also referred to as "oniomania" and "shopaholism." According to a recent meta-analysis, one in twenty people will at some point in their

lives struggle with compulsive shopping, and adolescent girls are more likely to suffer the negative effects of this behavior. These detrimental effects are comparable to those of other recognized behavioral addictions, like compulsive gambling (DSM-5) For example, it has been discovered that obsessive buying is linked to detrimental effects on one's finances (such as debt) and mental health (such as low self-esteem). On the other hand, not much is understood about compulsive online purchasing [18].

When spending is repetitively used to alleviate worries and stress, CB can turn into a buying and/or addiction to shopping. According to research, there is a favorable correlation between online purchasing and internet addiction. There is scant information regarding the role that virtual communities and e-compulsive behaviors play in causing online shoppers to become addicted to the internet, in addition to the paucity of studies that have sought to study the practices and levels of addiction of internet users. While there isn't much data to support the risks associated with online CB habits, it's thought that reckless purchasing can lead to both excessive internet use and negative effects on an individual's health. Furthermore, the popularity of online shopping is rising relative to in-person buying because it is easier and more comfortable to find the things that one is looking for in daily routine [19, 20].

The addiction to online shopping, commonly referred to as compulsive buying disorder or shopping addiction, can have a significant negative impact on one's mental well-being and general quality of life. The COVID-19 pandemic revealed a marked shift in human behavior due to issues with internet addiction, compulsive shopping, internet gaming, gambling, and pornography [21].

**Table -2 Effects of online shopping addiction on mental health**

<b>Effects of online shopping addiction on mental health</b>
Compulsive Buying Disorder
Anxiety and Depression
Financial Stress
Compromised Self-Control
Depression and Low Self-Esteem
Regret and Guilt
Social Isolation
Cognitive Biases
Environmental Impact
Impaired Work and Academic Performance
Relationship Strain
Escapism and Avoidance
Sleep Disturbances

#### **Anxiety, Depression & Social Isolation:**

The negative psychological and behavioral effects of Internet abuse on youth have been the subject of increased attention in recent research. These repercussions could manifest as potential behavioral changes, loss of control, academic failure, social isolation, and an uptick in family disputes. Depression and Internet addiction disorder (IAD) have been linked in several research. Overspending is another problem which also lead individuals to emotional and financial burden [22, 23-25]. It may also result with feeling of emptiness and sorrow after spending too much.

Numerous research have investigated the connection between self-esteem and Internet addiction. This research has shown a correlation between Internet addiction and personality traits, self-esteem, and psychiatric illnesses [26,27] The great majority of Internet addicts have experienced anxiety or sadness in the past. There have also been reports of low self-esteem. Other research has shown that self-esteem is a factor linked to problematic and general Internet use. According to this research, teenagers who have low self-esteem typically use social networking sites more than teenagers who have strong self-esteem [28-31]. Other problems involve debt, broken relationships, depression, and feeling of guilt, regret and hopelessness. Many unfavorable conditions are also linked with online buying which include all above with anxiety being most prominent [32-34].

#### **Sleep Disturbances & Suicidal ideation**

A variety of behavioral, social, and psychological factors might contribute to sleep issues. Teenage overuse of media and the internet has been linked to the onset and exacerbation of sleep disorders in teenagers and has emerged as a major global public health issue. In addition to the previously indicated detrimental impact of internet addiction on sleep patterns, numerous research has shown a correlation between the maladaptive internet usage of adolescents and

psychiatric symptoms. Teens who used the internet a lot were often found to have anxiety and sadness. There have been several theories put up to explain the connection between these mental health issues and internet addiction. The initial two processes inquire as to whether the addictive problem originates from the psychiatric disorder or vice versa. Thirdly, psychiatric diseases and internet addiction might have similar underlying biological, psychological, or societal causes [35].

#### 4. IMPROVED PATTERNS RECOMMENDATIONS FOR ECOMMERCE PLATFORMS

Developing features and tactics that support conscientious and ethical shopping is necessary to promote healthier consumption patterns on eCommerce platforms. Here are some suggestions for eCommerce platforms, one of which is to give instructional materials about ethical and sustainable consumption on the platform, including advice on how to purchase with awareness, support ethical production, and evaluate the environmental effects of different items [38, 39]. Further suggestion would be to offer information transparency, which would guarantee accurate and thorough product information, including specifics regarding components, production methods, and environmental certifications [40]. Hence, researchers suggest some recommendations for e-commerce to improve online shopping trends as given in the Table 3.

**Table -3 Recommendations For e-Commerce to Improve Online shopping trends**

<b>Effects of online shopping addiction on mental health</b>
Educational Content
Product Information Transparency
Filter and Recommendation Systems
Carbon Footprint Information
Fair Trade and Ethical Labels
Time-Limited Discounts
Customer Reviews and Ratings
Subscription Models for Essentials
Customizable Shopping Alerts
Community and Social Responsibility Initiatives
User Account Dashboards
Incentives for Sustainable Choices
Educational Content

It would also be advantageous to provide filters that let users order products according to sustainability and ethical production practices. Recommendation algorithms are used to provide options that fit with patterns of responsible consumption. An excellent strategy would be Including data on product carbon footprints or offering a carbon calculator that calculates the user's shopping cart's environmental impact [41, 42]. The promotion of goods bearing ethical labels or fair-trade certifications, cooperation with groups that support ethical production and sustainability, a space for customers to provide feedback on the sustainability and quality of products, and the launch of subscription models for necessities will ultimately lessen the need for frequent, individual purchases and encourage consumers to organize and combine orders [43-45].

