A Study on the Influence of Smartphone Addiction, Social Media Addiction, Fear of Missing Out (FOMO) and Impulsive Buying Behavior on Online Compulsive Buying Behavior of Young Consumers in India

> Dr. S. Saibaba Assistant Professor – Marketing saibaba@sdmimd.ac.in



Shri Dharmasthala Manjunatheshwara Research Centre for Management Studies (SDM RCMS) SDM Institute for Management Development Mysuru - 570 011



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## Preface

SDM Research Centre for Management Studies (SDM RCMS), since inception, has endeavoured to promote research in the field of business management in different ways. One of the initiatives undertaken, in this direction, was to enable Faculty to pursue applied research projects in the realm of management.

Broadly, an applied research project is expected to answer a specific question, determine why something is failed or succeeded, solve a specific and pragmatic problem relating to the business, economy, or policies. It may also intend to study the relationship and applicability of management theories or principles to the solution of a problem. It uses the data on a specific set of circumstances directly for real world application with the goal of relating the results to a situation. Hence an applied research is looked upon to develop strategic ways of addressing/solving the problems, thereby contribute with suggestions to the successful business and economy or effective policy implementation.

The Institute promotes such projects through the grant of funds and provision of needful research infrastructure. Generally, the applied research projects are completed in the duration of six to eight months and they could be in the form of case study, monograph, organisation/firm-based study, evaluation-based study of policy/scheme/institution or other types of studies/projects as deemed necessary by the Faculty, provided they fit into the broad nature of applied research.

It is heartening to note that the initiative has been effectively grabbed by the Faculty who are recruiting students as research assistants in the process of the projects. It has been found that this exercise enriches the knowledge of the students by extending their academic activities, outside the classroom learning situation, in the real world.

The project outcome is intended to help the firm concerned in fixing up the problem/addressing the given situation, and the Faculty to gain first-hand experience that enables in formulating hypotheses to get into a deeper research with wider scope. The findings from such practical exercises are disseminated to the wider world through FDPs, MDPs and publications. True to its objectives Faculty from SDMIMD are successful in harnessing the greater benefits of knowledge creation and its transfer from the applied research projects.

Dr.B.Venkatraja Chairperson, SDM RCMS



Applied Research Project, 2022

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Applied Research Project, 2022

## **Executive Summary**

The influence of smartphones and social networking sites on young consumers' and their consumption behavior across the world is apparently high in the recent years with the rapid development of information and communication technologies, specifically the Internet and mobile technology. The Global Internet users' population has drastically increased to 5 billion in the year 2021. India is the second largest country in Internet population with 845.68 million users, next to China. Young consumers below 39 years of age dominate the Internet users' population in the country. Similarly, the penetration rate of social networking sites has been rapidly increasing in the last decade across the world. Interestingly, India is one of the fastest growing e-commerce and m-commerce market in the world. Young consumers spend a lot of time on their smartphones and social media websites daily. They are highly attracted to aggressive promotions carried out by the e-commerce firms, encouraging them to make repetitive and addictive purchases on a regular basis, resulting in negative psychological and financial consequences. With the excessive usage of smartphones and social media sites, fear of missing out rewards online and higher impulsiveness, there exists increased pressure on young consumers to do frequent online shopping, resulting in compulsive buying disorders.

The purpose of this research is to understand the influence of smartphone addiction, social media addiction, fear of missing out and impulsive buying on online compulsive buying behavior of young consumers in India. Primary data was collected in this study by means of web-based survey from the young consumers with prior online shopping experience, between February and May 2022, resulted in a final sample 164 respondents. Based on detailed review of literature, research questions and research hypotheses were developed. Various descriptive statistical tools were used to portray the demographic, psychological and technological characteristics of the respondents. Since the data did not fulfil the normality condition, the non-parametric tests were applied to address the research questions.

The amount of time spent daily on smartphones and social media websites was found to be slightly higher among the female than male respondents. While the online shopping experience status of male and female respondents were similar. Smartphone addiction behavior was observed to be higher among the male than female, and who spend 2 to 4 hours daily on smartphones, 1 to 4 hours on social media websites, and with 3 to 5 years of online shopping experience. Similarly, the social media addiction was reported to be higher for female than male, and shoppers who spend 2 to 4 hours daily on both smartphones and social media websites. The young consumers characterized to be exhibiting high fear of missing out behavior are mostly male, consumers who spend 2 to 4 hours daily both on smartphones and social media websites, and with online shopping experience of both 1 to 3 years and more than 5 years. Further, the high tendency of impulsive buying behavior was reported to be equal for both male and female, consumers who use 2 to 4 hours of smartphone usage and spend 1 to 2 hours on social media websites, and mostly with 3 to 5 years of online shopping experience. Finally, the results of descriptive statistics indicated that online compulsive buying behavior was observed to be higher among the female, consumers who spend 2 to 6 hours daily on their smartphones, 1 to 4 hours on social media websites, and with 1 to 5 years of online shopping experience. The hypotheses testing results confirmed the positive and statistically significant influence of smartphone addiction, social media addiction, fear of missing out, and impulsive buying on online compulsive buying behavior.

The marketers of e-commerce firms need to design their offerings as more and more appealing to young consumers constantly and consistently, coping with the rapid changes in the online marketplace environment. At the same time, they should act more sensibly by encouraging responsible consumption behavior among the young consumers, with a notion that responsible marketing strategies can lead to responsible consumption behavior which would enable businesses to achieve sustainable competitive advantage.



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## Table of Contents

Section I: Introduction	1
Statement of the Problem	12
Purpose of the Study	13
Research Questions	13
Research Hypotheses	14
Section II : Literature Review	15
Section III : Research Methodology	
Section IV : Data Analysis and Results	22
Demographic Characteristics of Young Consumers	23
Cross - Tabulations	29
Hypothesis Testing	51
Section V : Discussion and Conclusion	60
Research Questions and Hypotheses	60
Conclusion	63
References	64

## Section I: Introduction

The influence of Internet and smartphones on young consumers' behavior across the world is obviously high in the recent years. This study will measure the impact of usage of smartphones, social networking sites, impulsiveness, and FOMO (fear of missing out) on online compulsive buying behavior of young consumers in India. This is considered to be highly significant due to the excessive use of smartphones and social media among the young population, which would eventually influence their personal and social life. With the high proliferation of internet and mobile technologies and its availability at affordable rates resulted in rapid adoption and usage of smartphones and social media sites.



Figure 1 : Global Internet users' population from 2005 to 2021

#### (Source: ITU, 2021)

Ther Internet users' population globally (figure 1) was 1 billion in the year 2005, and this was estimated to be 4.9 billion in 2021 (ITU, 2021). As per the latest report of We Are Social, & DataReportal, & Hootsuite (2022), there were 5 billion Internet users globally with a penetration

rate of 62.5% of the population. Further, it stated that there were 2.8 billion Internet users in Asia, followed by Europe with 744 million Internet users, and Northern Europe was ranked first in Internet penetration rate with 98% among the population.



Figure 2 : Top 10 Countries with largest Internet users





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It is interesting to note that China is leading in terms of Internet population with 976.26 million Internet users in 2021, followed by India with 845.68 million and the United States with 3.2.28 Internet users (Statista, 2021). Further,

it is evident from the figure 2 that most of the emerging economies have taken positions in the top 10 countries with largest number of Internet users in 2021.



Source: Statista (2021)

There Internet users' population in India is estimated to reach 1.13 billion by 2025, as against 92.57 million in the year 2010 (figure 3).



*Figure 4 : Distribution of internet users in India - 2019, by age group* Source: IAMAI & Nielsen (2020)

As depicted in figure 4, 34% of Internet users in india are belonged to the age group of 20 to 29 years, followed by 30 to 39 years (20%), 16 to 19 years (17%), 12 to 15 years (14%) and 40 to 49 years (9%). The following chart (figure 5) depicts the leading websites in india based on traffic

(pages per day) during 2021. It is clear that Instagram and Facebook, two popular social networking sites are popular among the Internet users in india, followed by Amazon India, Google-Search engine, Cricbuzz.com – cricket information website.



*Figure 5 : Leading websites in India 2021, by traffic* Source: We Are Social, & Hootsuite (2022)

Figure 6 illustrates the top 10 countries with the highest penetration rate in 2022, based on the report of DataReportal, & We Are Social, & Hootsuite (2022). This report stated that Denmark, UAE, and Ireland were the top three countries with 99 percentage of Internet penetration, followed

by UK, South Korea and Switzerland with 98 percentage of Internet penetration rate. Further, the Internet penetration rate in India was estimated to be around 47% in 2021, which has increased from 4% in 2007.



*Figure 6 : Countries with highest Internet penetration rate* Source: DataReportal, & We Are Social, & Hootsuite, 2022



Table 1 depicts the top 10 activities where the Internet users spent most of their time in 2021, as reported by Domo (2021). It is clear from the following table that internet users spend

most of their time on social networking and messaging apps, followed by online shopping and information search on search engines.

Table 1 : Media usage in an internet minute as of August 202	an internet minute as of August 2021
--	--------------------------------------

Media usage in an internet minute as of August 2021	Count
Videos watched by TikTok users	16,70,00,000
Views received by Facebook Live	4,40,00,000
Messages sent on iMessage	1,20,00,000
People shopping online	60,00,000
Google searches conducted	57,00,000
Snapchat messages sent	20,00,000
Hours streamed by YouTube users	6,94,000
Messages sent on Discord	6,68,000
Tweets posted by Twitter users	5,75,000

Source: Domo (2021)

The top 10 countries with highest daily time spent online by Internet users is illustrated in figure 7. It is evident that Philippines was leading with 10.23 hours spent by Internet users, followed by South Africa with 10.19 hours and Brazil with 9.56 hours online. It was stated that the Internet users in India spent daily 7.06 hours online in 2021.



*Figure 7 – Top 10 countries with highest daily time spent online by users* Source: DataReportal, & Hootsuite, & We Are Social (2022)

Further, the following chart (figure 8) depicts the most comfortable activities preferred by the Internet users globally (Capegemini, 2020). It was stated that searching or using Google was the most

comfortable activity with 75%, followed by accessing email (73%), online shopping (68%), watching videos or movies online (67%) and using social media sites (64%).



*Figure 8 – Global online population Internet activity confidence – 2020* Source: Capegemini (2020)

With the rapid penetration of Internet and smartphones across the globe, the usage of social networking sites has already increased exponentially. Figure 9 shows the top 10 social networking sites with the number of monthly active users in millions. It is clear that Facebook is the most used social networking site (2.9 billion users), followed by Youtube (2.56 billion), WhatsApp (2 billion), Instagram (1.48 billion) and WeChat (1.26 billion). It is reported that the active social media users in india were 468 million in 2022.



*Figure 9 - Global social networks ranked by number of users 2022* Source: We Are Social, & Hootsuite, & DataReportal. (2022)



As social media use is one of the most comfortable online activities by the global Internet users, the amount of time spent on these websites have surged considerably in the last ten years

(figure 10). The time spent on social networking sites had been around 90 minutes daily in 2012, and this was estimated to be 147 minutes in the year 2022.





