

Buy Now, Pay Later, Perceived Affordability, and Compulsive Buying: The Role of Fear of Missing Out

Ahsan Tufail¹, Moin Ahmad Moon²

¹ Ph.D. Scholar, School of Management Sciences, Air University, Multan, Pakistan. Email: ahsantufail7@yahoo.com

² Assistant Professor, School of Management, Air University Multan Campus, Pakistan. Email: moin@aumc.edu.pk

ARTICLE INFO

Article History:

Received:	March	22, 2026
Revised:	June	01, 2026
Accepted:	June	06, 2026
Available Online:	June	12, 2026

Keywords:

Buy Now Pay Later
Digital Payments
Installment Framing
Perceived Affordability
Compulsive Buying
Consumer Vulnerability
Online Shopping
Payment Psychology

Funding:

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

ABSTRACT

Buy Now Pay Later (BNPL) is an increasing payment trend in the digital commerce landscape that is under-researched when it comes to its implications for vulnerabilities of consumers. Previous research has dealt with the issues of purchase incidence, transaction value, merchant profits, or the risk of repayment, but has paid little attention to the possibility that installment framing could result in compulsive purchases because of the low value of the product being sold, which can make the purchase of an expensive product more affordable. This study seeks to fill this gap by conducting a survey-based experiment that compares the BNPL and lump-sum payment options while using the same smartphone purchase. The perceived affordability, fear of missing out (FOMO), and compulsive buying measures were measured with a five-point Likert scale. After cleaning, the number of valid responses was 69, of which 44 were in the lump-sum condition, and 25 were in the BNPL condition. Age, gender, occupation, and income were controlled for regression-based mediation and moderation-mediation analyses. The findings indicate that BNPL boosted the perceived affordability and compulsive buying compared to a single lump-sum payment. Perceived affordability and FOMO were also positively correlated with compulsive buying. The indirect pathway via perceived affordability and the moderating pathway of FOMO did not achieve statistical significance, and thus, the pathway through perceived affordability and the moderating pathway of FOMO should be interpreted with caution in this sample. The results suggest BNPL is a psychologically significant payment structure, although there was no evidence to support the complete conditional process model. The study suggests that there is a need for more transparent total-cost-of-transaction disclosure, reminders to repay, and the absence of red flag affordability cues when offering BNPL schemes, such as overstating the affordability of installments, and a responsible checkout design that doesn't correlate high-pressure scarcity cues with BNPL offers.



© 2026 The Authors, Published by iRASD. This is an Open Access article under the Creative Common Attribution Non-Commercial 4.0

Corresponding Author's Email: ahsantufail7@yahoo.com

Citation: Tufail, A., & Moon, M. A. (2026). Buy Now, Pay Later, Perceived Affordability, and Compulsive Buying: The Role of Fear of Missing Out. *IRASD Journal of Management*, 8(2), 15–32. <https://doi.org/10.52131/irasd-jom.2025.v7i2.3164>

1. Introduction

Buy Now Pay Later (BNPL) has become a bigger part of the checkout process, evolving from an afterthought to a fully-fledged payment system in online retail, mobile wallets, travel websites, fashion marketplaces, and digital commerce. With BNPL, a consumer can get a product as soon as they wish and pay for it over a period of short-term loans.

During the past few decades, BNPL has emerged as a significant payment method. BNPL users reached approximately 380 million in 2024 and are projected to reach 670 million by 2028. Furthermore, in 2023, BNPL spending was estimated at \$316 billion that would rise to \$450 billion by 2027 (Maesen & Ang, 2025). The demand for BNPL grew by 16% in the US in 2025, and importantly, 11% of BNPL users in the past year said that they were charged a non-sufficient funds or overdraft fee due to a BNPL payment (Federal Reserve Board, 2026). These statistics reveal that BNPL is not just a convenience for online shopping that people do for fun. It is becoming more a component of cash-flow management in the household, particularly in a setting where price increases continue to be a significant financial worry for consumers (Federal Reserve Board, 2026). The policy and welfare impact is thus large: the way BNPL makes purchasing something feel more affordable could enable more spending by some already budgeted-out borrowers, or by emotionally susceptible consumers who care about missing out.

This operational definition is easy to grasp, but its behavioral definition is more complex: If the total price is fixed, it is less threatening, more manageable financially, and therefore a more meaningful interpretation of a simple behavioral definition, to be asked to pay it in smaller amounts, rather than one big payment. This is a very important management problem. The retail sector is making better use of BNPL to create a smoother checkout experience and increase conversion rates; BNPL providers are making it more convenient and flexible, and digital platforms are improving at incorporating BNPL into the customer journey. But these traits are also traits that make consumers more vulnerable to BNPL. When that purchase price isn't as obvious to the consumer, they may be willing to pay more for something that they see as a good purchase, particularly on platforms that use scarcity rhetoric, "influencer" endorsements, algorithmic product visibility, and social comparison. New BNPL research has revealed that installment payment methods can impact buying behavior, spending, and online transaction results. Research in this area is not as developed as it is for other types of lending and borrowing in terms of whether BNPL adds to problematic consumption, like compulsive buying. This is crucial. Purchase intention refers to the readiness of a consumer to buy; impulse buying refers to a purchase that is made spontaneously, and situational and general overspending refers to spending that is outside a budget. In theory, compulsive buying is not the same since it involves recurrent buying urges that are hard to resist and frequently linked to emotional release, stress alleviation, or self-image management. Therefore, when BNPL becomes an object of study, it shifts the BNPL discussion from the facilitation of the purchase to the vulnerability of the consumer.

