



Scarcity Cues, Payment Convenience, and FOMO: Their Roles in Online Impulsive Buying and Post-Purchase Cognitive Dissonance

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ABSTRACT

This study investigates the influence of time-limited discounts, use of e-wallet payments, and fear of missing out (FOMO) on online impulsive buying and subsequent post-purchase cognitive dissonance among public university students. A total of 400 respondents from Mindanao State University-Iligan Institute of Technology, predominantly aged 18-19 (50.0%) and primarily female (73.7%), participated in the research. Data were collected through a structured questionnaire utilizing a 5-point Likert scale and analyzed using t-tests, one-way ANOVA, and Pearson Product-Moment Correlation. Findings indicate that participants reported above-average agreement with time-limited discounts (Mean = 3.61) and the use of e-wallet payments (Mean = 3.60), alongside elevated levels of post-purchase cognitive dissonance (Mean = 3.56). In contrast, online impulsive buying (Mean = 2.79) and FOMO (Mean = 2.32) were reported at moderate to low levels. Significant sex-based differences were observed, with male students demonstrating higher responsiveness to promotional urgency (Mean = 3.66) and use of e-wallet payments than female students. Age-related analysis revealed that older students reported significantly higher use of e-wallet payments, while younger students experienced slightly higher levels of post-purchase dissonance. Correlation results showed that time-limited discounts and FOMO were positively and significantly associated with both online impulsive buying and post-purchase dissonance. Use of e-wallet payments was positively related to online impulsive buying but not to post-purchase cognitive dissonance. Online impulsive buying demonstrated a strong positive relationship with post-purchase cognitive dissonance. These findings illuminate the psychological and contextual dynamics of digital impulse buying in an emerging Southeast Asian market.

Keywords: Online Impulsive Buying, Time-Limited Discounts, E-Wallet Payments, Fear Of Missing Out (Fomo), Post-Purchase Cognitive Dissonance, Public University Students

JEL Classifications: M31, D12, D91, L81

1. INTRODUCTION

Consumer behavior in digital commerce refers to how people make purchasing decisions in online environments. The rapid growth of e-commerce means businesses must understand new shopping patterns. Madlenak et al (2025) noted that digital commerce sales are growing globally in every industry and region, so firms are constantly adjusting to shifting consumer behavior and new technologies. Global online shoppers rose from 1.7 billion in

2018 to 1.92 billion in 2019 (Zhao et al., 2022) underscoring the rising importance of studying online buying. In this context, understanding how and why consumers buy online, particularly in impulsive situations, is critical for both theory and practice (Abellana and Alonzo, 2025).

Planned purchases involve deliberate decision-making such as researching and comparing choices before buying, whereas impulsive buying is sudden, spontaneous, and unplanned (Wu

et al., 2021). Impulsive purchases are defined as “unplanned purchases or making a purchasing decision on the spot” (Stern, 1962). Prior research indicates that impulse buying is prevalent in retail settings. One report found that 84% of shoppers engage in impulse purchases, which account for approximately 40% of e-commerce spending (Dela Peña et al., 2025). The online environment often amplifies impulsive tendencies such as removing constraints like store hours and travel time, while exposing buyers to stimulating cues (Zhao et al., 2022). Studies note that online contexts with one-click purchasing and constant promotions provide more favorable conditions for impulse buying than offline shopping (Luan and Trong, 2025).

Several factors have been identified as triggers of impulsive online shopping. In particular, time-limited discounts, digital payment tools, and fear of missing out (FOMO) are especially salient in the digital marketplace. Time-Limited Discounts such as flash sales, countdown deals, and other limited-time offers create urgency. Research shows that scarcity promotions raise consumers’ arousal and spur impulse purchases (Lee et al., 2025). Both limited-quantity and limited-time promotions significantly increased buyers’ perceived arousal, which in turn led to actual impulse purchases (Guo et al., 2017). Similarly, university students often respond spontaneously to online ads and “limited offer” pop-ups by clicking “buy” without pre-planning, driven by immediate emotional triggers in digital environments (Rafsanjani et al., 2025).