The social networking sites have become popular among the Internet users in india in the recent years (figure 11). It is clear that the penetration rate of social networking sites was only 19.13% in 2015, which had increased to 54.59% in 2021, and this is estimated to reach 67.4% by 2025 (Statista, 2021).



Figure 11 - Social network penetration India 2015-2025

6

Source: Statista (2020)

The Internet usage has been rapidly increasing across the world, especially through mobile devices including smartphones, tablets, and laptops. Among these Internet users have been accessing the online content predominantly

through smartphones. As depicted in figure 12, Bahrain is the country with the highest (98.11%) mobile Internet user penetration rate, followed by UAE (95.65%), Kuwait (94.21%), Japan (92.16%) and Taiwan (92.01%).



*Figure – 12 - Mobile Internet penetration rate – Top 10 countries* Source: Statista (2021)

Further, it is interesting note (figure 13) that India is the leading country where the digital users spend most of their time (93%) on smartphones,

followed by Indonesia (92%), Mexico (89%), Brazil (88%) and Argentina (87%).



*Figure – 13 - Mobile share of digital minutes in selected countries 2020* Source: comScore (2020)





The following chart (figure 14) illustrates the growth of wireless subscribers in India from 2010 to 2021. It is clear that there were 635 million

wireless subscribers in India during 2010 which has drastically increased to 1.154.62 million in 2021.



#### Source: TRAI (2022)

The mobile Internet users can utilize mobile applications for performing various activities like online shopping, fund transfer, watching videos/movies, social networking, bill payment etc. According to Data.ai (2021), the number of mobile applications downloaded worldwide in 2016 was 14.68 billion, which had increased to 230

billion in the year 2021. Based on the report by Mobile Ecosystem Forum (2021), playing a game on mobile devices was the most popular smartphone activities across the globe (68%), followed by listening to music (67%), using social media (63%), watching videos/movies (61%) and online shopping (47%).



Most popular smartphone activities worldwide in as of December 2020, by usage reach

*Figure – 15 - Leading mobile activities worldwide 2020, by usage reach* Source: Mobile Ecosystem Forum (2021)

The following chart (figure 16) shows the percentage of mobile Internet traffic to the total web traffic in 2021 of top 10 countries. It is

evident that Nigeria was ranked first with 81.43%, followed by India (75.96%), South Africa (72.59%), Ghana (71.12%), and Kenya (70.68%).



*Figure – 16 - Share of mobile internet traffic – Top 10 countries* Source: StatCounter (2022)

Figure 17 shows that chat messengers are the most popular mobile application preferred by the

smartphone users in india, followed by social networking, entertainment or video, shopping and map.



*Figure 17 - Mobile apps usage India Q3 2020, by category* Source: We Are Social, & Hootsuite. (2021)

9



As discussed in the previous paragraphs, the Internet users across the globe (and in India) spend most of their time on social networking sites, watching videos online and online shopping. The retail e-commerce globally has increased from \$ 1,336 billion in 2014 to \$ 4,938 billion in 2021. Further, this is forecasted to reach \$ 7,391 billion by the year 2025 (figure 18).



Figure – 18 - Global retail e-commerce sales 2014-2025

Source: eMarketer (2022)

Primarily, the massive growth of e-commerce market was confined to developed countries such as the U.S., the U.K., Australia etc. But this trend has shifted towards the emerging markets in the last two decades (figure 19). As given in figure 19, Philippines, India, Indonesia, Brazil, Vietnam are the top five countries leading the retail e-commerce sales growth worldwide in 2021 (eMarketer, 2021).



## **Retail e-commerce sales growth**

*Figure – 19 – Top 10 leading countries in retail e-commerce sales growth in 2021* Source: eMarketer (2021)

The following chart (figure 20) illustrates the estimations of compounded annual growth rate of retail ecommerce sales of top 10 countries from

2022 to 2025. It is clear that Brazil was ranked first with 20.73%, followed by Argentina, Turkey, Russia and India.



*Figure – 20 – Retail e-commerce sales CAGR from 2022 to 2025, Top 10 countries* Source: Statista (2022)

With advanced (wireless and mobile network) capabilities, the mobile phone had become most significant channel for global businesses to provide personalized communication, promote standard and customized products and services, and engage their target customers anytime anyplace. Initially, the mobile shopping was restricted to websites in micro-browsers of mobile phones, until introducing smart applications that resulted in accelerating the users' experience. The mobile technology has been proved to be more advantageous to the online shoppers due to its ubiquitous nature, as global consumers can purchase the desired products and services anytime anyplace. The rapid penetration of smartphones, advancement of mobile networks, affordable mobile devices and Internet could be some of the reasons for the quick growth of mobile commerce. As given in figure 21, the retail m-commerce sales worldwide were expected to increase from \$967 billion in 2016 to a massive \$3,556 billion in 2021 (eMarketer, 2018).

11





*Figure 21: Retail m-commerce sales worldwide from 2016 to 2021 in billions* Source: eMarketer (2028)

As illustrated in figure 22, the list of fastest growing retail m-commerce countries in the world are dominated by the emerging markets, in which India has been ranked the sixth position with 28.3% of growth in 2021 (eMarketer, 2021).



*Figure 22: Top 10 fastest growing countries in retail m-commerce in 2021* Source: eMarketer (2021)

## Statement of the Problem

This research will examine the online compulsive buying behavior of young consumers in India and its relationship with other psychological factors such as smartphone addiction, social media addiction, fear of missing out and impulsive

buying behavior. As detailed in the previous section, the young consumers worldwide, and especially in a developing country like India, have been involved in excessive usage of smartphones and social media websites, because of the rapid

changes in their personal lifestyle and societal attitudes and norms. Similarly, the fear of missing out behavior describes the need for young consumers to stay updated with the opportunity of gaining any rewarding experience through social networks. It has been found that the level of anxiety and depression because of increased use of compulsive social media had been significantly increased by the FoMo. Further, the impulsive buying in the online context is considered to be more irrational, spontaneous and unplanned purchases made due to aggressive promotions made by the e-commerce firms, attractive and irresistible offers, and little consideration for the purchase consequences. The impulsive buying behavior of young consumers could have a considerable impact on their online compulsive buying behavior. The influences of these psychological variables on online compulsive buying behavior of young consumers, would assist marketers of e-commerce firms not only to devise appropriate marketing strategies but also encouraging consumers to maintain responsible consumption behavior.

## Purpose of the Study

The purpose of this research is to understand the influence of smartphone addiction, social media addiction, fear of missing out and impulsive buying on online compulsive buying behavior of young consumers in India. The study's results will add knowledge to the existing literature on consumer behavior in general and specially to compulsive buying behavior. The study also highlights the technological characteristics such as smartphone usage, social media usage and other psychological factors of young consumers, which would help marketers to design specific communication strategies to attract, engage and retain them. Finally, this research also reinforces the need for marketers to promote the responsible consumption behavior among the young consumers in India.

## **Research Questions**

This research was guided by the following questions:

- What are the differences between male and female young consumers in India with respect to their smartphone usage, social media usage and online shopping experience?
- 2. What is the percentage of young consumers in India who exhibit high smartphone addition behavior?
- 3. What is the percentage of young consumers in India who exhibit high social media addiction behavior?
- 4. What is the percentage of young consumers in India who exhibit high fear of missing out behavior?
- 5. What is the percentage of young consumers in India who exhibit high online compulsive buying behavior?
- 6. What is the percentage of young consumers in India who exhibit high online impulsive buying behavior?
- 7. Is there a relationship between smartphone addiction behavior and online compulsive buying behavior among young consumers in India?
- 8. Is there a relationship between social media addiction behavior and online compulsive buying behavior among young consumers in India?



- 9. Is there a relationship between fear of missing out behavior and online compulsive buying behavior among young consumers in India?
- 10.Is there a relationship between impulsive buying behavior and online compulsive buying behavior among young consumers in India?

## **Research Hypotheses**

- 1. Null Hypothesis One (H1). There is no significant relationship between smartphone addiction and online compulsive buying behavior of young consumers in India.
- 2. Null Hypothesis Two (H2). There is no significant relationship between social media addiction and online compulsive buying behavior of young consumers in India.
- 3. Null Hypothesis Three (H3). There is no significant relationship between fear of missing out behavior and online compulsive buying behavior of young consumers in India.
- 4. Null Hypothesis Four (H4). There is no significant relationship between impulsive

buying behavior and online compulsive buying behavior of young consumers in India.

The literature on consumption behavior has considered for a long both impulsive and compulsive buying behaviors as "dark side consumption phenomena" (Shoham et al., 2015). Both these behaviors have been criticized to have serious consequences on individual's life and society, as people tend to make unplanned and spontaneous purchases From the above paragraphs, it is clear that compulsive buying behavior is impacted by various psychological, social and cultural factors, with the rapid growth of e-commerce worldwide, this behavior is also commonly found among the Internet users. The literature on online compulsive buying behavior of young consumers is found to be limited, especially in the Indian context. Therefore, this research aims to fill this gap by identifying the association between four psychological variables, namely, smartphone addiction, social media addiction, fear of missing out and impulsive buying, and online compulsive buying behavior of young consumers in India.

## Section II : Literature Review

The consumer decision making process is influenced by various factors such as psychological, social, cultural, and technological factors. The globalization of various economies has resulted in many advantages to consumers viz. wider choices of global brands, access to both luxury and economical brands, better quality products customized and available at affordable prices. With the rapid usage of technologies, today's consumers are having variety of opportunities to explore various products and services, their features, comparison between brands, various product reviews by users and experts and attractive offers and discounts available at a particular time. As detailed in the previous section, today's young consumers in India spend a lot of time in accessing online content, watching videos and movies, connecting with people through social media sites, convenience of shopping online at any time any place. Among these activities, the online shopping activity is one of the most important ones, since the online shopping firms or e-commerce firms have been flooding the market with frequent promotions and offers, described to be time-bound, persuading young consumers to increase the frequency and money spent on their online shopping activities. With the excessive usage of smartphones and social media sites, fear of missing out rewards online and higher impulsiveness, there exists increased pressure on young consumers to do frequent online shopping, resulting in compulsive buying disorders.

The literature on consumption behavior has considered for a long both impulsive and compulsive buying behaviors as "dark side consumption phenomena" (Shoham et al., 2015). Both these behaviors have been criticized to have serious consequences on individual's life and society, as people tend to make unplanned and spontaneous purchases which would lead to both psychological and financial problems.

According to O'Guinn and Faber (1989), compulsive buying can be defined as "chronic, repetitive purchasing that becomes a primary response to negative events or feelings". This behavior is specifically driven by negative emotions of consumers and is highly linked to adverse psychological, societal and financial consequences (Dittmar, 2004; Roberts et al., 2014). This maladaptive nature of consumer behavior has also been extended in the online context, has been studied by few empirical research (Dittmar et al., 2007; Lee et al, 2016; Pahlevan Sharif and Khanekharab, 2017). It has been found that this behavior is further intensified by the excessive Internet usage (Griffiths, 2000; Kukar-Kinney et al., 2009).

