

Exploring Impulse Buying In The Digital Age: A Quantitative Analysis

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Abstract

The present study was undertaken to explore the phenomenon of online impulse buying. The primary aim of this research was to measure the extent of online impulse buying. A survey was carried out to collect primary data from a sample of 225 online buyers who have purchased both apparels and food products/services online at least once in the last six months, using convenience sampling. A self-administered, structured questionnaire was used to collect primary data from the respondents. SPSS 27 software was applied on the data obtained from buyers in Punjab, India. To evaluate the extent of impulse buying, three major aspects were scrutinized: the perception of impulse buying among online buyers, the percentage of impulse purchases (both in terms of monetary value and quantity) and the frequency of impulse buying among online buyers. The results pertaining to the perception of impulse buying indicated a strong inclination towards impulse buying among online buyers, driven by psychological factors such as sudden urges while browsing an online store, purchasing products that are less expensive than initially planned, developing emotional connections with products/services leading to temporary loss of self-control and experiencing psychological conflicts regarding purchase decisions. Furthermore, the results pertaining to the second aspect explained that a significant portion of recent apparel and food purchases were impulse purchases. The analysis of the data about last three apparel purchases reveals that approximately 39.38% to 45.03% of the total apparel expenditure belonged to impulse buying. In the category of food, the results showed that 37.58% to 45.59% of total expenditure on food belonged to impulse buying category. Lastly, the study findings highlighted that a majority of online buyers usually buy apparel and food on impulse.

Keywords: online impulse buying, measurement, extent of impulse buying, percentage of impulse buying, impulse buying frequency.

1. Introduction

Impulse buying is generally described as a sudden, intense, persistent and hedonically complex buying behavior that violates the requirements of rationality i.e., lacks thorough evaluation of all the available information sources and alternative options to be considered for rational decision-making processes (Tversky and Kahneman, 1974; Rook, 1987; Parboteeah et al., 2009). There exists the ability of various categories of products to be bought on impulse and all consumers experience this impulse buying behavior at some point (Piyush et al., 2010). Previous research has highlighted that impulse buying accounts for 40 to 80 percent of total purchases, with variations across diverse product categories (Amos et al., 2014; Marketingdirecto, 2012). Given

the significance of impulse buying phenomenon, it has always been a subject of considerable interest for researchers across disciplines such as consumer behavior, psychology, marketing since the 1950s (Clover, 1950; Stern, 1962; Rook, 1987; Peck and Childers, 2006). The investigation of this intriguing concept began about half a century ago, especially in the offline (in-store) context. Researchers initially aimed at conceptualising and defining the concept, followed by the developing models to explain it. Subsequently, they shifted their focus on identifying the factors that influence this behavior.

The emergence and growing utilization of the internet as a platform for information gathering and a key channel for purchases have brought a transformation in consumer behavior, reflecting a shift towards a more deliberate and informed approach (Aragoncillo and Orus, 2017). Paradoxically, several scholars have proposed that the development and enhanced reliance on the internet motivates consumers to indulge in impulse buying behavior (Gupta, 2011; Rodriguez, 2013; Aragoncillo and Orus, 2017). Hence, this contradiction reveals the complexity surrounding the importance of impulse buying phenomenon. While earlier studies have tried to explain the phenomenon of impulse buying and its measurement in the offline context (Rook and Fisher, 1995; Donthu and Gilliland, 1996; Mick, 1996; Puri, 1996), there remains a paucity of studies that focus on accurately measuring the actual extent of impulse buying among consumers in the online setting. This knowledge gap necessitates further exploration to better understand the phenomenon of impulse buying behavior in online context.

Therefore, the aim of this study is to provide a more comprehensive understanding of impulse buying phenomenon, with a particular focus on the online channel. Explicitly, this research proposes a critical research question: what is the actual extent of impulse buying in the online context? To address this question an empirical study will be conducted, yielding valuable insights into the extent of impulse buying behavior in the digital environment.

The present research focusses on two categories of products, namely apparel and food. There are various reasons behind it. First, apparel, within the fashion industry, represents one of the most frequently purchased products on impulse, constituting for a significant portion of total money spent by consumers (Bellenger et al., 1978; Des Marteau., 2014). Second, the food industry has experienced significant growth due to proliferation of online food ordering applications such as Blinkit, Amazon Fresh, Flipkart Grocery which have enabled convenient food ordering with a single click from the comfort of home (Chung et al., 2016). Consequently, these two product categories are particularly susceptible to impulse buying behaviors (Aragoncillo and Orus, 2017). By emphasising on these product categories, the research aims to provide a greater understanding of impulse buying in the context of apparel and food, which are both significant and growing areas of consumer spending in the digital realm.

2. Review of Literature

2.1 Impulse Buying

In the 1940s, Luna and Quintanilla emerged as a foundational scholars who recognized impulse buying as an illogical and irrational behavior. The discovery of phenomenon sparked significant scholarly interest, prompting subsequent scholars to confront the complexities of quantifying this

behavior. A significant challenge arose from participants' reluctance or hesitance in openly disclosing their intended purchases, which were later contrasted with their actual buying decisions (Kollat and Willett, 1969). This review of literature seeks to reflect a comprehensive and transparent examination of the evolution of the phenomenon of impulse buying, while also acknowledging the ongoing lack of consensus in defining this concept within academic discourse (Amos et al., 2014).

The pioneering research on consumer behavior conducted by Du Pont de Nemours & Co. (1945–1949, 1954–1959, 1965; cited in Rook, 1987) represents one of the earliest research studies that examined the concept of impulse buying, with an emphasis on identifying its fundamental causes and assessing its extent. Following these initial investigations, Clover (1950) highlighted the significance of impulse buying by demonstrating that a considerable portion of retail sales originated from spontaneous purchases made without prior planning. Initially, an impulse purchase was conceptualized as a purchase made without any prior need recognition or intention to buy, defined as the deviation between consumer's total expenditures at the end of a shopping trip and the purchases that were intended before paying a visit to a store (Rook, 1987).

While initial definitions of impulse purchasing focused on the absence of planning prior to the purchases, certain research scholars (Stern, 1962; Kollat and Willett, 1969) claimed that this criterion alone was not sufficient in defining the essence of the phenomenon. Koski (2004) further clarified this distinction, elaborating that although all impulse purchases are inherently unplanned, not all unplanned purchases qualify as impulsive in nature. A consumer may make an unplanned purchase simply because they require a product that was not originally included on the list of items to be purchased. Contrary to popular belief, such spontaneous purchases are not always linked to the intense desire or favorable feelings typically connected with impulse purchases (Amos et al., 2014).