In addition to impulsive buying tendencies, payment methods also play a significant role in shaping online purchasing behavior. Cashless mobile wallets streamline online payment and reduce friction, which can weaken impulse control. Studies report that digital payment methods significantly affect consumers’ impulse purchase behavior (Lee et al., 2025). In other words, when buyers feel the payment is effortless or “painless,” they are more likely to act on impulse. E-wallet payments have been found to significantly heighten impulsive spending due to seamless, intangible transactions that lower spending barriers compared to cash (Underdown and Tamara, 2025). Indeed, one study argues that consumers’ impulse control can weaken because cashless payments are considered painless compared to cash payments (Lee et al., 2023). In markets such as the Philippines, where e-wallets are widely used, this suggests that digital wallets may amplify impulsive online buying.

Beyond transactional factors, psychological drivers such as fear of missing out (FOMO) further influence online purchasing behavior. FOMO is the anxiety that others are experiencing rewarding events without you, and it has emerged as a powerful motivator for young shoppers (Kleitsch and Drămnescu, 2025). Among digital natives, FOMO on deals or trending products can trigger unplanned purchases. Recent work finds that FOMO, fueled by social media trends and deal notifications, significantly triggers unplanned purchases by heightening anxiety over missing desirable products or experiences (Nguyen and Nguyen, 2025). When social media content or marketing messages emphasize scarcity or exclusivity, fear of missing out tends to increase, leading consumers to feel pressure to make immediate purchase decisions. In fact, one study of Gen Z consumers found that FOMO was the single most

important factor leading to online impulse buying, even more so than price or reviews (Chetioui and Bouzidi, 2023).

Following the purchase, attention shifts to consumers’ cognitive evaluation of their decision. Cognitive dissonance refers to the mental discomfort a person feels when holding two conflicting beliefs or behaviors. In consumer contexts, post-purchase dissonance (PPCD) often called “buyer’s remorse” occurs after an unplanned purchase when the consumer doubts the decision. This dissonance can manifest as regret, anxiety, or frustration about the bought item or deal. The lack of pre-planning in impulse purchases heightens regret, guilt, and emotional discomfort as consumers reconcile sudden spending with their budgets or values (Jain et al., 2018). The downward anticipated regret (fear of missing a deal) drives impulsive online buying, which subsequently correlates with elevated post-purchase regret as buyers confront the unplanned expenditure and potential dissatisfaction (Li et al., 2021). This outcome is important in consumer psychology, as increased dissonance can reduce satisfaction, harm loyalty, and influence return or repurchase behavior. Post-purchase cognitive dissonance is a relevant negative outcome of impulse buying in e-commerce (Amini and Rahmawati, 2025).

The Philippines offers a uniquely dynamic setting for studying e-commerce trends. The market reached \$20.1 billion (PHP 1.1 trillion) in 2023, growing at a 28.6% CAGR from 2019 to 2023, and is projected to reach \$24.1 billion by 2024 and \$39.5 billion by 2028, growing at 13.2% CAGR (Reporter, 2024). The online shopper base is predominantly young, with over 85% of Filipino e-commerce users under the age of 45, including 52% aged 25-34 and 28% aged 18-24 (Statista, 2025), reflecting high smartphone penetration and the strong presence of Gen Z and Millennial consumers on platforms such as Shopee (PCMI, 2025). Mobile payments are highly prevalent, with GCash holding around 90% of the e-wallet market and facilitating 57% of online transactions (Alonzo et al., 2025; dela Peña et al., 2025). Despite these trends, empirical research on online impulse buying and post-purchase dissonance in the Philippine student population is scarce. Cultural and infrastructural factors such as payment security concerns may moderate impulse behavior, as one Filipino study suggests millennials there are relatively cautious with online impulse buys (Moreno et al., 2022). Yet there is no comprehensive study examining how time-limited deals, e-wallet usage, and FOMO jointly influence impulsive purchases and subsequent dissonance among Filipino university students.