According to Rook and Fisher (1995), impulsive buying tendency is defined as ""a consumer's tendency to spontaneously, unreflectively, immediately, and kinetically". This specific behavior of consumers has been widely discussed in the marketing literature. Rook (1987) further stated that "... impulse buying occurs when a consumer experiences a sudden, often powerful and persistent urge to buy something immediately. The impulse to buy is hedonically complex and may stimulate emotional conflict. Also, impulse buying is prone to occur with diminished regard for its consequences".

Fear of Missing Out (FoMO) has been defined as "(...) a pervasive apprehension that others might be having rewarding experiences from which one is absent (...)" (Przybylski et al., 2013, p. 1842). Smartphone addiction refers to "an inability by individuals to regulate smartphone use and which



leads to negative consequences and clinical impairment in daily life" (Billieux, 2012, p. 299). Social media addiction can be referred as "a specific behavior of an individual when he/she is spending too much time on social media websites including Facebook, Twitter, and Instagram, so much it interferes with other aspects of their daily life" Grau et al. (2019),

Roberts (1998) highlighted the antecedents and consequences of compulsive buying as the low self-esteem, anxiety, frustration, and depression. He further stated that most compulsive buyers were females. Elif Akagün (2010) stated that the young consumers are highly prone to compulsive buying in general and empirically substantiated the differences between Turkish men and women with reference to their compulsive buying behavior tendencies. Palan et al. (2011) investigated the mediating role of credit misuse on relationship between three card psychological variables viz. self-esteem, power-prestige and risk-taking, and compulsive buying behavior. The study collected the responses from 550 college students in the U.S, through online survey. The findings of the study showed that power-prestige has both direct effect and indirect effect on compulsive buying behavior, mediated by credit card misuse.

Chinomona (2013) examined the influence of consumers' perception of brand attributes on their compulsive buying behavior in South Africa. The findings revealed that the brand trust was the most significant factor in predicting the compulsive buying behavior, followed by brand satisfaction and brand attachment. Further, it was found that the relationship between brand experience and compulsive buying behavior was negative and insignificant. Shoham et al. (2015) had empirically validated a model of impulsive and compulsive

buying behaviors of consumers in two diverse cultural contexts i.e., U.S and Israel. Their model tested the influence of personality traits and cultural values of consumers on their impulsive and compulsive tendencies and ultimately purchase behavior. The personality traits included in the model were envy, low-self-esteem, and fantasizing behavior. Similarly, power distance, uncertainty avoidance, individualism and masculinity were included under the cultural factors. The study's results highlighted the significant differences between the cultural contexts with respect to impulsive and compulsive buying behavior. As young consumers in India spend more time on social media websites, they would probably have a fear of missing out by observing other people's experiences tend to exhibit impulsive tendency and might engage in impulsive purchases online (Celik et al., 2019)

According to Lim et al. (2020), brand attachment, hedonic value and materialism had positive and significant impact on obsessive-compulsive buying behavior of young consumers in Malaysia. It was further stated that the effects of utilitarian value and materialism on compulsive buying were mediated by brand attachment. Another study conducted by Suresh and Biswas (2020) measured the impact of psychological factors viz. anxiety, loneliness, self-esteem, and depression on Internet addiction and subsequently leading to online compulsive buying behavior of millennials in India. The results of the study revealed that low levels of self-esteem and self-confidence led to increased time spent on the virtual space. Finally, the study concluded that the internet addition of Indian millennials did have positive influence on their online compulsive shopping behavior.

Bhatia (2019) examined the impact of fashion interest, materialism and internet addiction on

e-compulsive buying behavior of apparel consumers in India. The results indicated that the most important factor influencing e-compulsive buying behavior of apparel consumers is fashion interest, followed by materialism and internet addiction. Finally, the study also identified the significant differences between male and female with respect to their e-compulsive buying behavior. Mulyono and Rusdarti (2020) investigated the impact of various psychological variables on compulsive buying behavior of Indonesian students in the e-commerce context. The results denoted that materialism, self-esteem, self-control, narcissism, money attitude and income of young consumers did have significant impact on their online compulsive buying behavior. Research by Khandelwal et al. (2021) suggested that the financial stability of consumers in India would depend on their credit

card usage and compulsive buying behavior. Further, the results of the study indicated that the correlation between power-prestige money attitudes and compulsive spending of credit card was high and significant.

From the above paragraphs, it is clear that compulsive buying behavior is impacted by various psychological, social and cultural factors, with the rapid growth of e-commerce worldwide, this behavior is also commonly found among the Internet users. The literature on online compulsive buying behavior of young consumers is found to be limited, especially in the Indian context. Therefore, this research aims to fill this gap by identifying the association between four psychological variables, namely, smartphone addiction, social media addiction, fear of missing out and impulsive buying, and online compulsive buying behavior of young consumers in India.

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## Section III : Research Methodology

Research methods are the techniques a researcher use to do research, which represents the tools used and the procedure for collecting information sought. Research in social sciences has been concerned with the increasing the conceptual knowledge and its contribution to practical problems. As most of the business decisions are related to the uncertain environment, the business manager undertake various research works to collect relevant information in a scientific manner, for the purpose of making better decisions.

This study investigates the influence of smartphone addiction, social media addiction, fear of missing out and impulsive behavior on online compulsive buying behavior. The major focus of this research, by using quantitative research method, is to examine the correlation between online compulsive buying behavior-a dependent variable, and smartphone addiction, smartphone addiction, fear of missing out and impulsive behavior-independent variables of young consumers in India.

Most of the business research is based on scientific approach to problem solving. There could be atleast three reasons that stimulates the need for scientific method in business research:

- Need for more and better information.
- Improved techniques and tools available for better decisions.
- Need for accurate information but not just overload of information.

Following are some of the advantages of scientific research:

• It is objective and should be free from subjectivity and personal prejudice.

- It is systematic way of investigation.
- It is purposive and searches for answers to the problem.
- It can be generalised and predictions are made possible.
- It is replicable as it has specific methodology.

The research paradigm used in this study is positivistic approach as this research relies on quantitative data uses relatively larger samples, is concerned with hypothesis testing, having structural methodology and analysing data using statistical methods.

The quantitative research is considered to be suitable approach for this research because:

- The study will test the correlation between the independent variables and dependent variables;
- Uses structured questionnaire for collecting data;
- Uses relatively large samples; and
- Collected data will be analyzed through appropriate statistical techniques.

The data was collected through web-based survey, using a subscription-based online survey website (www.zipsurvey.com), from the young consumers in India. The sampling method used in this study is convenience sampling. The choice of sampling techniques would be dependent on various factors such as: nature of research, sampling errors, validity issues, usage of statistical techniques etc. Primary data was collected in this study through survey, by means of web-based survey, from the young consumers with prior online shopping experience. The study

was conducted for the period of four months i.e., from February 2022 to May 2022. The electronic version of the survey questionnaire was shared among the target respondents via e-mail, social media and mobile messenger applications. Based on the above procedure, 187 responses were obtained, out of which, 164 were found to be usable responses for the final data analysis. A structured questionnaire was designed and used for data collection, which included the demographic, psychological, and online shopping characteristics of young consumers. As the design of the questionnaire will affect the response rate, validity and reliability, the researcher has taken utmost care while devising questions, the layout was clearly formatted, and the purpose of the questions was explained in the way it is easily understood by the respondents. The study adopted variables that are identified to influence the online compulsive buying behavior, based on the previous empirical studies, as mentioned in Table 2. The questions for measuring each variable have been adapted from various previous research studies as given in Table.

#### Table 2 : Measurement Scale Items

Construct	Items	Source
Smartphone Addiction	Missing planned work due to smartphone use. Having a hard time concentrating in class, while doing assignments, or while working due to smartphone use. Feeling pain in the wrists or at the back of the neck while using a smartphone. Won't be able to stand not having a smartphone. Feeling impatient and fretful when I am not holding my smartphone. Having my smartphone in my mind even when I am not using it. I will never give up using my smartphone even when my daily life is already greatly affected by it. Constantly checking my smartphone so as not to miss conversations between other people on Twitter or Facebook. Using my smartphone longer than I had intended. The people around me tell me that I use my smartphone too much.	Kwon et al. (2013).
Social Media Addiction	Use a lot of time thinking about or planning using social media. Felt an urge to use social media more and more. Used social media to forget about personal problems. Tried to cut down on the use of social media without success. Got troubled by being prohibited from social media use. Used social media too much to negatively impact on your job.	Griffiths 2000, 2005; Andreassen et al. 2012



Fear of Missing Out	I fear others have more rewarding experiences than me. I fear my friends have more rewarding experiences than me. I get worried when I find out my friends are having fun with- out me. I get anxious when I don't know what my friends are up to. It is important that I understand my friends "in jokes". Sometimes, I wonder if I spend too much time keeping up with what is going on. It bothers me when I miss an opportunity to meet up with friends. When I have a good time it is important for me to share the details online (e.g., updating status). When I miss out on a planned get-together it bothers me. When I go on vacation, I continue to keep tabs on what my friends are doing.	Przybylski et al. (2013)
Impulsive Buying Behavior	I often buy things online spontaneously. "Just do it" describes the way I buy things online. I often buy things online without thinking. "I see it, I buy it" describes my online shopping behaviour. "Buy now, think about it later" describes my online shopping behaviour. Sometimes I feel like buying things online on the spur-of- the-moment. I buy things online according to how I feel at the moment. I carefully plan most of my online purchases (reversed item). Sometimes I am a bit reckless about what I buy online.	Kacen and Lee (2002) Rook and Fisher (1995) Aragoncillo and Orus (2018)
Online Compulsive Buying Behavior	<ul> <li>When I have money, I cannot help but spend part or all of it on online shopping.</li> <li>I often buy something I see online without planning, just because I have to have it.</li> <li>Online shopping is a way of relaxing and forgetting my problems.</li> <li>I sometimes feel that something inside pushes me to go online shopping.</li> <li>There are times when I have a strong urge to buy online (clothing, music, jewellery, etc.).</li> <li>At times, I have felt somewhat guilty after buying something online because it seemed unreasonable.</li> <li>There are some things I buy online that I do not show to anybody because I fear people will think I foolishly wasted my money.</li> <li>I often have a real desire to go online shopping and buy something.</li> <li>As soon as I visit an online shopping website, I want to buy something.</li> <li>I have often bought a product online that I did not need even when I knew I had very little money left.</li> <li>I like to spend money on online shopping.</li> </ul>	Shariff & Yehoh (2018)

Source: Previous literature

One of the most commonly used scaling technique in the field of business research is Likert scale developed by Rensis Likert (1932). Likert scales are a useful tool, since it makes a questionnaire very attractive to respondents, there is less ambiguity and more convenience. The variables of this research study will be measured using items derived from previous marketing literature. Specifically, five-point Likert-types has been used to measure the variables (1=strongly disagree; 2=disagree; 3=Neutral; 4= agree; 5=strongly agree). Data collected were analysed and interpreted using many statistical techniques that are relevant in the context of this study. Statistical analysis was done using SPSS (Statistical Package for Social Sciences) version 21.0. To obtain the overall composition of the sample collected, various descriptive techniques like average, frequency, percentage etc. were performed. The diagrammatic representation, to improve the visualisation of data, different charts and tables were done depicting the demographic characteristics of the sample. Various hypotheses proposed in this study, were tested using correlation techniques.