Further, certain researchers (Stern, 1962; Kollat and Willet, 1969) added another significant feature to the definition of impulse buying, suggesting that people tend to make impulsive purchases when exposed to a stimulus, which serves as a trigger for such behavior. Applebaum (1951) further elaborated on this phenomenon, explaining that impulse buying occurs when a consumer makes a purchase that was not planned in advance prior to visiting a store, often as a result of an exposure to a stimulus being generated by a sales promotion method used by the store. However, this definition was deemed inadequate, as it implied that the inciting factor (stimulus) was exclusively a marketing tactic. In response, Stern (1962) proposed a better classification of impulse purchases, identifying four unique categories: pure, reminder, suggestion and planned impulse purchases. Stern characterized *pure impulse buying* as occurring when consumers make “novelty or escape purchases”, which involve breaking of a usual buying pattern. The second category, *reminder impulse purchase*, arises when a consumer is reminded of the product once he or she encounters it in the store and consumer may recall the need to purchase it, either due to low stock at home, or a previous exposure to its advertisement. This recollection then prompts the consumer to buy a product impulsively. He further delineated the third type of impulse buying, *suggestion impulse buying*, occurs when a buyer encounters any product or service for the first time and perceives an immediate need for it, leading to an

impulsive decision to buy the item. Finally, *planned impulse buying* happens when a consumer, despite having no initial intention, actively seeks out market promotions, resulting in an unplanned yet deliberate purchase (Nesbitt, 1959). Rook's contributions to the literature (Rook and Hoch, 1985; Rook, 1987; Rook and Fisher, 1995) were instrumental in advancing the conceptual understanding of impulse buying behavior. The author asserted emphatically that: [...] impulse buying occurs when a customer experiences an unexpected, strong, and persistent need to purchase an item instantaneously. Buying is a complex hedonic act that might produce emotions that are unpleasant. In addition, consumers often make purchases on impulse and without fully considering the repercussions (Rook, 1987).

Subsequent research has emphasised comprehending the consumer decision-making process, with the sole objective to identify the variables that contribute to impulse buying behavior. These variables encompass both internal factors, such as personal features of consumers, as well as external situational aspects, comprising product and store-related traits (Amos et al., 2014; Badgaiyan and Verma, 2014). Earlier research emphasized the affective dimension of impulse purchases, highlighting the significance of hedonic and emotional features in determining consumer behavior, rather than pragmatic and logical reflections (Luna and Quintanilla, 2000). Focusing on this foundation, Sharma and colleagues (2010) proposed an updated definition of the impulse buying phenomenon, where the concept was conceptualised as a spontaneous, persuasive and hedonically complicated behavior, where the rapidity of the impulse buying decision-making process precludes any careful, deliberative evaluation of alternatives or potential consequences.

Further, a substantial body of research on impulse buying phenomenon has tried to develop the metrics to quantify the behavior. It is recognized that people exhibit varying degrees of impulsivity in their purchasing behavior, which is the underlying rationale behind these measurement approaches. One of the pioneering efforts in this direction were the work of Rook and Fisher (1995), who devised an imaginary shopping scenario where respondents were asked to choose a consumer behavior that would highlight their impulse buying tendencies. In this situation, participants were introduced to a Mary, a 21-year-old college going student, who had limited funds remaining before her next paycheck. While she was shopping for a pair of socks for an upcoming weekend celebration, she encounters an amazing sweater on sale (Rook and Fisher 1995). Respondents were then asked to choose from a range of options, highlighting varying levels of impulsiveness. These were: (1) purchasing socks only, (2) desiring to buy the sweater, but not actually buying it, (3) planning not to indulge in buying the socks, (4) purchasing both the socks and sweater using a credit card, and (5) buying both items along with additional clothing, such as slacks and shirt, using a credit card (Rook and Fisher, 1995). Rook and Fisher (1995) stated that the fundamental premise was that the impulsive respondents will consider themselves getting involved in such a situation and will show high probability of opting the highest impulsive alternative in comparison to the less impulsive or non-impulsive respondents. Fisher (1993) added that the approach used was deemed prudent since respondents will be able to provide 'accurate' responses, based on how they would behave in the hypothetical situation if asked (Fisher, 1993).

Additionally, Rook and Fisher (1995) formulated a 5-point Likert scale called, the Buying Impulsiveness Scale that consisted of nine items such as, frequently making instant purchases, engaging in buying without thinking, buying on the spur-of-the-moment, acting on impulse without prior deliberation. The key objective of this scale was to measure impulse buying tendency of consumers.

In addition, Donthu and Gilliland (1996) designed a scale to measure buying impulsiveness, aimed at quantifying the extent to which consumers acknowledge and take pleasure in making spontaneous purchases. It is 5-point Likert scale consisting of four items, including making unplanned purchases and purchasing on a whim. Notable, two items of the scale were reverse coded to analyse behaviors such as thinking double times before actually making purchases and buying as per the shopping list.

Furthermore, Mick (1996) proposed a scale intended to measure the tendency for impulse buying. The scale seeks to quantify the extent to which a consumer has chance of making unplanned, immediate, and unreflective purchases. It utilizes a 7-point Likert format and involves ten items, which includes behaviors such as making spontaneous purchases of unintended or unplanned items, as well as buying without any hesitation and without any consideration of future implications.

Puri (1996) developed a consumer impulsiveness scale which intends to measure individual's chronic tendencies towards impulsiveness. Puri (1996) explained that impulsive buying behavior is represented as an action that offers instant benefits, especially hedonic, while potentially leading to more serious long-lasting outcomes. The scale constitutes two subscales, called prudence and hedonic. It is assumed that any respondent who scores highly on hedonic scale will score lower scores on prudence subscale, indicating more inclination toward impulsive behavior. The prudence scale is a 7-point Likert scale that features seven adjectives, prompting respondents to reflect the degree to which such adjectives accurately explain them. These seven adjectives include self-controlled, farsighted, responsible, restrained, rational, methodical and a planner, all of which are reverse-coded (Puri, 1996). On the other hand, the hedonic subscale includes the five adjectives. These are impulsive, careless, extravagant, easily tempted and enjoy spending (Puri, 1996).

Further, Weun and colleagues (1997) developed a scale to measure impulse buying tendency, which they defined as "the degree to which an individual is likely to make unintended, immediate, and unreflective purchases" (Weun et al., 1997, p. 306). This scale is deemed to be superior to the one proposed by Rook and Fisher (1995) due to its greater internal consistency, convergent and discriminant validity. It comprises five items, consisting of behaviors such as buy unintended or unplanned items, buying without considering the consequences, among others, with responses rated on either a 5-point or 7-point Likert scale.

2.2 Impulse Buying in the Digital Age

In the twenty-first century, the Internet has become an increasingly significant medium for research in the field of consumer behavior, particularly in the context of impulse buying.

Consumers have highlighted a growing preference for online shopping over in-store buying. While it is frequently argued that consumers' online purchasing behaviour is more rational, as they seek information and take deliberate decisions before finalizing a purchase. However, consumers do not always make rational decisions. They may engage in impetuous purchasing through this medium (Jeffrey and Hodge, 2007; Verhagen and Van Dolden, 2011). The online medium has become a significant revenue source for businesses, reflecting the importance of understanding this phenomenon. Rook's (1987) analysis revealed that the developments in the late 1980s, such as direct marketing, in-home purchasing, and the extensive use of credit cards, have made it easier for consumers to make impulse purchases. Furthermore, Greenfield (1999) found that the convenience of selecting a product and "clicking" to purchase often enhances the likelihood of making an impulse purchase. Moreover, some research scholars have argued that the Internet makes it more difficult for individuals to control their desires, further leading to the widespread prevalence of online impulse buying (Verhagen and Van Dolen, 2011). Therefore, there exists a need for studying this phenomenon in the online context.

3. Research Model and Development of Hypothesis

The primary aim of this research study was to have better understanding of the extent of impulse buying. This research emphasized on assessment of the magnitude of impulse buying, which encompasses three key aspects. It includes the perception of impulse purchases among buyers, the percentage (both in terms of monetary value and quantity) of impulse purchases in the categories of apparels and food and the frequency of impulse buying behavior among buyers. These three aspects will be elaborated upon in the subsequent sections.