To address this gap, the present study investigates how key online stimuli (limited-time discounts, digital wallet use, and FOMO) affect impulsive buying behavior and resulting post-purchase cognitive dissonance among Philippine state university students. By focusing on this understudied but fast-growing consumer segment, the research seeks to illuminate the psychological and contextual dynamics of digital impulse buying in an emerging Southeast Asian market.

2. LITERATURE REVIEW

2.1. Stimulus-Organism-Response (S-O-R)

The rapid expansion of e-commerce in the Philippines, fueled by platforms like Shopee, Lazada, and TikTok Shop, has intensified

research on impulsive consumer behavior among university students (Statista, 2025). Time-limited discounts, e-wallet payments, and fear of missing out (FOMO) serve as key stimuli triggering online impulsive buying, often culminating in post-purchase cognitive dissonance (Chetioui and Bouzidi, 2023). Empirical studies support this pattern, showing that Gen-Z and Gen-Y exposed to flash sales and mobile payment promotions exhibit significantly higher impulsive buying tendencies, which subsequently increase feelings of regret and cognitive discomfort after purchase (Zai et al., 2025; Lee et al., 2023).

This study utilizes the Stimulus-Organism-Response (S-O-R) framework to examine these dynamics within the emerging Philippine market. Time-limited discounts significantly impact impulse buying behavior in online shopping environments. These promotions, characterized by countdown timers and short-term availability, create a psychological sense of urgency and a fear of missing out (Sritanakorn et al., 2021). Marketing strategies utilizing flash sales and scarcity messages effectively trigger impulsive buying by encouraging consumers to bypass rational decision-making in favor of immediate action to secure a perceived (Ngo et al., 2024). Shorter promotional durations enhance the perceived risk of opportunity loss, thereby stimulating the spontaneous urge to purchase among student consumers (Rafsanjani et al., 2025). Prior research further indicates that shorter promotional durations intensify emotional arousal and reduce cognitive evaluation, increasing the likelihood that consumers prioritize deal acquisition over product usefulness (Marjerison et al., 2022).

The adoption of digital payment systems, such as GCash and Maya, has revolutionized e-commerce by providing speed and convenience. These cashless methods reduce the “pain of paying” by minimizing the salience of money spent, which often leads consumers to spend more than they realize (Bakar et al., 2025). The technological ease and user-friendly interfaces of e-wallets reduce transaction friction and purchase hesitation, reinforcing impulsive buying tendencies (Alonzo et al., 2025; Alonzo & Abellana, 2025; dela Peña et al., 2025). In the Philippine context, the seamless integration of QR scans and one-click payments lowers the barriers to unplanned spending (Susilo and Dizon, 2023). The frictionless nature of digital payment systems can reduce consumers’ psychological safeguards against spending, making them more likely to later reflect negatively on their purchases once the emotional thrill subsides (Swarnalatha and Kalaivani, 2025).

Online impulsive buying is defined as an unexpected, unplanned, and spontaneous purchase decision driven by emotional or external factors (Zhao et al., 2022). In digital commerce environments, impulsive buying is frequently intensified by real-time social cues and promotional urgency, which limit consumers’ ability to engage in rational information processing before completing a purchase (Zhang and Rosli, 2025). Research consistently demonstrates that online impulsive buying has a statistically significant positive effect on post-purchase cognitive dissonance (Beikverdi et al., 2024). Impulsive purchases often lead consumers to experience product dissonance, which subsequently triggers feelings of regret, doubt, and psychological discomfort once the initial excitement

of the transaction fades (Amini and Rahmawati, 2025). This conflict arises because the purchase was made without thorough deliberation or a clear assessment of necessity (Festinger, 1957).