# sdmimd

## Section IV: Data Analysis and Results

The purpose of this research is to explore the relationships among five variables, namely, smartphone addiction, social media addiction, fear of missing out, impulsive buying and online compulsive buying behavior among young consumers in India. The responses were sought from the young consumers with prior online shopping experience in India, between February and May 2022, which comprised of 164 respondents. The study adopted online survey for the purpose of data collection, focusing on the following research questions:

- What are the differences between male and female young consumers in India with respect to their smartphone usage, social media usage and online shopping experience?
- 2. What is the percentage of young consumers in India who exhibit high smartphone addition behavior?
- 3. What is the percentage of young consumers in India who exhibit high social media addiction behavior?

- 4. What is the percentage of young consumers in India who exhibit high fear of missing out behavior?
- 5. What is the percentage of young consumers in India who exhibit high online compulsive buying behavior?
- 6. What is the percentage of young consumers in India who exhibit high online impulsive buying behavior?
- 7. Is there a relationship between smartphone addiction behavior and online compulsive buying behavior among young consumers in India?
- 8. Is there a relationship between social media addiction behavior and online compulsive buying behavior among young consumers in India?
- 9. Is there a relationship between fear of missing out behavior and online compulsive buying behavior among young consumers in India?
- 10. Is there a relationship between impulsive buying behavior and online compulsive buying behavior among young consumers in India?

## Demographic Characteristics of Young Consumers

The following table clearly states that both male and female comprised of equal (50%) percentage of respondents.

Participants by Gender	Frequency	Cumulative Frequency	Percent
Male	82	82	50.000
Female	82	164	50.000

Table 3 : Distribution of respondents based on gender

Source: Primary Data



Figure 23 : Gender wise distribution of respondents

Source: Primary Data

Table 4 shows that the majority of the respondents were in the 18 to 24 category of age, followed by 25 to 34 age category with 7.3%.

Participants by Age	Frequency	Cumulative Frequency	Percent
18-24	152	152	92.683
25-34	12	164	7.317

Table 4 :	Distribution	of res	pondents	based	on	ade
10010 11	D 10 11 10 11 10 11	000	ponaonio	Dubbu	••••	-90





Figure 24 : Age wise distribution of respondents

Source: Primary Data

Source: Primary Data

The majority of the participants were unmarried (98.8%), since most of the respondents were young college students (table 5)

Participants by Marital Status	Frequency	Cumulative Frequency	Percent
Single	162	162	98.780
Married	2	164	1.220

Table 5 : Distribution of respondents based on marital status





Source: Primary Data

24

The following table described that the majority of respondents were post-graduates (87.2%),

followed by undergraduates and professional degree holders with 9.1% and 3.05% respectively.

Participants by Education	Frequency	Cumulative Frequency	Percent
Doctoral Degree	1	1	0.610
Postgraduate Degree	143	144	87.195
Professional Degree	5	149	3.049
Undergraduate Degree	15	164	9.146

Table 6 : Distribution of respondents based on education

Source: Primary Data



Figure 26 : Education wise distribution of respondents

Table 7 shows that the majority of participants(76.8%) reported to be falling in less than 1 20,000

monthly income category, followed by <sup>1</sup> 40,001 to <sup>1</sup> 60,000 category with 7.9%.

INCOME	Frequency	Cumulative Frequency	Percent
Less than ₹20,000	126	135	76.829
₹20,001 to ₹40,000	7	142	4.268
₹40,001 to ₹60,000	13	155	7.927
₹60,001 to ₹80,000	9	164	5.488
Above ₹80,000	9	9	5.488

Table 7 : Distribution of respondents based on income

Source: Primary Data



Figure 27 : Income wise distribution of respondents

Table 8 illustrates that the majority of participants were spending 2 to 4 hours daily on their

smartphones (41.46%), followed by 1 to 2 hours (22.56%) and 4 to 6 hours (21.34%).

No. of hours spent on smartphones daily	Frequency	Cumulative Frequency	Percent
1 to 2 hours	37	37	22.561
2 to 4 hours	68	105	41.463
4 to 6 hours	35	140	21.341
Less than an hour	4	144	2.439
More than 6 hours	20	164	12.195

Table 8 : Amount of time spent on smartphone daily

Source: Primary Data



Figure 28 : Daily usage of smartphone by respondents

Source: Primary Data

The following table depicts that most of the respondents were spending 1 to 2 hours on social

media websites daily, followed by 2 to 4 hours and less than an hours with 31.1% and 14.02% respectively.

No. of hours spent on social media websites daily	Frequency	Cumulative Frequency	Percent
1 to 2 hours	64	64	39.024
2 to 4 hours	51	115	31.098
4 to 6 hours	19	134	11.585
Less than an hour	23	157	14.024
More than 6 hours	7	164	4.268

Table 9 : Amount of time spent on social media daily


Figure 29 : Daily usage of social media by respondents

Source: Primary Data

Source: Primary Data

Most of the participants (31.1%) reported 3 to 5 years of online shopping experience, followed closely by category of 1 to 3 years and more than 5 years with 30.49% and 25% respectively.

Table	10:	Online	shopping	experience	of	respondents
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No. of years of online shopping experience	Frequency	Cumulative Frequency	Percent
1 to 3 years	50	50	30.488
3 to 5 years	51	101	31.098
Less than a year	22	123	13.415
More than 5 years	41	164	25.000

41



Figure 30 – Length of online shopping experience of respondents

28

## **Cross - Tabulations**

Research Question One: What are the differences between male and female young consumers in India with respect to their smartphone usage, social media usage and online shopping experience? Table 11 shows that majority of both female and male participants were using their smartphones for 2 to 4 hours daily. Although the male respondents with categories 1 to 2 hours and 4 to 6 hours usage were scoring higher than their female counterparts.

No. of hours spent on	Ger	Total	
Smartphones Daily	Male Female		
1 to 2 hours	21(12.805%)	16(9.756%)	37(22.561%)
2 to 4 hours	33(20.122%)	35(21.341%)	68(41.463%)
4 to 6 hours	19(11.585%)	16(9.756%)	35(21.341%)
Less than an hour	1(0.610%)	3(1.829%)	4(2.439%)
More than 6 hours	8(4.878%)	12(7.317%)	20(12.195%)
Total	82(50.000%)	82(50.000%)	164(100.0%)

### Table 11 : Daily smartphone usage based on gender level

Source: Primary Data



No. of hours spent on smartphone daily

Figure – 31 – Daily smartphone usage based on gender level



Table 12 reveals that daily usage pattern of social media websites for less than 4 hours was similar to both male and female participants. While it is

found that female respondents' daily usage of social media for 4 to 6 hours was higher than the male respondents.

No. of hours spent	Ger	Total	
on social media websites daily	Male Female		
1 to 2 hours	31(18.902%)	33(20.122%)	64(39.024%)
2 to 4 hours	29(17.683%)	22(13.415%)	51(31.098%)
4 to 6 hours	2(1.220%)	17(10.366%)	19(11.585%)
Less than an hour	15(9.146%)	8(4.878%)	23(14.024%)
More than 6 hours	5(3.049%)	2(1.220%)	7(4.268%)
Total	82(50.000%)	82(50.000%)	164(100.0%)

Table – 12 – Daily social media usage based on gender level



Figure 32 : Daily social media usage based on gender level

The following table and figure clearly illustrate the differences in patterns of online shopping experience for both male and female respondents.

No. of years of	Ger		
online shopping experience	Male	Female	Total
1 to 3 years	21(12.805%)	29(17.683%)	50(30.488%)
3 to 5 years	28(17.073%)	23(14.024%)	51(31.098%)
Less than a year	8(4.878%)	14(8.537%)	22(13.415%)
More than 5 years	25(15.244%)	16(9.756%)	41(25.000%)
Total	82(50.000%)	82(50.000%)	164(100.0%)

Table 13 : Online shopping experience based on gender level

Source: Primary Data



No. of years of online shopping experience

Figure 33 : Online shopping experience based on gender level

31



# Research Question Two: What is the percentage of young consumers in India who exhibit high smartphone addiction behavior?

was found to be slightly higher among the male participants than the female participants. But the average score of smartphone addiction was higher for female than male respondents.

Table 14 illustrates that the smartphone addiction

# Table 14 : Smartphone Addiction behavior of respondents based on gender level

Smartphone	Ger			
Addiction Behavior	Male Female		Total	
Low	29(17.683%)	22(13.415%)	51(31.098%)	
Average	24(14.634%)	33(20.122%)	57(34.756%)	
High	29(17.683%)	27(16.463%)	56(34.146%)	
Total	82(50.000%)	82(50.000%)	164(100.0%)	



Source: Primary Data



Further, as depicted in table 15 and figure 35, respondents with 2 to 4 hours of smartphone use daily found to have scored higher on

smartphone addiction behavior, followed by two other major categories, namely, 4 to 6 hours and more than 6 hours.

Smartphone		<b>T</b> ( )				
Behavior	1 to 2 hours	2 to 4 hours	4 to 6 hours	Less than an hour	More than 6 hours	lotal
Low	13(7.927%)	23(14.024%)	9(5.488%)	2(1.220%)	4(2.439%)	51(31.098%)
Average	16(9.756%)	24(14.634%)	10(6.098%)	2(1.220%)	5(3.049%)	57(34.756%)
High	8(4.878%)	21(12.805%)	16(9.756%)	0(0.000%)	11(6.707%)	56(34.146%)
Total	37(22.561%)	68(41.463%)	35(21.341%)	4(2.439%)	20(12.195%)	164(100.0%)

Table 15 : Smartphone Addiction behavior of respondents based on daily smartphone usage level

Source: Primary Data



Figure – 35 – Smartphone Addiction behavior based on daily smartphone usage level



The smartphone addiction behavior was found to be higher for the participants who spend 1 to 2

hours on social media websites daily, closely followed by 2 to 4 hours category with 11.58%.

Table 16 · Smartphone Addict	ion behavior of respond	ents based on daily se	ocial media usage level
able to . Smartphone Addle	lon benavior of respond	ents based on daily st	Jelat media usage level

Smartphone	No.					
Addiction Behavior	1 to 2 hours	2 to 4 hours	4 to 6 hours	Less than an hour	More than 6 hours	Total
Low	17(10.366%)	12(7.317%)	4(2.439%)	16(9.756%)	2(1.220%)	51(31.098%)
Average	27(16.463%)	20(12.195%)	5(3.049%)	5(3.049%)	0(0.000%)	57(34.756%)
High	20(12.195%)	19(11.585%)	10(6.098%)	2(1.220%)	5(3.049%)	56(34.146%)
Total	64(39.024%)	51(31.098%)	19(11.585%)	23(14.024%)	7(4.268%)	164(100.0%)

Source: Primary Data



*Figure 36 : Smartphone Addiction behavior of respondents based on daily social media usage level* Source: Primary Data

34

Finally, the following table and figure summarises the smartphone addiction behavior of young consumers on their online shopping experience level. The participants with 3 to 5 years of online shopping experience exhibited higher smartphone addiction behavior, followed by respondents with more than 5 years of online shopping experience.