3.1 The Perception of Impulse Purchases

The assessment of impulse purchase behavior among online buyers is quantified through a set of certain statements derived from the accepted definitions of impulse buying proposed by various scholars. A comprehensive set of 15 statements, structured on Likert scale, has been developed and described as follows:

According to Rook's (1987) conceptualization, impulse buying behavior is explained by a buyer's sudden, powerful and persistent desire to buy any product instantaneously. This theoretical underpinning has led to the development of a statement, based on Likert scale, developed to measure the extent of impulse buying tendencies, where EXT is denoted as a statement measuring the extent of impulse buying.

EXT1: "Whenever I browse online/offline store, I feel sudden urge to buy something immediately".

In academic discourse, Parboteeah (2005) explained the meaning of the impulse buying as a purchase that

that is unplanned, driven by exposure to the stimulus. The urge felt motivates the buyer to make the purchase. Building upon this conceptualization, the following statement (based on Likert scale) has been developed:

EXT2: "Sudden urge makes me buy products/services from an online/offline store".

Further, Rook and Fisher (1995) created an imaginary shopping scenario where respondents were asked to choose a behavior that they would reflect as a consumer. The following section

provided a description of the scenario provided by Rook and Fisher (1995):

“Mary is a 21-year-old college student who works a part-time job. Mary has just \$25 left for necessities and two days until her next payday. Mary also has to get a pair of warm socks for a weekend outdoor gathering in addition to food. She goes to the mall with her friend (Susan) after work to buy the socks. While they were browsing Bullock’s, Mary saw a gorgeous sweater on sale for \$75.”

After reading the scenario, participants were asked to select one of the five options that best represented their course of action in that circumstance. The choice spans impulsiveness levels from low to high. There were five options: (1) buy socks only, (2) want the sweater but don’t buy it, (3) decide not to buy the socks, (4) use a credit card to pay for both the socks and the sweater, and (5) use a credit card to pay for these items as well as the coordinating pants and shirt. The underlying presumption was that impulse respondents will identify with the situation more and have a higher likelihood of choosing the most impulsive alternative than non-impulsive respondents (Rook and Fisher 1995).

After reviewing these diverse levels of impulse buying, the following statement (based on Likert scale) was developed:

EXT3: “Sudden urge felt on visiting an online/offline store make me buy the products/services that are even costlier than the products/services that I decided to buy before visiting the store”.

Further, Rook and Hoch (1985) identified significant aspects associated with impulse buying which can be summarized as follows:

- (1) A Sudden and spontaneous urge to take action.
- (2) A state of inner turmoil or disturbance.
- (3) The beginning of emotional conflict and internal struggle.
- (4) Reduced cognitive assessment.
- (5) Disregard for the consequences of impulse purchases.

Upon analysing the key elements highlighted by Rook and Hoch (1985), including their assertion that a buyer uses cheaper alternatives (small rewards) to save themselves from spending on higher ones, the following Likert-scale statement has been developed to gauge participant’s tendencies towards impulse buying:

EXT4: “Sudden urge felt on visiting an online/offline store make me buy the products/services that are cheaper than the products/services that I decided to buy before visiting the store”.

Furthermore, Rook (1987) explained that when a buyer encounters an abrupt and intense impulse to make a purchase(something), they face emotional conflict and such desire felt is hedonically complex. Hence, the following statement (Likert scale) was developed to capture this phenomenon:

EXT5: “The urge felt connects my emotions with the product/service”.

In addition, Beatty and Ferrel (1998) defined impulse buying as an unplanned and spontaneous purchase made without any prior intents to buy a certain product category or engage in a specific shopping-related activity. The behavior typically occurs spontaneously and without giving it much thought after getting the impulse to buy. It particularly excludes buying a straightforward reminder item, such as one that is simply out of stock at home. Building upon this definition, following statement has been developed:

EXT6: “I usually buy products/services from online/offline stores for which I had no buying intention before browsing”.

As previously outlined, Rook and Hoch (1985) defined that in the event of impulse buying, a buyer has a disturbed psychic state and he or she experiences emotional conflict and struggle. Drawing upon these characteristics, the statement structured on Likert scale was developed as follows:

EXT7: “Whenever I visit an online/offline store, I feel temporarily out of control”.

In addition, as explained by Beatty and Ferrel (1998) that impulse buying behavior usually occurs spontaneously and without giving much thought after getting the impulse to buy. On the basis of the definition, following statement has been developed:

EXT8: “If I see anything that attracts my attention, I buy it without thinking it through”.

As discussed before, Parboteeah (2005) conceptualized impulse buying as an unplanned purchase that arises as a result of exposure to a stimulus. It was further added that such an inner desire or urge actually encourages a buyer to make such a purchase. Building upon this conceptualization, the following statement (based on Likert scale) has been developed:

EXT9: “Whenever I visit an online/offline store, I buy only those products/services that I decided to buy before browsing a store”.

As discussed previously, Rook and Fisher (1995) presented an imaginary shopping condition for the respondents and asked them to select one out of the five options that would reflect their behavior as a consumer in that situation. The five options were to buy the planned item; wanting an impulse item but not buying it; deciding not to buy planned item; using credit card to buy the planned item along with the impulse item and lastly, using credit card to buy planned item, impulse item as well as other related items. After reviewing these diverse levels of impulse buying, a series of Likert-scale statements were developed to further analyse the participant’s tendencies in this regard. These were as follows:

EXT10: “On seeing an attractive product/service in an online/offline store, I purchased it along with the products/services that I decided to buy before visiting the store with a credit card”.

EXT11: “Even if I am short on money, I purchase products/services that attract my attention using credit card”.

Further, according to the major feature of impulse buying (impulse buying leads to emotional conflict and struggle) as explained by Rook and Hoch (1985), another statement (based on Likert scale) was developed, which was stated as:

EXT12: “Once I find anything interesting in the online/offline store, I feel psychological conflict in my mind whether to buy or not”.

Furthermore, Rook (1987) highlighted a significant feature of impulse buying, which was linked to limited consideration given to the aftereffects of impulse buying. Building upon this feature, another impulse buying statement (Likert scale based) was developed. It was as follows:

EXT13: “I don’t care about the consequences of products/services bought without any prior intention to buy”.

Lastly, Sabrina (2022) and Nelson-Bell (2022) have elucidated that impulse buying busts the

budget and make it difficult to reach long-run goals and an individual loses his or her financial freedom. Drawing upon these insights, the following Likert-scale statements have been developed:

EXT14: “I visit online/offline store after considering budget in my mind”.

EXT15: “I usually cross my budget limits once I visit online/offline store”.