The following features are worth mentioning customizable shopping alerts, alerts to users about their spending limits when they reach a certain threshold, and restrictions on the frequency and duration of discounts to deter impulsive buying and promote careful deliberation before making a purchase when they approach a certain threshold. The combined effect of all of this will be to promote thoughtful and frugal shopping practices. A partnership-based strategy to interacting with charitable organizations would be beneficial for the organization as well as for building a degree of trust between platforms and users and ultimately contributing to the creation of a mindful society [46,47].

Utilizing big data analytics to address e-commerce difficulties is another cutting-edge approach. With the use of social media messages and posts, it facilitates better decision-making. Additionally, it steers e-commerce in the right path, boosting vendor income and drawing in clients. In a similar vein, it can be employed to identify problem areas by analyzing population trends related to behavioral addiction [45].

Motivational therapy is an additional approach that can assist individuals in creating objectives and treatment plans for behavioral addiction, such as regaining control over their behavior and gaining social support. Teenagers who have developed such behavioral habits have found this to be helpful. Studies indicate that programs that support teenagers' overall good development provide them better self-control skills [48-50].

## 5. STATISTICAL ANALYSES OF SHOPPING HABITS

Recent years have shown advanced developments in economy with use of power of modern distribution channels. Researchers have worked on multiple aspects of online shopping addiction which involves exploring various factors, symptoms, trends, that contribute to compulsive and excessive online shopping behavior.

With a lifetime frequency of 5.8% in the US general population, compulsive buying is a worldwide illness. Individuals suffering with compulsive buying disorder describe a fixation on shopping, stress, or anxiety prior to making a purchase, and a feeling of relief afterward [51]. In one of the research projects carried out by Durvasula S., Lysonski S., Andrews J.C in the year 2013, represented and discussed the role of the role of consumer personality and the e-commerce environment in online impulse buying, which is a related behavior that can contribute to online shopping addiction [52].

Moreover, Likewise Rose S., Dhandayudham A. explored the characteristics of compulsive buying behavior in online shoppers, shedding light on the factors that contribute to chronic addiction [53]. Many other studies investigate the acceptance of online shopping addiction among consumers, considering the moderating effect of online shopping experience [54].

Yang K., Yu Q. performed a study that compares the determinants of online shopping addiction in the United Kingdom and China, providing cross-cultural insights into this phenomenon. These references cover a range of aspects related to online shopping addiction, including its causes, consequences, diagnostic criteria, acceptance, and cross-cultural perspectives [55, 56].

Researchers have also studied mechanisms of regulating customer markets of variety of products including health, hygiene, dietary and daily use products and define relation between their use, purchase and price to consumers consumption [57-59]

Researcher have also used developed and validated techniques like COOS Scale usually termed as compulsive online shopping scale. It utilized ChiSquare and logistic regression analysis to predict e commerce decisions based on age, class, and behavior patterns of consumers [53]. In one of the studies carried out by Hayhoe, C. R. et al, credit card purchasing was highly influenced by genders. Males and females purchased different varieties of products including electronic, clothing, travel and entertainment, gasoline, and food stuff. Amongst these female students employed greater financial practices than boys. Same was applicable on financial stress and affective credit attitude [60].

In some of the studies carried out with help of analytical tool named structural equation modelling (SEM), it was also found that external factors like technology acceptance, website quality and internal factors like holdup costs also affected customer e-satisfaction [6,61].

Another study found risks associated with online shopping. It included product perception, privacy and financial risks related with online shopping experiences. It presented a conceptual model showing more privacy risk with male customers than female online shoppers. It was significant in apparel shopping; however, women were more indulged in purchase of products on internet than males [62].

In another study comparing differences of shopping in Latvia for online and traditional methods, the statistical data showed basis over purchasing behaviors. It gave an insight into multiple relevant characteristics of consumer behavior including shopping frequency, pricing, time and volume purchase. The benefits were linked with money and time saving, all around a clock availability and convenience [60, 61]. Similarly, prevalence and demographics correlation were investigated in Hongkong students with different demographic variables like age and gender, economical and immigration status of family which concluded with early internet addiction detection in population [62].

Another critical aspect is security challenge due to these complex interactions between APIs (Application Programming Interfaces) and TTPs. Many malicious clients are likely to exploit security parameters. This requires modeling and verification of online shopping business processes with malicious behavior patterns. Certain online shopping businesses can utilize software designs, with reduced the difficulty and cost of modification to secure from the malicious attacks [66].

## 6. CONCLUSION

One of the most powerful mass media platforms, the Internet has completely changed how people behave, with more and more people using it for research, education, communication, creation, and entertainment. Internet addiction can have detrimental effects on both the person and the community in which people live and behave. Additionally, the Internet has led to the emergence of other harmful online behaviors, such as the use of social networking sites (SNS), some of which have been shown to be addictive addiction to online gaming, addiction to cybersex, and compulsive shopping.

Globally, it is agreed that the internet can serve as a tool that enhances well-being but there is no consensus regarding what constitutes problematic internet use and internet use relationship with offline behavioral addictions. On the other hand, compulsive Internet use such as in compulsive shopping is linked with extraversion, agreeableness, conscientiousness, and openness to experience traits. In conclusion, significant mental comorbidity, including mood and anxiety disorders, eating disorders, substance use disorders, and other problems of impulse control, are linked to

compulsive buying disorder. The issues may even run in families and impact their lives as family members who suffer from compulsive shopping may also struggle with mood disorders and substance misuse as well. Therefore, it is critical to acknowledge these psychological effects and, when necessary, seek support or expert assistance. In future however, we need to carry out further researches due to current applications of Artificial intelligence and machine learning by e-commerce businesses to provide customers with a personalized purchasing experience. This area can be better explored with making use of data to provide discounts, provide product recommendations, and enhance user experience as per needs.

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