Online impulsive buying serves as a mediating bridge or mechanism between external promotional stimuli and post-purchase psychological outcomes. Prior research suggests that impulsive buying explains how emotionally charged or urgency-based shopping environments translate into negative post-purchase evaluations, as consumers who make spontaneous decisions are more likely to reassess their choices unfavorably after the transaction (Verhagen and van Dolen, 2011; Çelik et al., 2019). Within this framework, time-limited discounts utilize scarcity cues and psychological pressure to prompt spontaneous, emotionally-driven purchases (Liang and Lin, 2023). Once the purchase is completed without thorough evaluation, the consumer reconciles the decision with their expectations, leading to post-purchase cognitive dissonance. Thus, impulsive buying acts as the channel through which the urgency of discounts translates into post-purchase regret (Marjerison et al., 2022).

3. RESEARCH METHODOLOGY

3.1. Research Design

This study employed a quantitative research design to examine online consumers in Iligan City who actively used e-commerce platforms (Shopee, Lazada, and TikTok) and e-wallets for digital payments. Convenience and snowball sampling techniques were used to recruit eligible respondents. Data were gathered using a self-administered structured questionnaire distributed through online (Google Forms) and paper-and-pencil (PAPI) formats via QR codes. The online survey enabled efficient access to hard-to-reach participants while reducing time and cost (McKinley, 2024; Palangan et al., 2025) whereas the PAPI method helped increase response rates (Alonzo and Ganas, 2025; Edwards and Perkins, 2024). Screening questions were included to ensure data quality.

3.2. Participants

A total of 400 respondents from Mindanao State University–Iligan Institute of Technology participated in this study. As presented in Table 1, most respondents are within the 18-19 age range (50.0%), followed by those aged 20-21 (33.0%), and 22-23 (17%). This age distribution indicates that the sample is predominantly composed of young consumers, aligning with the study’s focus on Generation Z, who are active users of digital platforms and online payment systems.

In terms of sex, 73.7% of the respondents were female, while 26.3% were male. The higher proportion of female respondents suggests greater engagement in online shopping, consistent with previous studies indicating that women tend to shop online more frequently than men (Pradhana and Sastiono, 2019).

Regarding e-wallet usage, the majority of respondents reported using GCash (94.0%), followed by Maya (4.8%), while 1.2% used both platforms. The predominance of GCash use may be attributed to its user-friendly interface, security features, and wide range of services (Marjerison et al., 2022; Tutar et al., 2024; Gumasing

Table 1: Demographic characteristics and digital wallet usage of the respondents

Demographic Variables	N	%
Sex		
Male	105	26.3
Female	295	73.7
Age		
18-19	200	50.0
20-21	132	33.0
22 -23	68	17%
Digital Wallet Used		
Gcash	376	94.0
Maya	19	4.8
Both Gcash and Maya	5	1.2

et al., 2023). Overall, the demographic profile reflects a sample largely composed of young, female online shoppers who actively use digital wallets, particularly GCash.

3.3. Data Collection Tool

The survey questionnaire was divided into five parts, each corresponding to one of the study's variables. The questions for time-limited discounts, e-wallet payments, impulse buying, post-purchase dissonance, and moderating variables such as FOMO, ease of use, sex, and self-control used a 5-point Likert scale to capture the respondents' level of agreement with the statements provided. The Likert scale ranged from "Strongly Disagree" to "Strongly Agree." The statements used in this study were adapted from previous validated studies that aligned with the study's objectives.

3.3.1. Data collection process

Ethical considerations, including informed consent and data protection, were prioritized throughout the research process. The questionnaires were distributed both online through Google Forms and in person, where participants were provided with a QR code that directed them to the survey. The survey link was shared with participants through multiple channels, including direct messages on social media platforms, email invitations, and informational materials on Facebook. The survey included demographic questions and items related to time-limited discounts, e-wallet payments, impulse buying behavior, post-purchase cognitive dissonance, and moderating variables such as sex, self-control, Fear of Missing Out (FOMO), and ease of use of e-wallet payments. Pilot testing with 20 participants was conducted prior to full-scale data collection to confirm the reliability and validity of the survey items.