After considering the statements that intends to measure the extent of impulse buying, the following hypotheses (Table 1) were proposed:

Table 1: Hypotheses proposed to test diverse statements (OEXT1-OEXT15) measuring the extent of online impulse buying

H1a: There is a significant difference between the score of OEXT1 and the mean score of 4. H1b: There is a significant difference between the score of OEXT1 and the score of 6.
H2a: There is a significant difference between the score of OEXT2 and the mean score of 4. H2b: There is a significant difference between the score of OEXT2 and the score of 6.
H3a: There is a significant difference between the score of OEXT3 and the mean score of 4. H3b: There is a significant difference between the score of OEXT3 and the score of 6.
H4a: There is a significant difference between the score of OEXT4 and the mean score of 4. H4b: There is a significant difference between the score of OEXT4 and the score of 6.
H5a: There is a significant difference between the score of OEXT5 and the mean score of 4. H5b: There is a significant difference between the score of OEXT5 and the score of 6.
H6a: There is a significant difference between the score of OEXT6 and the mean score of 4. H6b: There is a significant difference between the score of OEXT6 and the score of 6.
H7a: There is a significant difference between the score of OEXT7 and the mean score of 4. H7b: There is a significant difference between the score of OEXT7 and the score of 6.
H8a: There is a significant difference between the score of OEXT8 and the mean score of 4. H8b: There is a significant difference between the score of OEXT8 and the score of 6.
H9a: There is a significant difference between the score of OEXT9 and the mean score of 4. H9b: There is a significant difference between the score of OEXT9 and the score of 6.
H10a: There is a significant difference between the score of OEXT10 and the mean score of 4. H10b: There is a significant difference between the score of OEXT10 and the score of 6.
H11a: There is a significant difference between the score of OEXT11 and the mean score of 4. H11b: There is a significant difference between the score of OEXT11 and the score of 6.
H12a: There is a significant difference between the score of OEXT12 and the mean score of 4. H12b: There is a significant difference between the score of OEXT12 and the score of 6.
H13a: There is a significant difference between the score of OEXT13 and the mean score of 4. H13b: There is a significant difference between the score of OEXT13 and the score of 6.
H14a: There is a significant difference between the score of OEXT14 and the mean score of 4. H14b: There is a significant difference between the score of OEXT14 and the score of 6.
H15a: There is a significant difference between the score of OEXT15 and the mean score of 4. H15b: There is a significant difference between the score of OEXT15 and the score of 6.

Notes: OEXT1-OEXT15 = Statements to measure the extent of online impulse buying.

3.2 The Percentage of Impulse Purchases

To estimate the percentage of impulse purchases, encompassing both monetary value and quantity, the information regarding the most recent three transactions involving food and apparel, including the expenditure (in Indian Rupees) and the quantity (items purchased), was intended to be collected.

3.3 The Impulse Buying Frequency

To determine the frequency of impulse purchases in the category of apparels and food, the information regarding how frequently (always, usually, often, sometimes) a buyer purchases apparel and food online was intended to be gathered.

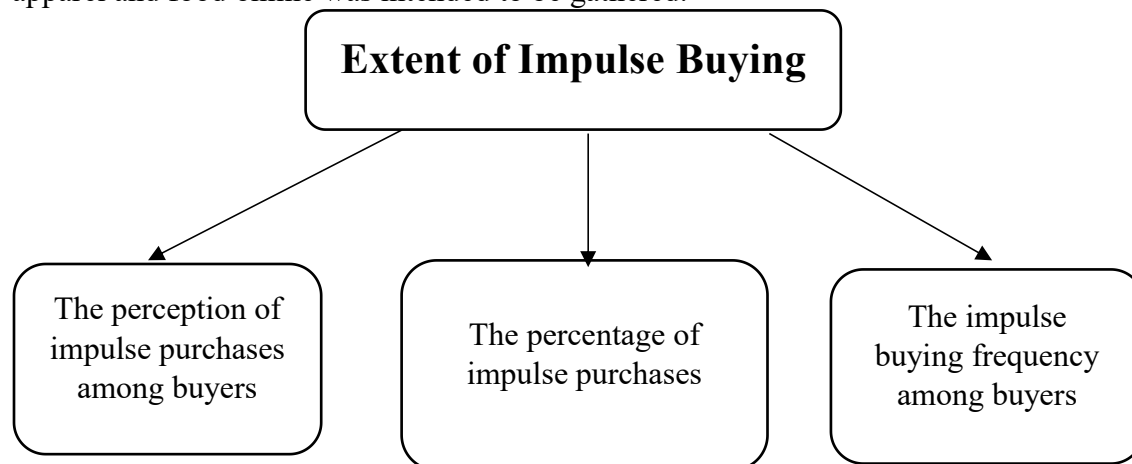


Fig. 1. Three key aspects to measure the extent of impulse buying

4. Research Methodology

4.1 Sample and Sampling Design

As per the study's objectives, a cohort of buyers of apparel and food was selected. The operational definition of a buyer for the purpose of this study is delineated as "an individual who had made at least one purchase of food and apparels online within the preceding six months". With the development of consumerism, impulsive purchasing has acquired considerable importance. Shopping itself is a gratifying pursuit, prompting individuals to spend substantial deal of time in retail environments, leading to impetuous purchases. Therefore, quantifying the prevalence of such purchases becomes imperative. Hence, a survey was conducted in the Punjab, India. For collection of data, a convenience sampling method was employed to contact 300 respondents who had made at least one online purchase of food and apparel within the previous six months.

4.2 Data Collection

To attain the key objective of the present study, data collection was done through a survey conducted in the state of Punjab, India in April 2023. Initially, a sample of 300 buyers who had made at least one online purchase of apparel and food in the last 6 months was approached using convenience sampling. The buyers (respondents) were contacted visiting 10 prominent apparel outlets (Lifestyle, Shoppers Stop, Kapsons, Baba Papa Garments, Monte Carlo, Westside, Decathlon, Puma, Vishal Mega Mart and Duke) and 10 food establishments (Rikhi Mega Mart,

C.R Supermarket, Ludhiana Grocery Store, More Supermarket, 24*7 Grocery Store, Reliance Smart Point, Reliance Fresh, Khanna Departmental Store, Vishal Mega Mart and Best Price) in the state of Punjab, India. They were requested to complete the questionnaires either in online or in a traditional paper-and-pen format, based on their preference. For those opting for paper-and-pen format, questionnaires were provided on-site for immediate completion. Other participants, who expressed their willingness to participate in the survey but had time limitation or felt other constraints were furnished questionnaires via email or whatsapp application. Two reminders (initially after 5 days and subsequently after 2 days of the first reminder) were sent either through phone calls or emails for the process of data collection. Out of the total questionnaires disseminated, 225 completely filled questionnaires were deemed suitable for inclusion in the study. The following section describes the comprehensive overview of the research instrument utilized in the study.

4.3 Research Instrument

The study employed questionnaire-based approach for collection of data. The questionnaire was divided into three distinct segments. The first segment was designed to collect information about an individual's online purchasing behaviour. The first question served as a qualifying criterion, inquiring whether a respondent has ever made online purchase of food and apparel during the last six months. It was further, followed by questions regarding the frequency and timing of such online shopping activities during the same period. The second segment was designed to gather information regarding impulse buying. This section began with the explanation of the concept of impulse buying to the respondents and included 15 statements structured on Likert scale to gain insights of respondent's perception towards impulse buying. These statements represented the major characteristics of impulse buying, such as sudden urge to buy, emotional connections with the products and services, buying without prior intentions and disregard for consequences. Further, the section gathered information about the respondent's last three purchases, the number of items purchased on impulse for both apparel and food and the frequency of getting engaged in impulse buying of these product categories. The purpose of the third section was to collect the information about demographics, including age, gender, marital status, education, occupation, and annual family income. Respondents were asked to indicate their degree of agreement with each statement on a 7-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree).