Recent literature indicates that BNPL has a significant impact on consumer purchasing behavior. In three preregistered customer-level transaction data experiments, Maesen and Ang (2025) demonstrated that BNPL installment payments boost purchase incidence and amounts. Installments make the total cost of the purchase less obvious than paying all at once. In the same way, Ashby et al. (2025) showed that BNPL payments may lead to higher spending due to the decrease in perceived cost. In addition, Kumar, Salo and Bezawada (2024) demonstrate that the use of BNPL influences customer-level online purchasing decisions, based on customer-level online transaction data. All these studies suggest that BNPL is not just a payment option; it can also influence the consumer's perception of affordability. A previous study has found that BNPL can lead to higher expenditure, and no studies have fully captured when and for whom BNPL-induced affordability perceptions become problematic. This omission can be a problem because these buying intentions are not the same as those of people who buy compulsively. Compulsive buying refers to a repetitive, excessive, and irresistible urge to spend. Spending that tends to manage tension, mood, social comparison, or self-image creates a financial and emotional burden. (Faber & O'Guinn, 1992; Ridgway, Kukar-Kinney, & Monroe, 2008). BNPL makes a product appear affordable, which may weaken internal resistance, particularly when the public is bombarded with limited-time offers, influencer recommendations, algorithmic personalization, and social comparison. This consequently leads to harmful buying.

The aim of this study is to investigate whether BNPL, in contrast to the lump-sum payment, leads to an increased amount of compulsive buying due to the elevated perceived affordability of goods and whether FOMO further strengthens the impact of perceived affordability on compulsive buying. Perceived affordability refers to how easy it feels to make a purchase with a payment method, or how easy it appears to be to make the purchase with a payment method, how easy it feels, or how easy it appears to be. FOMO is used as a

theoretical boundary condition and, based on empirical findings, as an autonomous psychological motivator of compulsive buying. The study makes three contributions. First, it will focus on BNPL as a payment experience, not just a financial product. Second, it relates installment framing to another more serious consumer outcome, compulsive buying, rather than purchase intention. Third, it adds to the affordability pathway by assessing if it serves as an indirect risk factor (exacerbating the pathway) or as a direct risk factor (psychological vulnerability). The contributions are applicable to retailers, BNPL providers, platform designers, consumer protection agencies, and policymakers who need to find an equilibrium between payment innovation and responsible consumer protection.

1.1. Research Objectives

- To compare the perceived affordability of using BNPL payment with using a lump-sum payment.
- To investigate whether perceived affordability is associated with compulsive buying tendency.
- To examine the mediational role of perceived affordability between payment methods and compulsive buying.
- To investigate the moderate effects of FOMO on the perceived affordability and compulsive buying.
- To determine if FOMO has a separate relationship with compulsive buying in the context of digital payment.

1.2. Research Questions

- Does BNPL payment make it easier to perceive the cost of payment compared to a lump sum?
- Does the belief in affordability lead to increased compulsive buying tendency?
- Does the perceived affordability of payment mediate between the payment method and the relationship between the payment method and compulsive buying?
- Does FOMO amplify the impact of perceived affordability on compulsive buying?
- Is compulsive buying tendency fully mediated by FOMO?

The results of the study will build on the literature on mental accounting and pain of paying and examine how BNPL might influence a constant price into a greater sense of affordability. The study will go beyond purchase intention and consider a more impactful consumer vulnerability measure. It provides managers, social scientists, educators, and policy makers with a sense of the potential impact of easy-payment design on vulnerable consumers, particularly those with social urgency. The study does not make the assumption that BNPL is either solely good or bad, but rather a more complex one: when does the perception of affordability turn into a trap? This paper has 5 sections. The following section will address the pertinent studies and theories found in the literature, and in Section 3, the methodology for the study will be discussed. Results and discussion will be presented in Section 4, and policy recommendations and research limitations will be presented in Section 5.

2. Literature Review and Hypotheses Development

2.1. BNPL and Consumer Spending

Research in the field of payment method suggests that, even if the amount of payment remains the same, the form, time and salience of payment differs can influence consumer's behaviour. Less immediate or less rehearsed payments reduces the psychological nature of the payment. Installment framing is at the heart of BNPL, as it's a way to delay the satisfaction of the purchase while still extracting it. Recent literature from BNPL companies takes this to the digital retail space. Empirical evidence indicates that BNPL can boost the likelihood of purchase, transaction values, and spending by creating an illusion of "ease of payment. Empirical research has found that BNPL can lead to higher purchase incidence, transaction value and purchasing. Many of these studies, however, are concerned with purchase or financial outcomes and not vulnerable consumer behaviors. This study, therefore,

re-focusses on compulsive buying as a theoretically unique and socially relevant consequence.