Table 17 :	<b>Smartphone Addiction</b>	behavior	of respondents	based on	online shopping
		experier	nce level		

Smartphone	No. of y	Total			
Addiction Behavior	1 to 3 years	3 to 5 years	Less than an year	More than 5 years	
Low	13(7.927%)	16(9.756%)	5(3.049%)	17(10.366%)	51(31.098%)
Average	25(15.244%)	13(7.927%)	10(6.098%)	9(5.488%)	57(34.756%)
High	12(7.317%)	22(13.415%)	7(4.268%)	15(9.146%)	56(34.146%)
Total	50(30.488%)	51(31.098%)	22(13.415%)	41(25.000%)	164(100.0%)

Source: Primary Data



*Figure 37 : Smartphone Addiction behavior of respondents based on online shopping experience level* 

35



Research Question Three: What is the percentage of young consumers in India who exhibit high social media addiction behavior?

The following table elucidates the social media addiction behavior based on gender. It is evident that female respondents exhibited higher such behavior, as compared to the male respondents.

						-	-		_	
Tahla	12	<ul> <li>Social</li> </ul>	modia	addiction	hehavior	of roc	nondente	hacad o	n gender	امررما
lance	TO	. Juliai	media	audiction	Denavior	01163	pondents	baseu u	n genuer	level

Social media	Gei	nder		
Addiction Behavior	Male	Female	Total	
Low	28(17.073%)	33(20.122%)	61(37.195%)	
Average	28(17.073%)	20(12.195%)	48(29.268%)	
High	26(15.854%)	29(17.683%)	55(33.537%)	
Total	82(50.000%)	82(50.000%)	164(100.0%)	

Source: Primary Data



*Figure 38 : Social media addiction behavior of respondents based on gender level* 

Similarly, table 19 summarizes the social media addiction behavior based on daily smartphone usage level. Of those respondents who were categorised as higher social media addiction, 13.4% were using smartphones 2 to 4 hours daily, followed by 7.9% were 4 to 6 hours.

Social media		Total				
Addiction Behavior	1 to 2 hours	2 to 4 hours	4 to 6 hours	Less than an hour	More than 6 hours	Totat
Low	20(12.195%)	25(15.244%)	11(6.707%)	2(1.220%)	3(1.829%)	61(37.195%)
Average	8(4.878%)	21(12.805%)	11(6.707%)	0(0.000%)	8(4.878%)	48(29.268%)
High	9(5.488%)	22(13.415%)	13(7.927%)	2(1.220%)	9(5.488%)	55(33.537%)
Total	37(22.561%)	68(41.463%)	35(21.341%)	4(2.439%)	20(12.195%)	164(100.0%)

Table 19 : Social media addiction behavior of respondents based on daily smartphone usage level

Source: Primary Data



Figure 39 : Social media addiction behavior of respondents based on daily smartphone usage level



Finally, the following table elucidates the response categories of social media addiction based on daily social media usage. Among the respondents who exhibited higher such behavior, 12.8% were using social media for 2 to 4 hours daily, closely followed by users who uses social media for 1 to 2 hours daily with 11.58%.

Table 20 : Social media addiction behavior of resp	ondents based on daily social media usage level
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Social	No.					
Addiction Behavior	1 to 2 hours	2 to 4 hours	4 to 6 hours	Less than an hour	More than 6 hours	Total
Low	25(15.244%)	12(7.317%)	5(3.049%)	18(10.976%)	1(0.610%)	61(37.195%)
Average	20(12.195%)	18(10.976%)	6(3.659%)	3(1.829%)	1(0.610%)	48(29.268%)
High	19(11.585%)	21(12.805%)	8(4.878%)	2(1.220%)	5(3.049%)	55(33.537%)
Total	64(39.024%)	51(31.098%)	19(11.585%)	23(14.024%)	7(4.268%)	164(100.0%)



*Figure 40 : Social media addiction behavior of respondents based on daily social media usage level* Source: Primary Data

Research Question Four: What is the percentage of young consumers in India who exhibit high fear of missing out behavior? behavior based on gender level. It is interesting to note that majority of male respondents (20.12%) exhibited high on such behavior, as compared to the female respondents (15.85%).

Table 21 summarises the fear of missing out

Fear of	Ger	nder	Total
Missing out	Male Female		TOtat
Low	28(17.073%)	26(15.854%)	54(32.927%)
Average	21(12.805%)	30(18.293%)	51(31.098%)
High	33(20.122%)	26(15.854%)	59(35.976%)
Total	82(50.000%)	82(50.000%)	164(100.0%)

Source: Primary Data



Figure 41 : Fear of missing out behavior of respondents based on gender level



The summary of fear of missing out behavior based on daily smartphone usage is illustrated in table 22. Of those who exhibit higher such behavior, the majority (13.41%) of participants were spending 2 to 4 hours daily on their smartphones, followed by 4 to 6 hours with 10.36% and 1 to 2 hours with 6.01%.

Table 22 ·	Fear of	missing	out behavior	of respo	ndents	hased o	n daily	smartnhone		امررما
IdDle ZZ .	real of	missurg	out benavior	orrespo	muents	baseu u	m ually	smartphone	usaye	level

Fear of		Tatal									
Out	1 to 2 hours	2 to 4 hours	4 to 6 hours	Less than an hour	More than 6 hours	Iotal					
Low	17(10.366%)	24(14.634%)	8(4.878%)	1(0.610%)	4(2.439%)	54(32.927%)					
Average	10(6.098%)	22(13.415%)	10(6.098%)	2(1.220%)	7(4.268%)	51(31.098%)					
High	10(6.098%)	22(13.415%)	17(10.366%)	1(0.610%)	9(5.488%)	59(35.976%)					
Total	37(22.561%)	68(41.463%)	35(21.341%)	4(2.439%)	20(12.195%)	164(100.0%)					



*Figure 42 : Fear of missing out behavior of respondents based on daily smartphone usage level* Source: Primary Data

Table 23 summarizes the fear of missing out behavior based on daily social media usage level. Among the respondents with high score on such behavior, 14.02% were using social media for 2 to 4 hours daily, closely followed by 1 to 2 hours of daily usage with 11.58%.

Fear of	No.						
Missing Out	1 to 2 hours	2 to 4 hours	4 to 6 hours	Less than an hour	More than 6 hours	lotal	
Low	23(14.024%)	15(9.146%)	2(1.220%)	13(7.927%)	1(0.610%)	54(32.927%)	
Average	22(13.415%)	13(7.927%)	8(4.878%)	8(4.878%)	0(0.000%)	51(31.098%)	
High	19(11.585%)	23(14.024%)	9(5.488%)	2(1.220%)	6(3.659%)	59(35.976%)	
Total	64(39.024%)	51(31.098%)	19(11.585%)	23(14.024%)	7(4.268%)	164(100.0%)	

Table 23 : Fear of	f missing out behavi	or of respondents bas	sed on daily social media	usage level
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*Figure 43 : Fear of missing out behavior of respondents based on daily social media usage level* Source: Primary Data



Finally, the summary of fear of missing out behavior based on online shopping experience level is illustrated in table 24. Interestingly, two categories of young shoppers, namely, with 1 to 3 years and more than 5 years of online shopping experience exhibited higher such behavior.

Fear of	No. of	_				
Missing Out	1 to 3 years	3 to 5 years	Less than an year	More than 5 years	Iotal	
Low	17(10.366%)	17(10.366%)	6(3.659%)	14(8.537%)	54(32.927%)	
Average	14(8.537%)	20(12.195%)	9(5.488%)	8(4.878%)	51(31.098%)	
High	19(11.585%)	14(8.537%)	7(4.268%)	19(11.585%)	59(35.976%)	
Total	50(30.488%)	51(31.098%)	22(13.415%)	41(25.000%)	164(100.0%)	

Table 24 : Fear of missing out behavior of respondents based on online shopping experience level

Source: Primary Data



*Figure 44 : Fear of missing out behavior of respondents based on online shopping experience level* Source: Primary Data Research Question Five: What is the percentage of young consumers in India who exhibit high impulsive buying behavior?

Table 25 summarises the impulsive buying

behavior of young online shoppers based on gender level. Majority of the participants exhibiting high on this behavior are found to be equal for both male and female shoppers.

Table	25:	Impulsive	buying	behavior	of	responde	ents	based	on	gend	er l	evel	
-------	-----	-----------	--------	----------	----	----------	------	-------	----	------	------	------	--

Impulsive	Gen			
Buying Behavior	Male	Female	Total	
Low	27(16.463%)	23(14.024%)	50(30.488%)	
Average	28(17.073%)	32(19.512%)	60(36.585%)	
High	27(16.463%)	27(16.463%)	54(32.927%)	
Total	82(50.000%)	82(50.000%)	164(100.0%)	



Source: Primary Data

Figure 45 : Impulsive buying behavior of respondents based on gender level



Table 26 summarizes the impulsive buying behavior of young consumers based on daily smartphone usage level. It is found that online shoppers who use their smartphones for 2 to 4 hours daily are exhibiting higher impulsive buying behavior.

Impulsive		Total					
Behavior	1 to 2 hours	urs 2 to 4 hours 4 to 6 hours		Less than an hour	More than 6 hours	TOtal	
Low	10(6.098%)	25(15.244%)	8(4.878%)	1(0.610%)	6(3.659%)	50(30.488%)	
Average	15(9.146%)	23(14.024%)	15(9.146%)	1(0.610%)	6(3.659%)	60(36.585%)	
High	12(7.317%)	20(12.195%)	12(7.317%)	2(1.220%)	8(4.878%)	54(32.927%)	
Total	37(22.561%)	68(41.463%)	35(21.341%)	4(2.439%)	20(12.195%)	164(100.0%)	

Table 26 : Impulsive buying behavior of respondents based on daily smartphone usage level

Source: Primary Data



*Figure 46 : Impulsive buying behavior of respondents based on daily smartphone usage level* Source: Primary Data Table 27 summarizes the impulsive buying behavior of young shoppers based on daily social media usage level. The higher impulsive buying tendency was found among the online shoppers who use social media websites daily for 1 to 2 hours.

Impulsive	No. o	No. of hours spent on social media websites daily					
Buying Behavior	1 to 2 hours	2 to 4 hours	4 to 6 hours	Less than an hour	More than 6 hours	lotal	
Low	16(9.756%)	18(10.976%)	3(1.829%)	11(6.707%)	2(1.220%)	50(30.488%)	
Average	25(15.244%)	17(10.366%)	9(5.488%)	8(4.878%)	1(0.610%)	60(36.585%)	
High	23(14.024%)	16(9.756%)	7(4.268%)	4(2.439%)	4(2.439%)	54(32.927%)	
Total	64(39.024%)	51(31.098%)	19(11.585%)	23(14.024%)	7(4.268%)	164(100.0%)	

Table 27 : Impulsive buying behavior of respondents based on daily social media usage level

Source: Primary Data



*Figure 47 : Impulsive buying behavior of respondents based on daily social media usage level* Source: Primary Data

Finally, the table 28 summarizes the impulsive buying behavior of young consumers based on online



shopping experience level. Young consumers with 3 to 5 years of online shopping experience were

found to have higher impulsive buying behavior amongst all the respondents.