3.3.2. Ethical aspects of the research

The data for this study were collected between June 2025 and September 2025 with ethics clearance from MSU-IIT. Informed consent was obtained from participants to guarantee that they fully understood the purpose and objectives of the research. Ethical considerations, including safeguarding the privacy and confidentiality of the gathered data, were prioritized and followed the guidelines outlined in the Data Privacy Act of 2012 (R.A. 10173). The researchers used proper citation and referencing by the APA style, properly acknowledging authors from various studies and literature reviews cited in the work. We observed

these ethical considerations to protect the rights and well-being of the participants and to uphold the integrity of the study. The researchers confirm their specific contributions to the work and are in agreement on the conclusions stated in the manuscript.

4. RESULTS AND DISCUSSION

4.1. Descriptive Analysis

This part of the study presents the results and findings gathered from the data analysis, which focuses on the variables and hypotheses that were explored in this research.

In Table 2, the normality tests for the variables investigated in this study, which include time-limited discounts, online impulsive buying, use of e-wallet payment, and fear of missing out, generally indicated compliance with normal distribution assumptions. While post-purchase cognitive dissonance showed higher values for skewness and kurtosis, the other constructs maintained levels within the -1.5 to $+1.5$ range. In addition, the results for the homogeneity of variance allowed the analysis to proceed as planned. Based on the participants' mean scores:

- The average score for Time-Limited Discounts was 3.61, which indicates a level of agreement above the midpoint.
- Online Impulsive Buying had a mean score of 2.79, which showed a moderate level among the respondents
- The mean score for Use of E-Wallet Payment was 3.60, which represents an above-average level
- Fear of Missing Out scored an average of 2.32, which indicates a level below the midpoint for this demographic
- Post-Purchase Cognitive Dissonance had a mean score of 3.56, showing that the respondents' scores were above the midpoint.

As shown in Table 2, respondents reported above-average agreement with time-limited discounts and the use of e-wallet payment, alongside elevated levels of post-purchase cognitive dissonance. In contrast, online impulsive buying and FOMO were reported at moderate levels. This pattern suggests that while students may not strongly identify as impulsive buyers, post-purchase discomfort remains prevalent. The findings support scarcity arousal theory, which posits that time pressure increases emotional arousal and encourages spontaneous purchasing, often followed by cognitive dissonance after the transaction (Guo et al., 2017). The moderate level of impulsive buying may reflect a degree of financial caution among Filipino students, consistent with behaviors observed in emerging market contexts.

4.2. Inferential Statistics

4.2.1. Independent t-test analysis

Based on the t-test results presented in Table 3, significant differences were observed between male and female respondents regarding their engagement with time-limited discounts and e-wallet usage. In terms of time-limited discounts, males (mean = 3.66) reported a significantly higher level of agreement compared to females (mean = 3.47), with a t-value of 2.359 ($P = 0.019$). This indicates that male consumers in this study are more responsive to the time pressure and urgency typical of flash sale promotions.

Table 2: Descriptive statistics of key study variables

Constructs	N	\bar{x}	Sd	Skewness	Kurtosis	Min.	Max.
Time-limited discounts	400	3.61	0.74	-0.43	0.03	1.00	5.00
Online impulsive buying	400	2.79	1.04	0.219	-0.85	1.00	5.00
Use of E-wallet payment	400	3.60	0.81	-0.25	-0.20	1.00	5.00
Fear of missing out	400	2.32	0.90	0.49	-0.17	1.00	5.00
Post-purchase cognitive dissonance	400	3.56	0.90	3.54	40.9	1.00	5.00

Table 3: Independent samples t-test results examining differences in key study variables according to sex