5. Data Analysis and Findings

The data collected through survey was processed and analysed using SPSS 27 software. Before analysis, data was cleaned by eliminating missing values, reluctant cases and outliers. Various statistical techniques were exercised to reach the research objectives, which included Descriptive Statistics and One Sample t-test. Furthermore, the extent of the impulse buying has been measured using percentage analysis.

5.1 Demographic Profile of buyers

The profile of online buyers is shown in Table 2 below. According to the table, 38 buyers (16.89%) represented the under-20-year-old demographic, 88 buyers (39.11%) the 20–30-year-old demographic, 64 buyers (28.44%) the 30–40-year-old demographic, 13 buyers (5.78%) the 40–50-year-old demographic, and 22 buyers (9.78%) the over-50-year-old demographic.

Therefore, 67.55% online buyers were young and belonged to category of 20-40 years of age. Only 15.56% (35 respondents) of online buyers were greater than 40 years of age and 16.89% (38 respondents) belonged to age group of less than 20 years. In the sample of 225 online buyers, males were 34.67% (78) and majority was of females (65.33%, 147). In the sample, 93 online buyers (41.33%) were single and 132 online buyers (58.67%) were married. With respect to educational qualifications, out of sample of 225 online buyers, 38 buyers (16.89%) were undergraduates, 134 buyers (59.56%) had education up to graduation and 53 buyers (23.56%) were post-graduates. Online buyers have been involved in varied occupations (like service both in private and government sector, own business, housewife, retired persons and student). A large number of respondents were having their own business (59 buyers, 26.22%). Approximately 17.33% buyers were in service either in private (30 buyers, 13.33%) or government sector (9 buyers, 4.00%). 41 online buyers (18.22%) were housewives, 80 online buyers were students (35.56%) and 6 buyers (2.67%) were in other professions. With respect to annual family income, majority of online buyers (140 buyers, 62.22%) were earning between Rs.10 Lakhs and Rs. 15 Lakhs annually, 75 buyers (33.33%) were earning greater than Rs. 15 Lakhs annually and negligible buyers (10 buyers, 4.44%) were having annual family income of Rs. 5 Lakhs and Rs. 10 Lakhs. In the sample, approximately 69.34% (156 buyers) had 4 or 5 members living in their household (including themselves), 35 online buyers (15.56%) had 3 or less members in their household (including themselves) and 34 online buyers had more than 5 members (15.11%) (including themselves).

Table 2: Demographic profile of online buyers (n₀ = 225)

Parameter	Category	Number	Percentage
Age			
	Less than 20 years	38	16.89
	20-30 years	88	39.11
	30-40 years	64	28.44
	40-50 years	13	5.78
	More than 50 years	22	9.78
Total		225	100.00
Gender			
	Male	78	34.67
	Female	147	65.33
Total		225	100.00
Marital Status			
	Single or never married	93	41.33
	Married	132	58.67
Total		225	100.00
Educational Qualifications			
	Undergraduate	38	16.89
	Graduate	134	59.56
	Post-Graduate or other higher-level degrees	53	23.56

Total		225	100.00
Occupation			
	Service-Private	30	13.33
	Service-Govt.	9	4.00
	Business	59	26.22
	Housewife	41	18.22
	Student	80	35.56
	Any other	6	2.67
Total		225	100.00
Annual Family Income			
	Less than Rs. 10 Lakhs	10	4.44
	Between Rs. 10 Lakhs and Rs. 15 Lakhs	140	62.22
	More than Rs. 15 Lakhs	75	33.33
Total		225	100.00
Members in the household (including respondent)			
	3 or less than 3	35	15.56
	4	78	34.67
	5	78	34.67
	Greater than 5	34	15.11
Total		225	100.00

Notes: n_o = Number of online buyers

5.2 The General Shopping Behavior of Buyers:

The general shopping behavior of buyers was described in terms of two aspects. Firstly, the respondents were inquired about the most recent occasion when they had purchased apparel or food. Secondly, the study explored the frequency of online shopping for apparel or food over the past six-month period. Respondents were asked to provide the information regarding these two aspects.

The findings regarding online shopping behavior of the respondents are represented in Table 3 below. According to the data, the majority of respondents (66.22%) have engaged in the online purchase of food and apparel within the last one month, while only 33.78% respondents have made such purchases prior to last one month. The table further highlights that 42.22% (95 out of 225) of the respondents have purchased the food and apparel online a few days before the survey. It reflects that most of respondents actively engage in online buying of food and apparel. Further, 20.89% of the respondents have purchased food and apparel online one month before the survey. Moreover, 15.56% of the respondents have purchased food or apparel online a week before the survey. There are certain respondents (11.56%) that have purchased food or apparel online three months before the survey.

Table 3: Recent online purchase of apparel and food ($n_o = 225$)

Category	Number	Percentage	Cumulative Percent
Three months before	29	12.89	12.89

One month before	47	20.89	33.78
Two weeks before	19	8.44	42.22
A week before	35	15.56	57.78
Few days before	95	42.22	100.00
Total	225	100.00	100.00

The data presented in Table 4 represents insights into the frequency of online purchases of food and apparel products by the respondents over the period of past six months. The findings show that most of the respondents (75.56%) engaged in buying these items either 6-10 times or more than 10 times in the last six months. Specifically, 98 respondents (43.56%) made more than 10 online purchases of food and apparel, while 72 respondents (32.00%) made 6-10 such purchases. In contrast, a smaller proportion of the sample, 45 respondents (20.00%), reported purchasing food and apparel online just 3-5 times, and only 10 respondents (4.44%) made 1-2 online purchases of these products in the period of last six months.

Table 4: Frequency of online purchases of apparel and food over past six months (n_o = 225)

Category	Number	Percentage	Cumulative Percent
1-2 times	10	4.44	4.44
3-5 times	45	20.00	24.44
6-10 times	72	32.00	56.44
More than 10 times	98	43.56	100.00
Total	225	100.00	100.00

5.3 Measurement of the Extent of Impulse Buying

The extent of impulse buying is measured using three key aspects, including the perception of impulse purchases among buyers, the percentage of impulse purchases and the impulse buying frequency among buyers. The following section delves into an exploration of these three aspects.

5.3.1 The Perception of Impulse purchases among buyers

The perception of impulse buying among online buyers was measured based on specific statements derived from established definitions of impulse buying put forth by various authors in the previous studies. To assess these statements, a one-sample t-test was applied, with test value set at 4 and 6, respectively.