2.2. Perceived Affordability and Payment Psychology

Literature on payment methods suggests that the shape, timing and characteristics of payment can influence the behaviour of consumers even if the amount of payment remains constant. Payment mechanisms affect spending by means of payment rehearsal and payment immediacy; less immediate and less rehearsed payments reduces the psychological spending (Soman, 2001). Raghurir and Srivastava (2008) correlated consumer psychology and spending and suggested that the payment forms that appear to be less direct money can enhance the willingness. Recent studies extend BNPL literature into digital retail. Maesen and Ang (2025) conducted a comparative experimental study by using the customer transactional level data. The results indicate that BNPL increases purchase incidence and amount by reducing perceived financial constraints, particularly through lower perceived cost and stronger perceived budget control as compared to lump-sum payments. Similarly, Kumar, Salo and Bezawada (2024) demonstrated that BNPL adoption rate affects online purchasing behavior, while Ashby et al. (2025) showed that BNPL shapes spending decisions by reducing perceived expensiveness. From a merchant perspective, BNPL can increase sales as customers find it convenient to pay when payment is made in installments (Berg et al., 2025). At the same time, deHaan et al. (2024) highlight the drawbacks of BNPL as its adoption may be associated with financial strain, including higher overdraft and credit-card costs for some users.

BNPL users can pay for a commodity in installments rather than in one go, which makes the commodity more affordable even though the total cost is the same. Mental accounting theory provides a theoretical foundation for this phenomenon. Money is divided by consumers into psychological accounts and they assess transactions in relation to subjective budgets and not just objective wealth (Thaler, 1985). The pain of paying theory also helps to understand why customers may find paying immediate to be cumbersome. Single payment creates disconnections and discomfort in the mind because the cost may be "right here now," it is salient, and the payment is tight to consumption. If payment is postponed and split up into small pieces, the customer feels that it is an affordable option, and it does not cause any discomfort (Prelec & Loewenstein, 1998). BNPL emerged as a popular payment mechanism as it breaks down the high price into smaller and manageable instalments. Yet despite the fact that there is no real difference in total monetary cost, perceived affordability is mediated by perceived cost and perceived budget control Maesen and Ang (2025), which is the subjective sense of monetary affordability for the purchase. BNPL can make the same cost seem more affordable when it's paid in smaller increments. If a consumer is paying a product a single price he/she may be more likely to feel financially resistant towards the purchase, but when the same product is offered as a series of smaller payments, he/she might feel more comfortable about it in their budget. This mechanism is in line with mental accounting and pain-of-paying viewpoints. Payments are assessed by consumers not just in terms of material wealth, but also by their psychological accounts. When the full cost is salient and immediate, payment produces psychological discomfort. When payment is deferred or fragmented, discomfort is reduced. BNPL, therefore, creates the possibility that a constant price may be mentally processed as a smaller or more tolerable burden.

H1: Consumers exposed to BNPL will report higher perceived affordability than consumers exposed to lump-sum payment.

2.3. Compulsive Buying as a Consumer Vulnerability Outcome

This perceived affordability triggers compulsive buying. Its consumption pattern involves recurrent and difficult-to-control purchases, which eventually lead to financial and psychological distress (Faber & O'Guinn, 1992; Ridgway, Kukar-Kinney, & Monroe, 2008). Compulsive buying is distinct from impulse buying. Impulse buying is situational, spontaneous, and immediate, whereas compulsive buying is repetitive, emotion-regulatory, and chronic. This distinction is important because a BNPL payment system not only triggers a one-time unplanned purchase; it normalizes the repeated spending by reducing the immediate financial resistance associated with the transaction. Roberts and Jones (2001)

argued that credit card use leads to compulsive buying and that credit purchases make spending easier, leading to excessive consumer spending. This is because deferred payments reduce internal barriers to purchase. When consumers frame purchases as financially manageable, they experience less guilt and self-control conflict. This relationship could be problematic when the purchase serves emotional or identity-related needs. Compulsive buying is often associated with tension reduction, mood repair, self-presentation, and a desire for immediate psychological reward. BNPL makes these purchases affordable by facilitating the consumer to pay in small installments rather than paying full price at once (Williams & Grisham, 2012).

BNPL may be relevant to compulsive buying because installment framing can reduce internal resistance at the point of purchase. When the consumer perceives the payment as manageable, the purchase becomes easier to justify. Over time, such reduced friction may normalize repeated buying behavior, particularly for high-value products or emotionally desirable goods.

H2: Perceived affordability will be positively associated with compulsive buying.

H3: Perceived affordability will mediate the relationship between payment methods and compulsive buying.

2.4. FOMO in Digital Consumption

Przybylski et al. (2013) conceptualized FOMO as pervasive apprehension that others may be engaging in rewarding experiences from which one is absent, with a persistent desire to remain socially connected and informed about those experiences. FOMO is not limited to social media but is also triggered due to scarcity, social proof, influencer endorsement, flash sales, limited editions, and product drops. FOMO base appeals urge customers to spend by inducing fear of missing out or being left behind in society (Good & Hyman, 2021). FOMO can amplify perceived affordability because the consumer feels that the product is financially reachable and that delaying the purchase may lead to loss of opportunity. The moderating role of FOMO is theoretically important because it explains why perceived affordability may not affect all consumers equally. Consumers with low FOMO may recognize that BNPL makes a product feel easier to afford, but still postpone or reject the purchase. While consumers with high FOMO may treat affordability as permission to act immediately (Glückert, Huffstadt, & Müller, 2025). In the BNPL payment system, consumer purchases are not merely based on affordability, but also perceived affordability is combined with FOMO, which weakens consumer buying resistance.

The original conceptual model positioned FOMO as a moderator of the perceived affordability-compulsive buying relationship. The logic is that consumers high in FOMO may convert affordability perceptions into immediate buying more readily than consumers low in FOMO. However, the empirical results also suggest an alternative interpretation: FOMO may operate as an independent driver of compulsive buying rather than as a boundary condition. Accordingly, this study distinguishes the direct role of FOMO from its hypothesized moderating role.