Impulsive	No. of				
Buying Behavior	1 to 3 years	3 to 5 years	Less than an year	More than 5 years	Total
Low	13(7.927%)	12(7.317%)	8(4.878%)	17(10.366%)	50(30.488%)
Average	22(13.415%)	19(11.585%)	9(5.488%)	10(6.098%)	60(36.585%)
High	15(9.146%)	20(12.195%)	5(3.049%)	14(8.537%)	54(32.927%)
Total	50(30.488%)	51(31.098%)	22(13.415%)	41(25.000%)	164(100.0%)

Table 28 : Impulsive buyin	y behavior of respondents	based on online shopping	experience level
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Source: Primary Data



*Figure 48 : Impulsive buying behavior of respondents based on online shopping experience level* Source: Primary Data Research Question 6: What is the percentage of young consumers in India who exhibit high online compulsive buying behavior?

buying behavior of young consumers based on gender level. Only 15.85% of female respondents exhibited higher such behavior, followed by 14.02% of male respondents.

Table 29 summarizes the online compulsive

Table 29 : Online compulsive buying behavior of respondents based on gender level

Online Compulsive	Ger	Total	
Buying Behavior	Male	Female	Total
Low	28(17.073%)	24(14.634%)	52(31.707%)
Average	31(18.902%)	32(19.512%)	63(38.415%)
High	23(14.024%)	26(15.854%)	49(29.878%)
Total	82(50.000%)	82(50.000%)	164(100.0%)



*Figure 49 : Online compulsive buying behavior of respondents based on gender level* Source: Primary Data



Table 30 summarizes the online compulsive buying behavior of young consumers based on daily smartphone usage level. The respondents' categories of 2 to 4 hours and 4 to 6 hours of daily smartphone usage exhibited higher such behavior.

Table 30 : Online compulsive buying behavior	of respondents based on daily smartphone
usage	level

Online	No. of hours spent on smartphone daily					
Compulsive Buying Behavior	1 to 2 hours	2 to 4 hours	4 to 6 hours	Less than an hour	More than 6 hours	Total
Low	12(7.317%)	22(13.415%)	11(6.707%)	2(1.220%)	5(3.049%)	52(31.707%)
Average	15(9.146%)	30(18.293%)	8(4.878%)	2(1.220%)	8(4.878%)	63(38.415%)
High	10(6.098%)	16(9.756%)	16(9.756%)	0(0.000%)	7(4.268%)	49(29.878%)
Total	37(22.561%)	68(41.463%)	35(21.341%)	4(2.439%)	20(12.195%)	164(100.0%)



*Figure 50 : Online compulsive buying behavior of respondents based on daily smartphone usage level* Source: Primary Data

Table 31 summarizes the online compulsive buying behavior of young consumers based on daily social media usage level. Respondents who spent 1 to 2 hours daily on social media exhibited higher such behavior, closely followed by respondents spending 2 to 4 hours.

Table 31 : Online compulsive buying behavior of respondents based on daily social media usage level

Online Compulsive Buying Behavior	No. c					
	1 to 2 hours	2 to 4 hours	4 to 6 hours	Less than an hour	More than 6 hours	Total
Low	18(10.976%)	17(10.366%)	1(0.610%)	14(8.537%)	2(1.220%)	52(31.707%)
Average	27(16.463%)	16(9.756%)	10(6.098%)	7(4.268%)	3(1.829%)	63(38.415%)
High	19(11.585%)	18(10.976%)	8(4.878%)	2(1.220%)	2(1.220%)	49(29.878%)
Total	64(39.024%)	51(31.098%)	19(11.585%)	23(14.024%)	7(4.268%)	164(100.0%)



*Figure 51 : Online compulsive buying behavior of respondents based on daily social media usage level* Source: Primary Data



Table 32 summarizes the online compulsive buying behavior of young consumers based on online shopping experience level. Both the categories of young consumers with 1 to 3 years and 3 to 5 years of online shopping experience exhibited a higher tendency of this behavior.

Table 32 : Online compulsive buying behavior of respondents based on online shopping
experience level

Online	No. of					
Compulsive Buying Behavior	1 to 3 years	3 to 5 years	Less than More than an year 5 years		Toal	
Low	12(7.317%)	13(7.927%)	12(7.317%)	15(9.146%)	52(31.707%)	
Average	22(13.415%)	22(13.415%)	8(4.878%)	11(6.707%)	63(38.415%)	
High	16(9.756%)	16(9.756%)	2(1.220%)	15(9.146%)	49(29.878%)	
Total	50(30.488%)	51(31.098%)	22(13.415%)	41(25.000%)	164(100.0%)	

Source: Primary Data



*Figure 52 : Online compulsive buying behavior of respondents based on online shopping experience level* 

## Hypothesis Testing

Before selecting the appropriate statistical tools to be used for data analysis, the normality test needs to be performed. In this study, two popular normality tests are being used, based on the recommendation of Razali and Wah (2011), namely, Shapiro-Wilk test and Anderson-Darling test.

	Online Compulsive Buying Behavior	Smartphone Addiction Behavior	Social Media Addiction Behavior	Fear Of Missing Out	Impulsive Buying Behavior
Shapiro-Wilk Statistic	0.803	0.796	0.781	0.787	0.800
Shapiro-Wilk p-value	0.000	0.000	0.000	0.000	0.000
Anderson-Darling Statistic	12.732	13.135	14.244	13.798	12.896
Adjusted Anderson- Darling Statistic	12.791	13.196	14.310	13.863	12.957
p-value	<0.01	<0.01	<0.01	< 0.01	< 0.01

Table 3	33	:	Normality	test	results
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Source: SPSS Analysis Results

Since the p-values of both the normality tests (table 33) of all variables used in the study are less than 0.05, it is assumed that the normality condition of scales has not been met. Hence, the non-parametric tests were used for testing the hypothesis proposed in the study. The study applied the following two tests for hypothesis testing:

- Chi-square test of independence to validate if there is significant relationship between two categorial variables, and
- Non-parametric correlation coefficient tests - Spearman's rho; Goodman-Kruskal's Gamma; Kendall's tau-b; and Somers' d – to ascertain the strength of relationship between two categorical variables.

Research Question Seven. Is there a relationship between smartphone addiction behavior and online compulsive buying behavior among young consumers in India? *Null Hypothesis One (H1) -There is no significant relationship between smartphone addiction and online compulsive buying behavior of young consumers in India.* To validate this research question / null hypothesis, scale items of both variables are summed up and divided into three major categories, namely, low, average, and high, based on median split method in SPSS. As given in Table 34, higher online compulsive buying behavior was directly associated with higher usage of smartphones (figure 52).



Online	Smartph	Total			
Buying Behavior	Low	Average	High		
Low	27(16.463%)	18(10.976%)	7(4.268%)	52(31.707%)	
Average	20(12.195%)	21(12.805%)	22(13.415%)	63(38.415%)	
High	4(2.439%)	18(10.976%)	27(16.463%)	49(29.878%)	
Total	51(31.098%)	57(34.756%)	56(34.146%)	164(100.0%)	

Table 34 : Online compulsive buying behavior and smartphone addiction behavior

Source: Primary Data





Source: SPSS Analysis Results

To determine whether is a significant relationship between these two categorical variables, Chi-square test was applied, as given in table 35. It is evident from the results that there exists a significant relationship between smartphone addiction and online compulsive buying behavior of young consumer  $X^2$  (2, N = 164) = 28.469, p = 0.000.

# Table 35 : Chi-square test results – online compulsive buying behavior and smartphone addiction behavior

Test Statistic	Value	df	p-value
Pearson Chi-square	28.469	4.000	0.000

## A Study on the Influence of Smartphone Addiction....

The strength of relationship between smartphone addiction and online compulsive buying behavior was assessed by applying four non-parametric correlation tests, as given in table 36. All the four test values indicated a strong and positive correlation exists between smartphone addiction and online compulsive buying behavior of young consumers in India.

- Spearman correlation was calculated to assess the relationship between smartphone addiction and online compulsive buying behavior. There was a positive correlation between the two variables, *r*> (162) = 0.414, *p* < .05, 95% CI [0.290, 0.539].</li>
- Goodman and Kruskal's gamma was run to determine the association between smartphone addiction and online compulsive buying behavior amongst 164 participants. There was a strong, positive correlation between smartphone addiction and online compulsive buying behavior, which was statistically significant, *G* = .533, *p* < .05, 95% CI [0.383, 0.682].

- A Kendall's tau-b correlation was run to determine the relationship between smartphone addiction and online compulsive buying behavior amongst 164 participants. There was a strong, positive correlation between smartphone addiction and online compulsive buying behavior, which was statistically significant ôb = .368, p < .05, 95% CI [0.281, 0.454]
- Somers' d was run to determine the association between smartphone addiction and online compulsive buying behavior amongst 164 participants. There was a strong, positive correlation between smartphone addiction and online compulsive buying behavior, which was statistically significant d = .368, p < .05, 95% [0.256, 0.481].</li>

Based on the above results, it can be inferred that there is a strong and positive relationship between smartphone addiction and online compulsive buying behavior of young consumers in India. Therefore, the null hypothesis is rejected.

Coefficient	Value	ASE	95 % Confidence Interval		Z	p-value
			Lower	Upper		
Spearman's rho	0.414	0.064	0.290	0.539	6.523	0.000
Goodman-Kruskal's Gamma	0.533	0.076	0.383	0.682	6.977	0.000
Kendall's tau-b	0.368	0.044	0.281	0.454	8.323	0.000
Somers' d	0.368	0.057	0.256	0.481	6.349	0.000

Table 36 : Non-parametric test results –	Smartphone -	addiction	behavior a	nd online (	compulsive
I	buying behav	ior			

Source: SPSS Analysis Results

Research Question Eight. Is there a relationship between social media addiction behavior and online compulsive buying behavior among young consumers in India? *Null Hypothesis Two (H2). There is no significant relationship between social* 

*media addiction and online compulsive buying behavior of young consumers in India.* To validate this research question / null hypothesis, scale items of both variables are summed up and divided into three major categories, namely, low, average, and



high, based on median split method in SPSS. As given in Table 37, higher online compulsive

buying behavior was directly associated with higher usage of social media websites (figure 53).

Table 37 : Online compulsive	buying behavi	or and social	. media	addiction	behavior
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Online	Social M	Total			
Buying Behavior	Low Average High		High		
Low	27(16.463%)	16(9.756%)	9(5.488%)	52(31.707%)	
Average	23(14.024%)	19(11.585%)	21(12.805%)	63(38.415%)	
High	11(6.707%)	13(7.927%)	25(15.244%)	49(29.878%)	
Total	61(37.195%)	48(29.268%)	55(33.537%)	164(100.0%)	

Source: SPSS Analysis Results



*Figure 54 : Online compulsive buying behavior and social media addiction behavior* Source: SPSS Analysis Results

To determine whether is a significant relationship between these two categorical variables, Chi-square test was applied, as given in table 38. It is evident from the results that there exists a significant relationship between social media addiction and online compulsive buying behavior of young consumer  $X^2$  (2, N = 164) = 14.639,  $\rho$  = 0.000.