Table 5: One sample t-test results of diverse statements (OEXT1-OEXT15) (n_o = 225)

Hypothesis	Items	Mean	S.D.	(μ = 4) (a)		(μ = 6) (b)	
				t-value	p-value	t-value	p-value
H1	OEXT1	6.18	0.99	32.92	< 0.001	2.75	0.006
H2	OEXT2	5.80	1.12	24.06	< 0.001	-2.74	0.007
H3	OEXT3	5.42	1.19	17.89	< 0.001	-7.34	< 0.001
H4	OEXT4	6.34	0.90	38.91	< 0.001	5.69	< 0.001
H5	OEXT5	6.03	1.06	28.67	< 0.001	0.38	0.706
H6	OEXT6	5.81	1.09	24.86	< 0.001	-2.63	0.009

H7	OEXT7	6.01	1.06	28.52	< 0.001	0.13	0.900
H8	OEXT8	5.20	1.23	14.70	< 0.001	-9.80	< 0.001
H9	OEXT9	3.67	1.37	-03.66	< 0.001	-25.62	< 0.001
H10	OEXT10	5.36	1.42	14.42	< 0.001	-6.73	< 0.001
H11	OEXT11	5.35	1.44	14.05	< 0.001	-6.82	< 0.001
H12	OEXT12	6.07	0.88	35.37	< 0.001	1.21	0.226
H13	OEXT13	4.56	1.29	06.47	< 0.001	-16.82	< 0.001
H14	OEXT14	5.97	0.76	38.95	< 0.001	-0.62	0.539
H15	OEXT15	5.72	1.14	22.70	< 0.001	- 3.70	< 0.001

The results, which were based on a 7-point Likert scale (ranging from 1 as strongly disagree to 7 as strongly agree), are displayed in Table 5. Online buyers were asked to provide their responses indicating their level of agreement or disagreement with each statement. The reliability analysis using Cronbach's alpha for the entire construct yielded a value of 0.89, which makes data highly fit for further analysis. The mean values of research statements ranged from 3.67 to 6.34, indicating that the majority of the respondents agreed with the statements and the standard deviation implied between 0.76 and 1.44. The results of one sample t-test (hypothesis testing) of diverse statements (OEXT1-OEXT15) examining the perception of online impulse buying with test value of 4 (mean) are presented in Table 5. The level of significance (α) was set at 0.05. The results for the (H1a) OEXT1 statement indicate a significant difference between the score of OEXT1 and the average score of 4 (Mean = 6.18, S.D. = 0.99), with a t-statistic of 32.92 and p-value less than 0.001. Hence, H1a was supported. Similarly, the results for the (H2a) OEXT2 statement describe a significant difference between the score of OEXT2 and the average score of 4 (Mean = 5.80, S.D. = 1.12), with a t-statistic of 24.06 and p-value less than 0.001. Therefore, H2a was supported. Further, the results for the (H3a) OEXT3 statement depict a significant difference between the score of OEXT3 and the average score of 4 (Mean= 5.42, S.D. = 1.19), with a t-statistic of 17.89 and p-value less than 0.001. Hence, H3a was supported. The (H4a) OEXT4 statement results indicate a significant difference between the score of OEXT4 and the average score of 4 (Mean = 6.34, S.D. = 0.90), with a t-statistic of 38.91 and p-value less than 0.001. Therefore, H4a was supported. Further, the results for the (H5a) OEXT5 statement depicts a significant difference between the score of OEXT5 and the average score of 4 (Mean = 6.03, S.D. = 1.06), with a t-statistic of 28.67 and p-value less than 0.001. Hence, H5a was supported. The (H6a) OEXT6 statement results represent a significant difference between the score of OEXT6 and the average score of 4 (Mean = 5.81, S.D. = 1.09), with a t-statistic of 24.86 and p-value less than 0.001. Therefore, H6a was supported. The (H7a) OEXT7 statement results show a significant difference between the score of OEXT7 and the average score of 4 (Mean = 6.01, S.D. = 1.06), with a t-statistic of 28.52 and p-value less than 0.001. Hence, H7a was supported. The results for the (H8a) OEXT8 statement represent a significant difference between the score of OEXT8 and the average score of 4 (Mean = 5.20, S.D. = 1.23), with a t-statistic of 14.70 and p-value less than 0.001. Therefore, H8a was supported. The (H9a) OEXT9 statement (inverse) results explain a significant difference between the score of OEXT9 and the average score of 4 (Mean = 3.67, S.D. = 1.37), with a t-statistic of -3.66 and p-value less than 0.001. Hence, H9a was supported. Further, the (H10a) OEXT10 statement results depict a significant difference between the score of OEXT10 and the average score of 4 (Mean = 5.36, S.D. = 1.42), with a t-statistic of 14.42 and p-value less than 0.001. Therefore, H10a was supported. The results for the

(H11a) OEXT11 statement reflect a significant difference between the score of OEXT11 and the average score of 4 (Mean = 5.35, S.D. = 1.44), with t-statistic of 14.05 and p-value less than 0.001. Hence, H11a was supported. Furthermore, the (H12a) OEXT12 statement results represent a significant difference between the score of OEXT12 and the average score of 4 (Mean = 6.07, S.D. = 0.88), with a t-statistic of 35.37 and p-value less than 0.001. Hence, H12a was supported. The (H13a) OEXT13 statement results indicate a significant difference between the score of OEXT13 and the average score of 4 (Mean = 4.56, S.D. = 1.29), with t-statistic of 6.47 and p-value less than 0.001. Hence, H13a was supported. Additionally, the results for the (H14a) OEXT14 statement reflect a significant difference between the score of OEXT14 and the average score of 4 (Mean = 5.97, S.D. = 0.76), with t-statistic of 38.95 and p-value less than 0.001. Therefore, H14a was supported. Lastly, the (H15a) OEXT15 statement results describes a significant difference between the score of OEXT15 and the average score of 4 (Mean = 5.72, S.D. = 1.14), with t-statistic of 22.70 and p-value less than 0.001. Hence, H15a was supported.

Since all the hypotheses were supported against the neutral score of 4, an additional investigation was undertaken to test the level of impulsiveness with a test value set at 6, representative of an inclination towards impulse buying. The findings revealed that only four statements related to impulse buying (OEXT5, OEXT7, OEXT12 and OEXT14), led to the rejection of hypotheses (H5b, H7b, H12b and H14b). On the contrary, hypotheses for 11 statements (OEXT1, OEXT2, OEXT3, OEXT4, OEXT6, OEXT8, OEXT9, OEXT10, OEXT11, OEXT13, OEXT15) were supported at the test value of 6. Moreover, the results pertaining to statements (OEXT1, OEXT4, OEXT5, OEXT7 and OEXT12) revealed favorable responses from buyers, representative of their inclination towards online impulse buying. Consequently, it was deduced that when a buyer browses an online retail platform, a sudden urge to buy something immediately is experienced. This impulsive urge often makes the buyer buy the products/services that are more economical than the products/services initially intended to buy before visiting the online store. Furthermore, this urge felt establishes an emotional connection between the buyer and the products or services, resulting in a transient loss of self-control. Lastly, the buyer finds themselves in a psychological dilemma, torn between the decision to proceed with the purchase or refrain from acquiring the product or service.

5.3.2 The Percentage of Impulse Purchases

5.3.2.1 Apparel

The section deals with estimation of the percentage of impulse purchases, comprising both monetary value (expenditure in Indian Rupees) and quantity (items purchased). It was measured separately for apparel and food. Buyers were asked to furnish details pertaining to their last three apparel purchases, including the monetary value (in Indian Rupees) and the quantity of products acquired. Based on the data shown in Table 6, it can be observed that a significant portion of the most recent apparel purchases (average value of INR 2260) were categorised as impulse buys, accounting for around 39.38% (average value of INR 890). Moreover, out of the two or three items purchased on average (Mean = 2.55), approximately one item (39.22%) was purchased on impulse. Similarly, for the second-to-last purchases of apparel (Mean = INR 2110), 39.80% (Mean = INR 840) belonged to the impulse buying. Among an average 2.48 items purchased, around 1.03 items (41.53%) were purchased on impulse. Lastly, for the third most recent purchases of apparel (Mean = INR 1910), 45.03% (Mean = INR 860) belonged to the impulse

buying, with an average of 2.32 items purchased, of which about 1.06 items (45.69%) were purchased on impulse.