H4a: FOMO will be positively associated with compulsive buying.

H4b: FOMO will moderate the relationship between perceived affordability and compulsive buying, such that the relationship will be stronger at higher levels of FOMO.

2.5. Conceptual Model

The model positions payment method as the experimental independent variable, perceived affordability as the theorized mediator, FOMO as both a direct psychological predictor and a proposed moderator, and compulsive buying as the dependent variable. Age, gender, occupation, and income are included as controls.

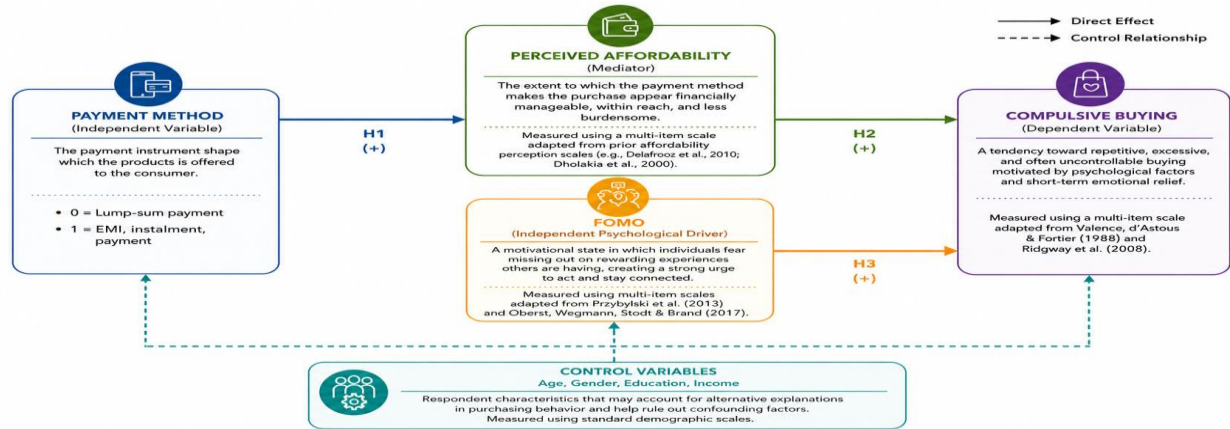


Figure 1: Conceptual Model and Hypothesized Pathways

3. Methodology

3.1. Research Design and Procedure

This study adopts a cross-sectional, survey-based experimental design to assess whether payment method influences compulsive buying through perceived affordability, and the relationship of this with fear of missing out (FOMO) (Aguinis & Bradley, 2014; Spector, 2019). Consumers are randomly exposed to a questionnaire having two alternative purchase scenarios: a lump-sum payment and a buy now, pay later (BNPL) installment plan. The rest of the factors, like product, total price, and purchase context, remain the same in both scenarios (Shadish, 2002). Participants were given one of two scenarios involving buying a cell phone. The product was sold on a lump-sum condition, wherein the entire payment would be made at once, with no time for installments. The product, price, seller, and purchase context were all the same, except the payment was broken up into installments in the BNPL condition. This design focuses on the payment method as the focal manipulation. The questionnaire was administered online to the respondents, and they were randomized into one of two payment scenarios. There were no differences between the two versions of the survey other than the payment-method stimulus.

Respondents read the scenario and then answered manipulation-check questions and perceived affordability items, FOMO items, compulsive buying items, and demographic questions. Randomization was performed by sending out parallel survey links and by alternating recruitment between the two conditions. Demographic randomization checks were used to determine group equivalence. The allocation procedure was designed to prevent respondents from self-selecting into their preferred payment condition. Respondents were not informed that alternative payment-conditioning versions existed and were exposed to only one condition. The assignment was implemented through the survey distribution procedure rather than respondent choice. The unequal final group sizes resulted from data screening and removal of incomplete or unusable responses, rather than from participant self-selection into either condition. This approach is consistent with experimental reporting guidelines, which emphasize clear disclosure of assignment procedures, treatment implementation, and post-assignment exclusions in survey experiments (Gerber et al., 2014; Mutz & Pemantle, 2015).

3.2. Population, Sample, and Data Quality

The target group was digital consumers, such as active online shoppers, early career professionals and university students. It is important to note that the sample is taken from digital consumers, as BNPL is a service that is generally available in digital retail settings and is prevalent in online shopping. The respondents need to be 18 years or older, and first-time users of online shopping. This is to keep the scenario that participants have to imagine they are shopping, as well as to enable the participants to distinguish between paying the complete sum up front and paying for it in installments. Structured online questionnaire will be used to collect data. Participants will be asked for consent after which they will complete screening and demographic questions and then be randomly assigned to one of two payment scenarios.

The number of respondents for each scenario will be 144. This sample size will be larger than the minimum needed to test latent-variable relationships and adequately large for estimating interaction terms with demographic controls (Hair et al., 2022; Kline, 2016). A higher generalizability to the population would be achieved with probability sampling. Eligibility sampling method is appropriate for this study because the study needs samples with characteristics of respondents who have knowledge in digital shopping and online payment forms (Etikan, 2016). This study aimed to get a sample size of 300 respondents. After applying the data screening criteria, however, the final analytical sample of 69 valid respondents remained. The data was checked for missing data, duplicate responses, failed attention and manipulation checks, straight lining, and fast completion times. All responses that were full and understandable were kept for analysis. There were 25 respondents in the buy-now-pay-later (BNPL) payment condition and 44 respondents in the lump-sum payment condition in the final valid sample. This is important to note because the number of valid responses will impact the strength of the statistical inferences drawn from the sample.