Constructs	Group	N	\bar{x}	Sd	SE	T Test		
						T	Df	P
Time-limited discounts	Male	295	3.66	0.71	0.041	2.359	398	0.019
	Female	105	3.47	0.78	0.076			
Online impulsive buying	Male	295	2.82	1.05	0.061	0.985	398	0.325
	Female	105	2.70	1.01	0.091			
Use of E-wallet payment	Male	295	3.53	0.79	0.046	-2.953	398	0.003
	Female	105	3.47	0.84	0.082			
Fear of missing out	Male	295	2.32	0.90	0.052	0.144	398	0.886
	Female	105	2.31	0.93	0.091			
Post-purchase cognitive dissonance	Male	295	3.55	0.77	0.045	-0.086	398	0.931
	Female	105	3.56	1.34	0.130			

Table 4: Results of one-way analysis of variance (One-Way ANOVA) conducted to determine whether participants' time-limited discounts, online impulsive buying, use of e-wallet payment, and fear of missing out differ according to age group

One-Way ANOVA Result								
Constructs	Group	N	\bar{x}	Sd	SE	F	Df2	P
Time-limited discounts	18-19	200	3.67	0.70	0.049	1.579	178	0.209
	20-21	132	3.52	0.80	0.070			
	22-23	68	3.60	0.70	0.085			
Online impulsive buying	18-19	200	2.79	1.04	0.074	1.719	182	0.182
	20-21	132	2.89	1.08	0.094			
	22-23	68	2.61	1.00	0.118			
Use of E-wallet payment	18-19	200	3.50	0.78	0.055	5.436	176	0.005
	20-21	132	3.60	0.83	0.072			
	22-23	68	3.87	0.81	0.098			
Fear of missing out	18-19	200	2.30	0.84	0.060	0.083	166	0.921
	20-21	132	2.32	0.90	0.079			
	22-23	68	2.36	1.08	0.131			
Post-purchase cognitive dissonance	18-19	200	3.59	0.77	0.055	3.790	184	0.024
	20-21	132	3.61	1.27	0.110			
	22-23	68	3.34	0.67	0.081			

Similarly, the data shows that males scored significantly higher than females in the use of e-wallet payments ($t = -2.953$, $P = 0.003$). These findings emphasize how sex influences consumer behavior, as the male participants demonstrated a more pronounced tendency to utilize the convenience of digital payment systems and participate in discount-driven purchasing than female participants.

Sex-based differences were evident in responses to promotional and payment-related factors. As indicated in Table 3, male respondents showed significantly greater responsiveness to time-limited discounts and higher use of e-wallet payments compared to female respondents. This suggests that sex plays a role in engagement with promotional urgency and digital payment convenience. Prior research indicates that males tend to adopt financial technologies more readily and display higher risk tolerance, whereas females may exhibit more cautious purchasing behavior influenced by security concerns and price sensitivity

(Lee et al., 2023). However, no significant sex differences were observed in online impulsive buying, FOMO, or post-purchase cognitive dissonance, indicating that emotional and psychological responses following purchases are broadly similar across sexes.

4.2.2. One-way analysis of variance (One-Way ANOVA) for time-limited discounts, online impulsive buying, use of e-wallet payment, and fear of missing out differ according to age group

Table 4 presents the results of one-way ANOVA tests conducted to examine differences in time-limited discounts, online impulsive buying, use of e-wallet payment, and fear of missing out across different age groups. Statistically significant differences were found across age groups only in the use of e-wallet payment ($P < 0.05$), while no significant differences were observed for time-limited discounts, online impulsive buying, and fear of missing out ($P > 0.05$). Specifically, participants in the older age group reported higher mean scores in the use of e-wallet payment compared to younger age groups. This pattern suggests that as

age increases, individuals may demonstrate greater adoption and reliance on digital payment methods. In contrast, responses related to promotional time pressure, impulsive online buying behavior, and fear of missing out appear to remain relatively stable across age groups, indicating minimal age-related variation in these behaviors.