#### A Study on the Influence of Smartphone Addiction....

#### Table 38 : Chi-square test results – online compulsive buying behavior and social media addiction behavior

Test Statistic	Value	Df	p-value
Pearson Chi-square	14.639	4.000	0.006

Source: SPSS Analysis Results

The strength of relationship between social media addiction and online compulsive buying behavior was assessed by applying four non-parametric correlation tests, as given in table 39. All the four test values indicated a strong and positive correlation exists between social media addiction and online compulsive buying behavior of young consumers in India.

- Spearman correlation was calculated to assess the relationship between social media addiction and online compulsive buying behavior. There was a positive correlation between the two variables, *r*> (162) = 0.294, *p* < .05, 95% CI [0.153, 0.436].</li>
- Goodman and Kruskal's gamma was run to determine the association between social media addiction and online compulsive buying behavior amongst 164 participants. There was a strong, positive correlation between social media addiction and online

compulsive buying behavior, which was statistically significant, G = .387, p < .05, 95% CI [0.208, 0.567].

- A Kendall's tau-b correlation was run to determine the relationship between social media addiction and online compulsive buying behavior amongst 164 participants. There was a strong, positive correlation between social media addiction and online compulsive buying behavior, which was statistically significant ôb = .262, p < .05, 95% CI [0.150, 0.375]
- Somers' d was run to determine the association between social media addiction and online compulsive buying behavior amongst 164 participants. There was a strong, positive correlation between social media addiction and online compulsive buying behavior, which was statistically significant d = .262, p < .05, 95% [0.136, 0.389].</li>

Based on the above results, it can be inferred that there is a strong and positive relationship between social media addiction and online compulsive buying behavior of young consumers in India. Therefore, the null hypothesis is rejected.

Table 39 :	Non-parametric test results	<ul> <li>Social me</li> </ul>	dia addiction	behavior	and online	compulsive
		buying be	havior			

Coefficient	Value	e ASE	95 % Confidence Interval		z	p-value
			Lower	Upper		•
Spearman's rho	0.294	0.072	0.153	0.436	4.077	0.000
Goodman-Kruskal's Gamma	0.387	0.092	0.208	0.567	4.230	0.000
Kendall's tau-b	0.262	0.058	0.150	0.375	4.562	0.000
Somers' d	0.262	0.065	0.136	0.389	4.057	0.000



Applied Research Project, 2022

Research Question Nine. Is there a relationship between fear of missing out behavior and online compulsive buying behavior among young consumers in India? *Null Hypothesis Three (H3). There is no significant relationship between fear of missing out behavior and online compulsive buying behavior of young consumers in India.* To validate this research question / null hypothesis, scale items of both variables are summed up and divided into three major categories, namely, low, average, and high, based on median split method in SPSS. As given in Table 40, higher online compulsive buying behavior was directly associated with higher fear of missing out behavior (figure 54).

Online	Fe	Tatal			
Buying Behavior	Low	Average	High		
Low	28(17.073%)	17(10.366%)	7(4.268%)	52(31.707%)	
Average	19(11.585%)	20(12.195%)	24(14.634%)	63(38.415%)	
High	7(4.268%)	14(8.537%)	28(17.073%)	49(29.878%)	
Total	54(32.927%)	51(31.098%)	59(35.976%)	164(100.0%)	

#### Table 40 : Online compulsive buying behavior and fear of missing out behavior

Source: SPSS Analysis Results



Figure 55 : Online compulsive buying behavior and fear of missing out behavior

#### A Study on the Influence of Smartphone Addiction....

To determine whether is a significant relationship between these two categorical variables, Chi-square test was applied, as given in table 41. It is evident from the results that there exists a significant relationship between fear of missing out and online compulsive buying behavior of young consumer  $X^2$  (2, N = 164) = 25.888, p = 0.000.

#### Table 41 : Chi-square test results – online compulsive buying behavior and fear of missing out behavior

Test Statistic	Value	df	p-value
Pearson Chi-square	25.888	4.000	0.000

Source: SPSS Analysis Results

The strength of relationship between fear of missing out and online compulsive buying behavior was assessed by applying four non-parametric correlation tests, as given in table 42. All the four test values indicated a strong and positive correlation exists between fear of missing out and online compulsive buying behavior of young consumers in India.

 Spearman correlation was calculated to assess the relationship between fear of missing out and online compulsive buying behavior. There was a positive correlation between the two variables, *r*> (162) = 0.395, *p* < .05, 95% CI [0.264, 0.526].

- Goodman and Kruskal's gamma was run to determine the association between fear of missing out and online compulsive buying behavior amongst 164 participants. There was a strong, positive correlation between fear of missing out and online compulsive buying behavior, which was statistically significant, G = .511, p < .05, 95% CI [0.352, 0.669].</li>
- A Kendall's tau-b correlation was run to determine the relationship between fear of missing out and online compulsive buying behavior amongst 164 participants. There was a strong, positive correlation between fear of missing out and online compulsive buying behavior, which was statistically significant τb = .352, p < .05, 95% CI [0.259, 0.445]</li>
- Somers' d was run to determine the association between fear of missing out and online compulsive buying behavior amongst 164 participants. There was a strong, positive correlation between fear of missing out and online compulsive buying behavior, which was statistically significant d = .352, p < .05, 95% [0.235, 0.471].</li>

Based on the above results, it can be inferred that there is a strong and positive relationship between fear of missing out and online compulsive buying behavior of young consumers in India. Therefore, the null hypothesis is rejected.

Table	42 : Non-parametric test results – Fear of missin	g out behavio	r and online	e compulsive	buying
	behavio	r			

Coofficient	Value	ASE	95 % Confidence Interval		7	n value
Coefficient			Lower	Upper	2	p-value
Spearman's rho	0.395	0.067	0.264	0.526	5.928	0.000
Goodman-Kruskal's Gamma	0.511	0.081	0.352	0.669	6.324	0.000
Kendall's tau-b	0.352	0.047	0.259	0.445	7.436	0.000
Somers' d	0.352	0.060	0.235	0.471	5.872	0.000



Applied Research Project, 2022

Research Question Ten. Is there a relationship between impulsive buying behavior and online compulsive buying behavior among young consumers in India? *Null Hypothesis Four (H4). There is no significant relationship between impulsive buying behavior and online compulsive buying behavior of young consumers in India.* To validate this research question / null hypothesis, scale items of both variables are summed up and divided into three major categories, namely, low, average, and high, based on median split method in SPSS. As given in Table 43, higher online compulsive buying behavior was directly associated with higher impulsive buying behavior (figure 55).

able 43 : Online compulsive	buying behavior a	nd impulsive b	ouying behavior
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Online	Impu	lsive Buying Be	havior	1	
Compulsive Buying Behavior	Low	Average	High	Iotal	
Low	37(22.561%)	13(7.927%)	2(1.220%)	52(31.707%)	
Average	12(7.317%)	34(20.732%)	17(10.366%)	63(38.415%)	
High	1(0.610%)	13(7.927%)	35(21.341%)	49(29.878%)	
Total	50(30.488%)	60(36.585%)	54(32.927%)	164(100.0%)	

Source: SPSS Analysis Results



Figure 56 : Online compulsive buying behavior and impulsive buying behavior

Source: SPSS Analysis Results

To determine whether there is a significant relationship between these two categorical variables, Chi-square test was applied, as given in table 44 . It is evident from the results that there exists a significant relationship between impulsive buying behavior and online compulsive buying

behavior of young consumer  $X^2$  (2, N = 164) = 88.473, p = 0.000.

The strength of relationship between impulsive buying behavior and online compulsive buying behavior was assessed by applying four non-parametric correlation tests, as given in table 45. All the four test values indicated a strong and positive correlation exists between impulsive buying behavior and online compulsive buying behavior of young consumers in India.

Table 44 : Chi-square test results – online compulsive buying behavior and impulsive buying behavior

Test Statistic	Value	df	p-value
Pearson Chi-square	88.473	4.000	0.000

Source: SPSS Analysis Results

- Spearman correlation was calculated to assess the relationship between fe impulsive buying behavior and online compulsive buying behavior. There was a positive correlation between the two variables, *r*> (162) = 0.674, *p* < .05, 95% CI [0.584, 0.764].</li>
- Goodman and Kruskal's gamma was run to determine the association between impulsive buying behavior and online compulsive buying behavior amongst 164 participants. There was a strong, positive correlation

between impulsive buying behavior and online compulsive buying behavior, which was statistically significant, G = .832, p < .05, 95% CI [0.748, 0.916].

- A Kendall's tau-b correlation was run to determine the relationship between impulsive buying behavior and online compulsive buying behavior amongst 164 participants. There was a strong, positive correlation between impulsive buying behavior and online compulsive buying behavior, which was statistically significant τb = .621, p < .05, 95% CI [0.530, 0.704]</li>
- Somers' d was run to determine the association between impulsive buying behavior and online compulsive buying behavior amongst 164 participants. There was a strong, positive correlation between impulsive buying behavior and online compulsive buying behavior, which was statistically significant d = .621, p < .05, 95% [0.533, 0.711].</li>

Based on the above results, it can be inferred that there is a strong and positive relationship between impulsive buying behavior and online compulsive buying behavior of young consumers in India. Therefore, the null hypothesis is rejected.

Table 45 : Non-parametric test results – Impulsive buying behavior and online compulsive buyingbehavior

Coofficient	Value	ASE	95 % Confidence Interval		7	
Coentcient			Lower	Upper	2	p-value
Spearman's rho	0.674	0.046	0.584	0.764	14.695	0.000
Goodman-Kruskal's Gamma	0.832	0.043	0.748	0.916	19.438	0.000
Kendall's tau-b	0.621	0.045	0.530	0.704	13.681	0.000
Somers' d	0.621	0.046	0.533	0.711	13.682	0.000



# Section V: Discussion and Conclusion

The main objective of this research is to explore the relationships among five variables, namely, smartphone addiction, social media addiction, fear of missing out, impulsive buying and online compulsive buying behavior of young consumers in India. More specially, the study measured the influence of four psychological variables on online compulsive buying behavior. A total of 164 samples of young consumers between the age group of 18 to 34 years were collected, through online survey. The significance of this study lies on highlighting the impact of these four psychological variables of young consumers on their online compulsive buying behavior and offer implications for academia, industry, and policy makers. The study also sought to (a) identify the differences between male and female respondents with respect to their smartphone usage, social media usage and online shopping experience; (b) the prevalence of higher smartphone addiction amongst young consumers based on smartphone usage, social media usage and online shopping experience; (c) the existence of higher social media addiction among the young consumers based on their smartphone usage, social media usage and online shopping experience; (d) the prevalence of higher fear of missing out behavior amongst young consumers based on their smartphone usage, social media usage and online shopping experience; (e) the existence of higher impulsive buying behavior amongst young consumers based on smartphone usage, social media usage and online shopping experience; and (f) the prevalence of higher online compulsive buying behavior based on smartphone usage, social media usage and online shopping experience.