This study looks at how BNPL payment framing, perceived affordability, fear of missing out (FOMO), and compulsive buying are related. It is treated as a critical psychological construct that can be a factor in consumers' feelings that items are less expensive and that they undertake compulsory behavior in the context of BNPL. Thus, the analysis is directed toward group differences, associations between primary constructs, and regression analysis evidence regarding the role of FOMO in compulsive buying. The smaller sample size is a limitation of the statistical power of the study, especially for the detection of small effects. Smaller samples tend to yield wider confidence intervals and less precise estimates if there are several psychological and behavioral variables in the models. Therefore, the results should be viewed with some caution. The study is more likely to identify medium-to-large differences between the "lump sum" and "BNPL" conditions than small associations between the measures of perceived affordability, FOMO, and compulsive buying.

The study adheres to the principles of transparent sample size justification by providing both the valid sample size and the rationale for the analytical sample size that was used, as per the recommendations of Lakens (2022). The results are preliminary and theory consistent to avoid exaggeration of the results, and are considered as preliminary evidence of the role of FOMO in consumer behavior related to BNPL. In addition to being statistically significant, the following are also considered: effect size, confidence intervals, and theoretical consistency. The sample size does not render the experimental design in question invalid for the survey, but it restricts the generalizability and precision of results. The findings of this study should be replicated with a larger and more balanced sample to give more robust evidence regarding the relationship between BNPL payment framing, perceived affordability, and FOMO and compulsive buying. In addition, the data quality checks revealed that 26.1% passed the attention check, and only 10 participants passed all the data quality checks. As this was too small to make regression estimates, the entire cleaned sample was kept, but this is reported explicitly in the results, limitations, and policy discussion.

3.3. Measurement

The five focal constructs were scaled from 1 = strongly disagree to 5 = strongly agree. Reliable composite scores were calculated by taking the average of the items for each one. The use of five-point scales was suitable, as the study comprised brief online questionnaires and demanded precise categories for participants who were rating a hypothetical situation.

The data will be examined for missing data, duplicated responses, failed attention, and manipulation checks, as well as straight-lining and abnormal response times. Outliers and distribution issues will be identified using descriptive statistics. Cronbach's alpha and composite reliability will be computed to examine the reliability and validity of the measures. Multi-item scales are often assessed for internal consistency using Cronbach's alpha, and composite reliability is another form of reliability measure that is usually employed when measuring a latent construct with multiple indicators (Hair et al., 2021). An acceptable level of internal consistency and reliability will be represented by a value of 0.70 or higher. Moreover, the factor/item loadings will be explored to identify whether there are enough indicators for the latent constructs observed. Average variance extracted will be used to assess convergent validity, with scores of 0.50 or higher considered as having an acceptable

level of variance that is explained by the construct. To ensure the distinctness of the constructs in the model, the criterion of Fornell and Larcker (1981) and the heterotrait-monotrait ratio (HTMT) will be used to test discriminant validity, where applicable Henseler, Ringle and Sarstedt (2015) If the final analysis is performed via regression-based composite scores rather than a complete latent variable measurement model, however, the internal consistency of the scales will be reported via Cronbach's alpha, and construct validity will be supported using the previously validated and established scales. This method is suitable because regression analysis does not attempt to measure constructs (i.e., factors) but rather uses scale scores as observed composite variables.

Table 1
Measurement Summary and Adaptation Sources

Variable	Role	Operationalization/items	Source/Adaptation Logic
Payment method	Experimental IV	0 = lump-sum payment; 1 = BNPL payment	Experimental vignette adapted to online smartphone checkout context
Perceived affordability	Mediator	This payment method makes the product seem affordable, manageable, easy to handle, within financial reach, and less financially pressured.	Adapted from perceived cost and financial-constraint logic in BNPL/payment-framing research
FOMO	Moderator/direct predictor	Items captured concern about missing limited opportunities, trends, social approval, and purchase chances.	Adapted from FOMO scale literature and digital-consumption applications
Compulsive buying	Dependent variable	Items captured difficult-to-control, repeated, excessive, and emotionally driven buying tendencies.	Adapted from compulsive-buying screening and expanded compulsive-buying literature
Controls	Covariates	Age, gender, occupation, and income.	Included to reduce alternative explanations for purchasing tendency

3.4. Model Equations

The hypotheses were evaluated using regression-based mediation and moderated-mediation logic. The equations were specified as follows:

$$PA_i = \alpha_0 + \alpha_1 PM_i + \sum \alpha_k Controls_{ki} + \varepsilon_i \quad (1)$$

$$CB_i = \beta_0 + \beta_1 PM_i + \sum \beta_k Controls_{ki} + \mu_i \quad (2)$$

$$CB_i = \gamma_0 + \gamma_1 PM_i + \gamma_2 PA_i + \sum \gamma_k Controls_{ki} + v_i \quad (3)$$

Were,

- PM_i denote payment method for respondent i , coded 0 for lump-sum payment and 1 for BNPL.
- PA_i denote perceived affordability,
- CB_i compulsive buying
- X_i are control variables like age, gender, occupation, and income.