Age-related differences were examined using one-way ANOVA results presented in Table 4. Older students reported significantly higher reliance on e-wallet payments compared to younger cohorts, suggesting that age and experience may facilitate greater acceptance and use of digital payment systems (Venkatesh et al., 2003). This finding is consistent with technology acceptance perspectives, which emphasize familiarity and perceived ease of use as drivers of adoption (Davis, 1989). Additionally, post-purchase cognitive dissonance differed significantly across age groups, with younger respondents reporting slightly higher levels of dissonance (Beikverdi et al., 2024). This could be due to younger students having less financial independence or feeling more uncertain when making purchase decisions. No significant age differences were observed for time-limited discounts or FOMO, indicating relatively uniform promotional sensitivity across the 18-23 age range.

4.2.3. One-way analysis of variance (One-Way ANOVA) for key study variables differ according to digital wallet usage

As shown in Table 5, no significant differences were found across digital wallet usage groups (GCash, Maya, or both) for any of the study variables. Despite the dominance of GCash among respondents, consumer responses related to promotional urgency, impulsive buying, FOMO, and post-purchase cognitive dissonance were comparable across wallet types. This suggests that digital wallets function primarily as facilitating infrastructure rather than as differentiating behavioral drivers within the online purchasing environment.

4.2.4. Pearson product-moment correlation analysis

The results of the Pearson correlation analysis indicate several statistically significant relationships among the study variables

(Table 6). In particular, time-limited discounts were found to be positively and significantly correlated with online impulsive buying, and post-purchase cognitive dissonance at the $P < 0.001$ level. This suggests that promotional strategies involving time pressure are associated with higher impulsive purchasing behavior, increased feelings of urgency, and greater cognitive dissonance following purchase decisions (Satria and Suryandari, 2025).

Moreover, the analysis demonstrates a significant positive relationship between e-wallet payment usage and online impulsive buying ($P < 0.001$), suggesting that the convenience and reduced payment friction of digital wallets may facilitate spontaneous purchasing behavior. This result aligns with previous studies indicating that seamless payment systems lower cognitive barriers during transactions and enhance psychologically driven urgency (Aryadipura et al., 2025; Lee et al., 2023). However, no statistically significant relationship was observed between e-wallet payment usage and post-purchase cognitive dissonance ($P = 0.080$), implying that while digital payment methods may influence purchasing behavior, they do not directly contribute to discomfort or doubt experienced after the transaction.

Furthermore, online impulsive buying exhibited a significant positive relationship with post-purchase cognitive dissonance ($P < 0.001$), indicating that unplanned purchasing decisions are more likely to result in feelings of regret, uncertainty, or dissatisfaction after purchase. This finding supports earlier research suggesting that impulsive consumption often leads to post-decision psychological tension due to limited deliberation and unmet expectations (Satria and Suryandari, 2025; Aprilia, 2023). Fear of missing out was also weakly but significantly correlated with post-purchase cognitive dissonance ($P = 0.009$), suggesting that urgency-related psychological factors may persist beyond the point of purchase and continue to influence consumers' post-purchase evaluations (Ögel, 2022).

The significant correlations identified in this study highlight the roles of time-limited discounts, fear of missing out, and the use of e-wallet payment in shaping online impulsive buying and post-purchase cognitive dissonance. These findings contribute to the

Table 5: Results of one-way analysis of variance (One-Way ANOVA) conducted to determine whether participants' key study variables differ according to digital wallet usage