Interestingly, the distribution of sample respondents based on gender was equal in this study. This further adds more value to the validation of the empirical findings, since the number of male and female respondents were equal. Although, the demographic profile of Internet users in india has been found to be 58% of male and 42% of female (Kantar, 2021), the variation in this research is justified as it sought responses only from the young consumers with prior online shopping experience.

Most of the respondents (41.463%) reported that they were spending about 2 to 4 hours daily on their smartphones, which implies that the sample respondents are either higher education students or working professionals and their smartphone usage has been moderate. Further, the majority of participants (39.024%) were spending only 1 to 2 hours daily on social media websites. This could be explained as young consumers spend a lot of time on Internet for various other activities, such as searching for information, watching videos and movies, playing games etc.

The majority of respondents (61.576%) were having a minimum of one year to five years of online shopping experience. According to The New Indian Express (2021) report, there were 110 million online shoppers during 2018 in India, which was estimated to reach 190 million shoppers in 2021. As given in the introduction section, the young consumers comprise a major proportion of online shopping community in India.

## **Research Questions and Hypotheses**

**Research Question One:** What are the differences between male and female young consumers in India with respect to their smartphone usage, social media usage and online shopping experience? As noted earlier, the majority of both female (21.341%) and male (20.122%) participants were using their smartphones for 2 to 4 hours daily. It was found that (12.805%) of male respondents were spending only 1 to 2 hours daily on their smartphones, as compared to 9.756% female respondents. The excessive usage of smartphones for more than 6 hours in a day was reported to be high for female respondents (7.317%), whereas only 4.878% of male respondents spent similar time on their smartphones. The least time spent of social media websites was found to be high for male (9.146%), as compared to 4.878% of female respondents. Daily usage pattern of social media websites for less than 4 hours was similar for both male and female participants. Participants with more than 5 years of online shopping experience was found to be higher for male (15.244%) than female (9.756%). Most of the respondents were having online shopping experience between 1 to 5 years, almost similar for both male and female groups.

Research Question Two: What is the percentage of young consumers in India who exhibit high smartphone addiction behavior? As the smartphone usage is generally found to be higher among the young population in India, the smartphone addiction was found to be higher among the male respondents (17.683%) than female (16.463%). Similarly, most of the respondents who spent about 2 to 4 hours daily on their smartphones were reported to have higher tendency of smartphone addiction behavior. While majority of young consumers (12.195%) who spent only about 1 to 2 hours on social media websites daily, found to have higher addiction towards the smartphones. Finally, 13.415% of the respondents with 3 to 5 years of online shopping experience were reported to score high on smartphone addiction.

**Research Question Three:** *What is the percentage of young consumers in India who exhibit high social media addiction behavior?* Findings of the study revealed that female respondents exhibited slightly higher (17.683%) social media addiction behavior than male (15.854%). Consistent with earlier findings, the social media addiction was found to be higher for respondents who have spent 2 to 4 hours daily on smartphones and social media websites.

**Research Question Four:** *What is the percentage of young consumers in India who exhibit high fear of missing out behavior?* Majority of male participants (20.122%) scored higher on fear of missing out behavior as compared to female with 15.854%. Respondent who have spent 2 to 4 hours daily on smartphones and social media websites are exhibiting higher such behavior. Finally, respondents with 1 to 3 years and more than 5 years of online shopping experience exhibited higher fear of missing out behavior.

**Research Question Five:** What is the percentage of young consumers in India who exhibit high impulsive buying behavior? It is interesting to note that 16.463% of both female and male respondents have shown higher impulsive buying behavior. It is found that online shoppers who use their smartphones for 2 to 4 hours daily are exhibiting higher impulsive buying behavior. The higher impulsive buying tendency was found among the online shoppers who use social media websites daily for 1 to 2 hours. Young consumers with 3 to 5 years of online shopping experience were found to have higher impulsive buying behavior amongst all the respondents.

**Research Question Six:** What is the percentage of young consumers in India who exhibit high online compulsive buying behavior? Only 15.85% of female respondents exhibited higher online



compulsive buying behavior, as compared to 14.02% of male respondents. The respondents' categories of 2 to 4 hours and 4 to 6 hours of daily smartphone usage exhibited higher such behavior. Respondents who spent 1 to 2 hours daily on social media exhibited higher such behavior, closely followed by respondents spending 2 to 4 hours. Both the categories of young consumers with 1 to 3 years and 3 to 5 years of online shopping experience exhibited a higher tendency of this behavior.

Research Question Seven. Is there a relationship between smartphone addiction behavior and online compulsive buying behavior among young consumers in India? Null Hypothesis One (H1) - There is no significant relationship between smartphone addiction and online compulsive buying behavior of young consumers in India. The results of this analysis – using Chi-square test and four non-parametric correlation tests have indicated that there is a strong and positive relationship between smartphone addiction and online compulsive buying behavior of young consumers in India. Therefore, the null hypothesis is rejected. This supports many other previous literatures on compulsive buying behavior in the online context. It can be concluded that online compulsive buying behavior of young consumers would be positively affected by their usage of smartphones. The young consumers in India tend to exhibit higher compulsive buying behavior towards the online shopping, due to excessive time spent on their smartphones.

**Research Question Eight.** *Is there a relationship between social media addiction behavior and online compulsive buying behavior among young consumers in India? Null Hypothesis Two (H2). There is no significant relationship between social media addiction and online compulsive buying* 

behavior of young consumers in India. The results of this analysis - using Chi-square test and four non-parametric correlation tests have indicated that there is a strong and positive relationship between social media addiction and online compulsive buying behavior of young consumers in India. Therefore, the null hypothesis is rejected. This also supports existing literatures on compulsive buying behavior in the online context. It can be established that online compulsive buying behavior of young consumers would be positively influenced by the usage of social media websites. The young consumers in India tend to exhibit higher compulsive buying behavior towards the online shopping, due to excessive time spent on social networking websites.

Research Question Nine. Is there a relationship between fear of missing out behavior and online compulsive buying behavior among young consumers in India? Null Hypothesis Three (H3). There is no significant relationship between fear of missing out behavior and online compulsive buying behavior of young consumers in India. The results of this analysis - using Chi-square test and four non-parametric correlation tests have indicated that there is a strong and positive relationship between fear of missing out behavior and online compulsive buying behavior of young consumers in India. Therefore, the null hypothesis is rejected. This also supports previous literatures on compulsive buying behavior in the online context. It can be inferred that online compulsive buying behavior of young consumers would be positively affected by their fear of missing out behavior. The young consumers in India tend to exhibit higher compulsive buying behavior towards the online shopping, when they have higher tendency of fear of missing out behavior.

**Research Question Ten.** *Is there a relationship between impulsive buying behavior and online* 

compulsive buying behavior among young consumers in India? Null Hypothesis Four (H4). There is no significant relationship between impulsive buying behavior and online compulsive buying behavior of young consumers in India. The results of this analysis – using Chi-square test and four non-parametric correlation tests have indicated that there is a strong and positive relationship between impulsive buying behavior and online compulsive buying behavior of young consumers in India. Therefore, the null hypothesis is rejected. This finding strongly supports the previous literatures on compulsive buying behavior in the online context. It can be concluded that online compulsive buying behavior of young consumers would be significantly affected and increased when they have higher impulsive buying behavior.

## Conclusion

The young consumers spend a lot of time on their smartphones, social media websites, and are being more materialistic, showing low level of loyalty towards the brands (Lim et al. 2020), as they are provided with wider choices of products and services available online at desired features and prices. This demands the marketers of e-commerce firms to design their offerings as more and more appealing to young consumers constantly and consistently, coping with the rapid changes in the online marketplace environment. It is highly essential for the e-commerce firms to focus on this specific irrational behavior, be it impulsive or compulsive, with the objective of attracting and retaining young consumers for the long-term survival and profitability.

Although, the primary objective of any commercial organization is to make profits, the businesses need to pay attention to this compulsive buying behavior of consumers, as this

would lead to serious complications to individuals, their families and society at large. In today's fast-paced technological world, the individuals are compelled to save a lot of time and efforts by purchasing goods and services instantaneously, many a times, either without sufficient need for such items or purchasing more than what is required. There are many causes for such compulsive buying disorders of consumers. Some of the significant reasons could be aggressive promotions done by the e-commerce firms through multiple media simultaneously, peer pressures built through social media websites, excessive usage of smartphones leading to unnecessary exposure of online offers and discounts, online shopping is considered to be more entertaining and fun, easy credit options available for shopping online, and finally, the simplest and quickest methods of online shopping. The marketers should act more sensibly by encouraging responsible consumption behavior among the young consumers, as part of their social responsibility initiatives.

Palan et al. (2011) suggested that socially responsible marketers should encourage young consumers to use their credit cards responsibly, reducing the need for making compulsive buying decisions, like the way alcoholic beverage companies address the young segments. They further suggested that promoting responsible consumption among the young consumers would help the company's focus on consumers' interests in mind, possibly leading to long-term benefits. A similar trend is found in today's technological era, where young consumers are more susceptible to compulsive buying disorders, due to wider choices of credit options available for shopping online, encouraging them to buy now and pay later. This would ultimately lead to many serious psychological issues and financial debts in the long


run for the individuals and unstable economic conditions in societies, especially in a developing country like India.

As suggested by Shoham et al. (2015), marketers can still stay competitive in the marketplace and win consumers' trust and loyalty, by refraining themselves from unscrupulous marketing practices (avoid creating artificial psychological pressure by appealing to individual's self) and educating the consumers to act responsibly. Contrary to this, Suresh and Biswas (2020) advocated that marketer should understand the psychological attributes of consumers which lead to Internet addiction, thus enabling them to design customized offerings and promotions through multi-channels to increase the likelihood of online shopping by their target consumers. Besides the commercial nature of business and its profit-oriented targeting strategies, executives and managers could make social responsibility as part of their business DNA, in order to stay relevant and responsible. It can be concluded that responsible marketing strategies leading to responsible consumption behavior would enable businesses to achieve sustainable competitive advantage.

The marketers of business organizations, consumer researchers, and public policy makers should make a serious note of online compulsive buying behavior - 'a negative consumption phenomena' (Elif Akagün, 2010), as this would have negative implications on individual's lifestyle, societal attitudes and norms, and economic outlook of a nation. As suggested in previous paragraphs, there should necessarily be 'personal finance' education programme (Khandelwal et al. 2021), cultivating sensible and healthy financial habits, leading to responsible consumption patterns among the young consumers in India. It is highly recommended that there should be statutory warnings (to be enforced by Government of India), when young consumers are subjected to excessive promotions and offers by e-commerce firms, thus provoking consumers to indulge in impulsive and compulsive online shopping. As this is already prevailing in specific market scenarios (online/mobile games) in India, it is necessary that such awareness campaigns to be carried out by the concerned authorities in e-commerce arena as well.

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