The following equation estimates the direct, mediated, and moderated components predicting compulsive buying:

$$CB_i = \delta_0 + \delta_1 PM_i + \delta_2 PA_i + \delta_3 FOMO_i + \delta_4 (PA_i \times FOMO_i) + \sum \delta_k Controls_{ki} + \xi_i \quad (4)$$

$$Conditional\ indirect\ effect = \alpha_1 \times (\delta_2 + \delta_4 FOMO_i) \quad (5)$$

$$Index\ of\ moderated\ mediation = \alpha_1 \times \delta_4 \quad (6)$$

where

- $FOMO_i$ denotes the mean-centered FOMO score for respondent i .
- CB_i denotes the compulsive buying of respondent i .

- β_1 represents the effect of perceived affordability on compulsive buying when FOMO is at its mean
- β_2 represents the association between FOMO and compulsive buying, and
- β_3 tests whether FOMO changes the strength of the perceived affordability-compulsive buying relationship.
- X_i are control variables like age, gender, occupation, and income.

If the bootstrapped 95% CI is not included in the zero line, then the indirect or moderated-mediation effect is statistically significant. All results are interpreted with a level of confidence of 95%.

4. Results and Discussion

4.1. Sample Structure and Data Quality

It yielded a final cleaned sample of 69 cases: 44 cases in the lump-sum condition and 25 cases in the BNPL condition. Most respondents seemed to understand the payment situation and product costs based on manipulation and price checks. But performance on the attention check was poor. This limitation is of interest for internal validity and thus is not minimized.

Table 2
Sample Structure and Data-quality Checks

Indicator	Result
Valid cases in the main analysis	N = 69
Payment-method allocation	Lump-sum = 44 (63.8%); BNPL = 25 (36.2%)
Manipulation check pass rate	54/69 = 78.3%
Price check pass rate	63/69 = 91.3%
Attention: Check the pass rate	18/69 = 26.1%
Strictly eligible after all checks	10/69 = 14.5%

4.2. Descriptive Statistics and Reliability

The level of perceived affordability, FOMO, and compulsive buying was found to be moderate according to the descriptive statistics. All multi-item constructs had reliability coefficients above the typical 0.70, with all but two reaching 0.80. The manipulation check showed that the BNPL scenario was felt as more installment-based than the lump-sum scenario. The main analysis uses the full cleaned dataset (N = 69). This is consistent with survey-experimental standards, where manipulation validity, attention checks, and transparent reporting are necessary for evaluating internal validity (Podsakoff et al., 2003).

Table 3
Descriptive Statistics, Reliability, and Group Meaning

Variable	Items	α	Min-Max	Overall (SD)	M	Lump-sum M (SD)	BNPL (SD)	M
Age	--	--	21.00-40.00	26.899 (4.236)	--	--	--	--
Perceived affordability	5	0.946	1.00-5.00	3.035 (1.213)	2.705 (1.014)	3.616 (1.333)		
FOMO	6	0.923	1.00-5.00	3.036 (1.105)	2.852 (0.919)	3.360 (1.331)		
Compulsive buying	7	0.900	1.00-5.00	2.915 (1.037)	2.695 (0.776)	3.303 (1.313)		
Installment check	--	--	1.00-5.00	2.899 (1.516)	2.273 (1.264)	4.000 (1.291)		

4.3. Correlation Analysis

The correlation matrix gave initial evidence that supported the study's logic. The relationship between payment methods and perceived affordability was positive, and with compulsive buying. Payment method was positively associated with perceived affordability ($r = 0.364$, $p < .01$) and compulsive buying ($r = 0.284$, $p < .05$). Perceived affordability was highly correlated with compulsive buying ($r = 0.550$, $p < .001$), indicating that when

purchasing feels manageable, resistance to consumption may weaken. FOMO was also strongly associated with compulsive buying ($r = 0.709$, $p < .001$), indicating that social and emotional urgency significantly drives problematic buying.

Table 4
Correlation Matrix

Variable	PM	PA	FOMO	CB	Age
PM	1				
PA	0.364**	1			
FOMO	0.223	0.338**	1		
CB	0.284*	0.550***	0.709***	1	
Age	0.183	0.032	0.179	0.248*	1

Note: PM = payment method; PA = perceived affordability; CB = compulsive buying. * $p < .05$, ** $p < .01$, *** $p < .001$.

4.4. Hypothesis Tests and Regression Results

The first regression was used to assess whether the BNPL payment frame led to a higher perceived affordability compared to a lump-sum payment frame. The first regression model assessed the hypothesis that there would be an increase in perceived affordability of a BNPL payment frame compared to a lump-sum payment frame. Payment method was positive, suggesting that the BNPL group perceived themselves to be more able to afford the payment than the lump sum group. However, after controlling age, gender, and income, the effect was only marginally significant, $B = .677$, $SE = .354$, $\beta = .270$, $t = 1.911$, $p = .061$, 95% CI $[-.032, 1.387]$. As was also pointed out in the confidence interval, the adjusted effect should not be considered robust. The demographics of age, gender, and income were not statistically significant factors in perceived affordability. Thus, the findings are suggestive—rather than conclusive—of a change in perceived affordability after adding demographics. This is important since the unadjusted mean comparison does not come with the same evidentiary weight as the adjusted regression. While BNPL respondents are more likely to perceive being more affordable than lump-sum respondents, the controlled model indicates that this impact is less when demographic variation is considered. The finding is consistent with the theoretical frameworks of mental accounting and pain-of-paying theories, which suggest that consumers do not consider price only on an objective monetary basis, but also through the timing of the payment, its salience, and the perceived burden (Prelec & Loewenstein, 1998; Soman, 2001; Thaler, 1985).