Constructs	Group	One-Way ANOVA Result						
		N	\bar{x}	Sd	SE	F	Df2	P
Time-limited discounts	1	376	3.61	0.73	0.038	0.344	8.99	0.718
	2	19	3.58	0.74	0.169			
	3	5	3.96	0.93	0.418			
Online impulsive buying	1	376	2.78	1.40	0.054	0.397	8.98	0.684
	2	19	3.00	1.07	0.244			
	3	5	2.60	1.36	0.609			
Use of E-wallet payment	1	376	3.59	0.81	0.042	0.788	9.12	0.483
	2	19	3.62	0.67	0.154			
	3	5	4.08	0.84	0.377			
Fear of missing out	1	376	2.30	0.89	0.046	1.027	8.98	0.397
	2	19	2.63	1.02	0.233			
	3	5	2.56	1.5	0.470			
Post-purchase cognitive dissonance	1	376	3.56	0.96	0.049	0.117	9.03	0.891
	2	19	3.45	0.92	0.211			
	3	5	3.60	1.11	0.494			

Table 6: Results of Pearson product–moment correlation analysis conducted to determine the relationship between time-limited discounts, use of E-wallet payment, online impulsive buying, fear of missing out, and post-purchase cognitive dissonance

Post-purchase cognitive dissonance	N	R	P
Time-limited discounts	400	0.169**	<0.001
Online impulsive buying	400	0.088	0.080
Use of E-wallet payment	400	0.241**	<0.001
Fear of missing out	400	0.130*	0.009

growing literature on how promotional pressure, psychological urgency, and digital payment convenience interact in online consumer behavior. Future research may further explore the mechanisms underlying these relationships across different consumer groups or digital shopping contexts.

5. CONCLUSION AND PRACTICAL IMPLICATIONS

This study examined the effects of time-limited discounts, use of e-wallet payments, and fear of missing out on online impulsive buying and post-purchase cognitive dissonance among Philippine state university students in Mindanao. Students reported above-average agreement with time-limited discounts and e-wallet usage, alongside elevated levels of post-purchase cognitive dissonance, while online impulsive buying and FOMO were at moderate levels, indicating that post-purchase discomfort occurs even when impulsive buying tendencies are moderate.

Male students demonstrated higher responsiveness to time-limited discounts and e-wallet usage, whereas no sex differences were observed for online impulsive buying, FOMO, or post-purchase cognitive dissonance. Age differences appeared in e-wallet usage and post-purchase cognitive dissonance, with older students using digital payments more frequently and younger students experiencing slightly higher dissonance. Differences across digital wallet types were not significant for any variable.

Time-limited discounts were positively associated with online impulsive buying, FOMO, and post-purchase cognitive dissonance. Use of e-wallet payment was positively related to online impulsive buying but not to post-purchase cognitive dissonance. Online impulsive buying showed a strong positive relationship with post-purchase cognitive dissonance, while FOMO demonstrated a weaker but significant association with dissonance. These findings highlight the influence of promotional urgency, psychological pressure, and digital payment convenience on impulsive purchasing behavior and the resulting cognitive dissonance in young consumers.

6. RECOMMENDATIONS FOR FUTURE RESEARCH

While this study provides insights into the relationships among time-limited discounts, e-wallet payments, fear of missing out,

online impulsive buying, and post-purchase cognitive dissonance among Philippine state university students, several directions for future research are suggested.

1. Future studies may expand the sample to include private university students, working adults, or non-student populations to improve the generalizability of the findings. Cross-regional or cross-cultural comparisons may further clarify how contextual factors shape online impulsive buying behavior and post-purchase cognitive dissonance
2. Incorporating psychological and behavioral factors such as self-control, financial literacy, perceived financial stress, spending norms, or anticipated regret could provide a more comprehensive understanding of the mechanisms driving impulsive purchases and after-purchase effects
3. Longitudinal research designs are recommended to capture changes in impulsive buying behavior and post-purchase cognitive dissonance over time, particularly as consumers gain financial experience or as digital payment technologies continue to evolve. Experimental approaches manipulating promotional urgency, scarcity cues, or payment friction may also strengthen causal inferences
4. Future research could explore platform-specific differences across e-commerce sites and marketing formats (e.g., live-stream shopping, flash sales) while incorporating objective behavioral indicators such as transaction frequency, purchase timing, and actual spending alongside self-reported data to improve the rigor and reliability of findings.

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