Table 6: The last three online apparel purchases that belong to impulse buying (n_o = 225)

Purchases	Total amount (INR) spent (Mean)	Number of items purchased (Mean)	Amount (INR) spent on impulse purchases (Mean)	Number of items bought impulsively (Mean)
Last	2260	2.55	890 (39.38%)	1.00 (39.22%)
2 nd Last	2110	2.48	840 (39.80%)	1.03 (41.53%)
3 rd Last	1910	2.32	860 (45.03%)	1.06 (45.69%)

The prevalence of impulse buying behavior ranges from 40% to 80% of overall purchases, depending on the product category being considered, as indicated by various research scholars (Kacen et al., 2012; NEFE, 2012; West, 1951). Moreover, it has been observed that about 62% of in-store purchases are made impulsively and online buyers have greater impulse buying tendencies (Iyer et al., 2020). Notably, scholarly investigations have highlighted that a significant proportion (76%) of online purchases in the fashion industry, including clothing and shoes represent impulse purchases (Utama et al., 2022). Another study states that up to 40% of all purchases made in retail stores can be classified as impulsive purchases, indicating a high rate of impulse buying in apparel industry (Wadera and Sharma, 2019). However, the findings obtained from the present research indicate that impulse buying of apparel constitutes approximately 39-46% of the overall expenditure on online apparel purchases.

Furthermore, a separate investigation was conducted to **examine the phenomenon of impulse purchase among male and female respondents, with the aim of documenting potential gender disparities**. Based on the data presented in Table 7, it can be observed that female respondents exhibited a greater propensity for impulse purchase in the apparels category when compared to their male counterparts. The proportion of their impulsive purchases ranged from 41.21% to 48.37% of the overall expenditure on all three apparel transactions. In contrast, male participants indicated a comparatively lower degree of impulsivity (regarding apparel purchases), ranging from 34.80% to 38.04% of the overall expenditure on last three apparel transactions. The findings indicate that males have a lower level of impulsivity, approximately 7-10% less, in comparison to females. The acquired results align with the conclusions drawn by other researchers (Dittmar et al., 1995; Verplanken and Herabadi, 2001; Güre, 2012), indicating that males exhibit lower levels of impulsive buying behaviour compared to females. Additionally, Coley and Burgess (2003) provided an explanation that males perceive shopping as a futile expenditure of both time and money. Individuals may exhibit a limited propensity to engage in and justify impulsive purchasing behaviours. Furthermore, it has been observed that women exhibit a stronger inclination towards acquiring emotional and symbolic possessions in comparison to men, as they are commonly perceived to possess higher levels of emotional sensitivity and prioritise interpersonal relationships (Dittmar et al., 1995; Underhill, 1999).

Nevertheless, Kollat and Willet (1967) posited that there is no statistically significant association between gender and impulse purchase behaviour. This implies that there is a lack of substantial disparity in the purchasing tendencies between males and females in relation to impulse purchase.

Table 7: Gender differences in the last three online apparel purchases that belong to impulse buying

Purchases	Females (No. of females = 147)		Males (No. of males = 78)	
	Total amount (INR) spent (Mean)	Amount (INR) spent on impulse purchases (Mean)	Total amount (INR) spent (Mean)	Amount (INR) spent on impulse purchases (Mean)
Last	2130	900 (42.25%)	2500	870 (34.80%)
2 nd Last	1960	810 (41.32%)	2340	880 (37.61%)
3 rd Last	1840	890 (48.37%)	2050	780 (38.04%)

5.3.2.2 Food

In the context of food consumption, respondents were asked to furnish details on their three most recent food purchases in terms of expenditure in Indian Rupees. As indicated in Table 8, among the most recent food purchases (Mean expenditure of INR 745), 37.58% (Mean expenditure of INR 280) were classified as impulse buys. Similarly, for the second last purchases of food (Mean expenditure of INR 640), 39.06% (Mean expenditure of INR 250) were identified as impulse purchases. Further, for the third last purchases of food (Mean expenditure of INR 680), 45.59% (Mean expenditure of INR 310) belonged to the impulse buying.

The phenomenon of impulse buying in the category of food products has been an area of substantial interest. A study conducted by Sha (2019) revealed that a significant proportion of buyers, specifically 70%, engage in impulsive food purchasing. The results indicate that a significant portion of food expenditure can be attributed to impulse purchases. Furthermore, the present research attempted to estimate the percentage of impulse purchases within the overall food expenditure. A range of 37.58% to 45.59% has been reported, reflecting that a significant portion of spending on food category can be classified as impulsive in nature.

Table 8: The last three online purchases of food that belong to impulse buying (n_o = 225)

Purchases	Total amount (INR) spent (Mean)	Amount (INR) spent on impulse purchases (Mean)
Last	745	280 (37.58%)
2 nd Last	640	250 (39.06%)
3 rd Last	680	310 (45.59%)

In conclusion, it can be stated that online buyers of apparels reflected 39 to 46% of impulsiveness in their last three apparel purchases. Further, when comparison was drawn between male and female buyers of apparels, it was revealed that females show higher level of impulsiveness (about 7-10% more) as compared to the males. Moreover, in case of food, the level of impulsiveness ranged between 38 to 46% approximately.

5.3.3 The impulse buying frequency among buyers

The section examines the frequency with which buyers engage in buying apparel and food impulsively. It is measured separately for apparel and food products/services.

5.3.3.1 Apparels

The data reflected in the table 9 reveals insights into the impulse buying tendencies of buyers regarding apparel products. The findings represents that a significant portion of the buyers, about 70-80%, engage in impulse buying on a regular basis. Further, it reflects that 110 respondents, constituting 48.89% of the sample, usually buy apparel (about 80%) on impulse. Additionally, 18.22% of respondents, often buy apparel (about 70%) without prior planning. Furthermore, 48 respondents, representing 21.33% of the total, sometimes (about 50%) make impulse apparel purchases. In contrast, only 12 respondents or 5.33%, believe that they always buy apparel on impulse. Lastly, a small fraction of the sample, constituting 14 respondents (6.22%), rarely engage in buying apparel on impulse.

Table 9: The frequency of buying apparels online on impulse (n_o = 225)

Category	Frequency	Percentage	Cum. Percent
Always (100%)	12	5.33	5.33
Usually (about 80%)	110	48.89	54.22
Often (about 70%)	41	18.22	72.44
Sometimes (about 50%)	48	21.33	93.78
Rarely (about 20%)	14	6.22	100.00
Total	225	100.00	100.00

The analysis of the food category, as depicted in Table 10, represents that a majority of buyers tend to buy food impulsively. Specifically, the data reveals that 106 respondents, representing 47.11% of the surveyed population, usually buy food (about 80%) impulsively. Additionally, 31 respondents often buy food (about 70%) on impulse. Moreover, 41 respondents, equivalent to 18.22% of the respondents, sometimes (about 50%) opt for impulsive food buying behavior. Interestingly, a significant proportion of respondents, 40 individuals (17.78%), perceive themselves as always making impulsive food purchases. Conversely, a small proportion of 7 respondents (3.11%) exhibit rare impulsive food purchasing tendencies.