But BNPL can make what might seem like a fixed product price less onerous by splitting the amount down into smaller chunks and making the psychological cost of paying up front more manageable. At present, however, the evidence is merely suggestive, not definitive. This positive association would be more stable and statistically significant with a larger sample. The second model examined the relationship of BNPL with compulsive-buying tendency. The total-effect regression showed a statistically significant positive effect of payment method on compulsive buying, $B = .690$, $SE = .310$, $\beta = .322$, $t = 2.224$, $p = .030$, 95% CI $[.069, 1.312]$. This means that the respondents from the BNPL showed significantly higher compulsive buying behavior tendency compared to the respondents from the lump-sum condition. Age was not a significant predictor, $B = .044$, $SE = .034$, $\beta = .180$, $t = 1.308$, $p = .196$, 95% CI $[-.023, .111]$. The results differed between the two models as the confidence interval for the BNPL effect on compulsive buying did not include zero, lending more support to the notion that the payment framing of BNPL is related to problematic buying tendencies. This outcome is substantively meaningful because compulsive buying is a more extreme behavior outcome than purchase intention. The purchase intention is associated with planned consumption, while compulsive buying is associated with repetitive buying, a decrease in self-regulatory, and increased difficulty in controlling buying impulses. This discovery indicates that BNPL can have a behavioral impact as it reduces payment friction now of purchase and enables consumers to purchase goods without necessarily fully facing the immediate cost. Such an interpretation is supported by literature on compulsive buying, which focuses on the vulnerability, poor self-control, and sensitivity to situational spending cues (Faber & O'Guinn, 1992; Ridgway et al., 2008). The third model added perceived affordability as a predictor of compulsive buying. Perceived affordability had a strong and statistically significant positive effect on compulsive buying, $B = .471$, $SE = .099$, $\beta = .551$, $t = 4.773$, $p < .001$, 95% CI $[.273, .668]$. Once perceived affordability was included, the

direct effect of payment method on compulsive buying became statistically non-significant, $B = .371$, $SE = .272$, $\beta = .173$, $t = 1.363$, $p = .178$, 95% CI $[-.174, .917]$.

This seems to align with the theoretical explanation that affordability is what leads to the perception of being hooked on BNPL and, therefore, compulsive buying. But be careful not to interpret the result of the mediation as having been statistically confirmed, since the bootstrapped confidence interval for the indirect effect covered zero. For this sample, therefore, perceived affordability must be considered as a theoretically possible, but empirically untested mechanism. A positive and significant relationship between perceived affordability and compulsive buying suggests that consumers who perceive that they can buy something more affordably are more likely to report compulsive-buying tendencies. However, there is no evidence to support a formal claim for mediation. For the sake of theoretical exactitude, this distinction is significant. Based on the results, perceived affordability is a factor influencing compulsive buying, though it does not create a statistically significant indirect pathway between BNPL and compulsive buying through perceived affordability. The mechanism should be re-examined with bootstrapped mediation analysis in future studies with larger samples and higher statistical power. In the fourth model, the role of FOMO in the relationship between the perceived affordability and compulsive buying was examined. Perceived affordability remained a significant positive predictor of compulsive buying, $B = .296$, $SE = .085$, $\beta = .346$, $t = 3.490$, $p < .001$, 95% CI $[.126, .466]$. FOMO also showed a strong and statistically significant direct association with compulsive buying, $B = .526$, $SE = .090$, $\beta = .561$, $t = 5.848$, $p < .001$, 95% CI $[.346, .707]$. However, the interaction between perceived affordability and FOMO was not statistically significant, $B = .054$, $SE = .063$, $\beta = .081$, $t = .863$, $p = .392$, 95% CI $[-.072, .180]$.

Table 5
Mean Comparison Tests

Test	Lump-sum M (SD)	BNPL (SD)	M t(df)	p	95% CI for difference	Effect size
Manipulation intensity	2.273 (1.264)	4.000 (1.291)	-5.414 (67)	< 0.001***	[-2.364, 1.090]	--
H1: Perceived affordability	2.705 (1.014)	3.616 (1.333)	-3.197 (67)	0.002**	[-1.481, .342]	d = .801
H2: Compulsive buying	2.695 (.776)	3.303 (1.313)	-2.115 (33.737)	0.042*	[-1.192, .024]	d = .607

Regression models give a more conservative interpretation. Payment method significantly predicted perceived affordability in the initial model in Equation 1, but this effect was negligible after adjusting for the other variables. Payment method was a significant predictor of compulsive buying in Equation 2. In Equation 3, the direct effects of payment method were no longer significant, and perceived affordability significantly predicted compulsive buying. The bootstrapped indirect effect was positive but not statistically significant due to an interval that contained 0. In this sample, perceived affordability is a theoretically plausible and empirically relevant predictor; however, it cannot be confirmed as a mediator. Both perceived affordability and FOMO were significant predictors of compulsive buying in Equation 4. But the PA x FOMO interaction was not significant. Therefore, H4a was supported and not supported; H4b was not supported. The findings indicate that FOMO is more of an independent psychological mechanism in the compulsive buying process than a pathway moderator.