Table 10: The frequency of buying food online on impulse (n_o = 225)

Category	Frequency	Percentage	Cum. Percent
Always (100%)	40	17.78	17.78
Usually (about 80%)	106	47.11	64.89

Often (about 70%)	31	13.78	78.67
Sometimes (about 50%)	41	18.22	96.89
Rarely (about 20%)	7	3.11	100.00
Total	225	100.00	100.00

The analysis of impulse buying behavior across apparel and food categories reveals several notable trends. Regarding apparel, the majority of buyers make impulse purchases on regular basis, with approximately 70-80% of purchases being impulsive in nature. However, only a small fraction, about 5%, of respondents believe they always make impulsive apparel purchases. Moreover, a mere 6% of buyers rarely exhibit impulsive tendencies, when purchasing apparel. While analysing the food category, it was found that a significant proportion of online buyers, usually make food purchases on impulse. Moreover, it is interesting to note that about 18% of respondents perceive themselves as always involving in impulse buying. On the contrary, only 3% of buyers rarely make unplanned food purchases. The findings highlight the prevalence of impulse buying tendencies among buyers, where a larger percentage of buyers believe they always make impulse purchases.

6. Conclusion

The primary aim of this research was to measure the extent of impulse buying behavior in the e-commerce environment. The study focused on two distinct categories of products, namely food and apparel, which are the most frequently bought products on impulse. The research employed a three-dimensional approach to quantify the actual extent of impulse buying. Specifically, the study measured the following key aspects: (1) the perception of impulse purchases among online buyers, (2) the percentage (both in terms of monetary value and quantity) of impulse purchases, and (3) the frequency with which buyers engage in impulse buying decisions.

The research attempted to investigate the perception of impulse buying among buyers by employing specific statements that were derived from the established definitions of impulse buying proposed by various scholars in the field. Respondents were asked to rate how strongly they agreed or disagreed with each of the statements on a 7-point Likert scale. A one sample t-test was applied using a test value of 4 (average) and the results supported the hypotheses for all 15 impulse buying statements. A further attempt was made to test the level of impulsiveness using a test value at 6 (indicating strong agreement). The results revealed that statements OEXT1, OEXT4, OEXT5, OEXT7 and OEXT12 showed the positive responses from buyers, which represent their inclination towards online impulse buying. The results suggest that when browsing an online store, buyers often experience a sudden urge to buy something immediately. This sudden urge felt makes buyer buy the products or services that are less expensive than those initially planned before visiting the online store. Furthermore, this urge appears to create an emotional connection between the buyer and products/services, resulting in a temporary loss of self-control. Finally, buyer may experience psychological conflict regarding whether to buy or refrain from purchasing such a product or service.

Secondly, a comprehensive analysis was conducted to estimate the percentage of impulse purchases made by online buyers. The findings provide valuable insights into the monetary value and quantity of impulse purchases made by online buyers in the apparel and food product

categories. By analysing the details of buyers' last three apparel purchases, including the expenditure in Indian Rupees and the number of items acquired, the study revealed that a significant portion of recent apparel purchases were classified as impulse purchases. It accounted for approximately 39.38% of the total expenditure (INR 890 out of INR 2260) and 39.22% of the total items purchased (1 out of 2.55 items). Similar results were observed for the second-to-last and third most recent apparel purchases, with impulse buying accounting for 39.80 % (INR 840 out of INR 2110) and 45.03% (INR 860 out of INR 1910) of the total expenditure, respectively and 41.53% (1.03 out of 2.48 items) and 45.69% (1.06 out of 2.32 items) of the total items purchased. Furthermore, a gender-based analysis was conducted to highlight the potential differences in impulse buying behavior. The findings suggest that, as compared to male respondents, female respondents were more likely to make impulse purchases of apparel. Their impulse buying varied between 41.21% to 48.37% of the total amount spent on all three apparel purchases. However, men reported being less impulsive than women, with their impulsiveness ranging from 34.80% to 38.04% of the total amount spent on all three purchases. The results showed that males are less impulsive (about 7-10% less) as compared to females in the apparel category. The findings explained that men may consider shopping as a waste of time and money. They may be less likely to justify impulse purchases. In addition, women typically place a higher value on sentimental and symbolic items than do males. Furthermore, the study examined impulse buying behavior in the food product category. The results showed that 37.58% (INR 280 out of INR 745) of the last food purchases, 39.06% (INR 250 out of INR 640) of the second-to-last food purchases and 45.59% (INR 310 out of INR 680) of the third-to-last food purchases were categorised as impulse buys.

Lastly, the study investigated the frequency of impulse buying behavior among online buyers in the apparel and food categories. The respondents were asked to provide information about how frequently they indulge in making unplanned purchases while shopping for these products online. The findings reflected that a substantial proportion of buyers engage in impulse apparel purchases online. Approximately, 48.89% of respondents reported usually buying apparel on impulse, while 18.22% indicated very often doing so. Additionally, 21.33% of respondents sometimes make impulsive apparel purchases and only 6.22% rarely engage in this behavior. The study also examined impulse buying behavior in the food category. Its findings revealed that about 47.11% of buyers usually purchase food on impulse when shopping online. Furthermore, 31.00% of respondents very often make impulse food purchases and 18.22% sometimes do so. Notably, a substantial number of respondents (17.78%) believe they always buy food on impulse and only 3.11% rarely engage in this behavior. The overall findings reflect that impulse buying is a common phenomenon among online buyers, particularly in the apparel and food category. The majority of respondents reported making unplanned purchases, either usually or very often, when ordering food and apparel online.

7. Implications

The present study on impulse buying aimed to assess the extent of this phenomenon, offers several key implications. Initially, the examination of the perception of online impulse buying among online buyers highlights the powerful influence of psychological drivers that enable buyers to indulge in impulse buying. The study found that online buyers often experience a

sudden urge to make immediate purchases, deviating from their initial plans. This urge leads to building of emotional connection with products or services, leading to temporary loss of self-control and potential psychological conflicts regarding purchase decisions. Such findings equip retailers with valuable insights to trigger such psychological factors, effectively manage and influence impulse buying tendencies among buyers. Further, the estimation of percentage of impulse buying (monetary value and quantity) reveals that a significant proportion of the total amount spent on apparel and food is a result of impulse buying. Furthermore, the study suggests that approximately one out of every two to three apparel items purchased is impulsively bought. Lastly, the analysis of the frequency of impulse buying among online buyers explains that majority of online buyers engage in buying food and apparel usually on impulse. The findings offer retailers with valuable information regarding the proportion of their overall sales that can be attributed to impulse buying. Developing techniques to enhance buyer motivation for impulse buying can be beneficial for retailers, potentially leading to improved sales and enhanced profitability.

Conversely, research on the issue of impulse buying can assist buyers in becoming cognizant of their superfluous expenditures incurred through impulse purchasing behaviors. This awareness can aid buyers in formulating tactics to regulate their superfluous purchasing. As an example, buyers may attempt to postpone their purchases by adding products to their online shopping cart and physically distancing themselves from their mobile devices or computers. They should then engage in a period of reflection lasting 24 hours, during which they consider whether there is a genuine necessity for the items they have added to their cart. Moreover, the study suggest that individuals should own a well-defined budget and diligently evaluate and adhere to it. However, the buyers can build some flexibility into their budgets in order to splurge once in a while. In this way, they will have healthier buying habits.

Declaration of Interest:

There is no conflict of interest among authors or authors with any person/organisation.

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