Thus, the findings are inconclusive and not in favor of the hypothesis that FOMO has moderating effects on the relationship between perceived affordability and compulsive buying. This discovery alters the definition of FOMO in the model. FOMO is a psychological risk factor for compulsive buying that does not serve as a boundary condition, strengthening the effect of perceived affordability. This is an interesting and significant finding, theoretical. FOMO can be a driver of compulsive buying due to urgency, social comparison pressure, and fear of losing access to desirable products/experiences. These emotional influences can motivate consumers to purchase products even when they feel they will not be able to afford them. In that regard, FOMO does not need to be associated with affordability to elicit compulsive buying; it can have its own motivational impact. The non-significant moderation

result also indicates that affordability perceptions and FOMPL are two different behavior pathways. Perceived affordability is the monetary meaning of the purchase; that is, how does the consumer think about the purchase being affordable or not? FOMO is an emotional and social-psychological pressure: feeling urgency, risk of exclusion, or fear of missing out. Both lead to compulsive purchasing, but the evidence does not indicate that FOMO increases the impact of perceived affordability.

Table 6
Regression Results by Model Equation

Equation	Predictor	B	SE	β	t	p	95% CI
Eq. 1 / PA	Payment method	.677	.354	.270	1.911	.061	[-.032, 1.387]
Eq. 1 / PA	Age	-.025	.038	-.086	-.644	.522	[-.102, .052]
Eq. 1 / PA	Gender: female	.352	.363	.131	.972	.335	[-.374, 1.078]
Eq. 1 / PA	Income: 100k-200k	.352	.419	.120	.839	.405	[-.487, 1.191]
Eq. 2 / CB	Payment method	.690*	.310	.322	2.224	.030	[.069, 1.312]
Eq. 2 / CB	Age	.044	.034	.180	1.308	.196	[-.023, .111]
Eq. 3 / CB	Payment method	.371	.272	.173	1.363	.178	[-.174, .917]
Eq. 3 / CB	Perceived affordability	.471***	.099	.551	4.773	< .001	[.273, .668]
Eq. 4 / CB	Payment method	-.027	.237	-.012	-.113	.910	[-.501, .448]
Eq. 4 / CB	Perceived affordability (centered)	.296***	.085	.346	3.490	< .001	[.126, .466]
Eq. 4 / CB	FOMO (centered)	.526***	.090	.561	5.848	< .001	[.346, .707]
Eq. 4 / CB	PA x FOMO	.054	.063	.081	.863	.392	[-.072, .180]

Note: Only substantively relevant rows are displayed for readability; the full dummy-coded control structure was estimated. * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 7: Hypothesis decisions and conditional-process effects.

Hypothesis/effect	Estimate	95% CI	Decision
H1: BNPL -> perceived affordability	Mean difference = .911	[.342, 1.481]	Supported
H2: BNPL -> compulsive buying	Mean difference = .608	[.024, 1.192]	Supported
H3: PM -> PA -> CB	Indirect = .319	[-.033, .777]	Not supported
H4a: FOMO -> CB	B = .526	[.346, .707]	Supported
H4b: PA x FOMO -> CB	B = .054	[-.072, .180]	Not supported
Index of moderated mediation	Index = .037	[-.041, .202]	Not supported

This distinction enhances the theoretical contribution as it reveals that compulsive buying behavior in BNPL environments can be both financial and effective, even when there is no statistically significant interaction between the two. The results of the overall analysis should be interpreted carefully. However, there is a statistically significant total effect of BNPL on compulsive buying, and a marginally significant adjusted effect on perceived affordability. Compulsive buying is strongly correlated with perceived affordability; the bootstrapped indirect effect was not statistically significant, and so was not confirmed as a mediator. FOMO does not moderate the perceived-affordability effect, but there is a strong direct relationship between FOMO and compulsive buying. This implies that BNPL can be associated with compulsive buying in several ways, but the current sample only supports direct associations better than mediation or moderation. Further research is needed to validate the proposed mechanism in larger and more varied samples before causal and process claims can be made.

5. Discussion

The best evidence is psychological, as in the case of installment framing. BNPL made smartphone purchases more affordable and was linked to increased compulsive buying. This confirms the notion that BNPL is not just a payment convenience but a checkout architecture that can influence the perception of the price and purchase hesitation. However, there is a certain degree of caution when interpreting the results. This effect was made less apparent when demographic controls were added, and the bootstrapped mediation test was not deemed significant, indicating that perceived affordability was not a statistically significant mediator. Therefore, the manuscript does not assert that a full mediation mechanism is set up. Instead, perceived affordability is offered as a theoretical mechanism, not as a fully documented one, and it is one that needs to be further substantiated with a larger, more rigorous sample. The FOMO results also help to further clarify the conceptual model. The perceived affordability-compulsive buying relationship was significantly predicted by FOMO, but it did not significantly moderate the relationship between perceived affordability and compulsive buying. This indicates that FOMO consumers are more susceptible to compulsive buying in general as they are more prone to urgency, scarcity, social comparison, and trend stimuli. So, FOMO can function concurrently with affordability perceptions, rather than magnifying its impact. Managerially, the results emphasize the necessity of having a responsible payment design. Do not assume the affordability of small installments should be used by retailers and BNPL providers as the sole basis for affordability. The interplay of checkout cues, installment language, scarcity appeals, and FOMO marketing should be considered by consumer protection agencies and platform designers that might influence vulnerable consumption.

6. Conclusion

Consumer psychology and payment mechanisms played a significant role in shaping purchase decisions. This study investigates this relationship by developing a hypothetical scenario between two types of payment mechanisms, i.e., Lump Sum payment and Buy Now, Pay Later. A lump sum payment is defined as paying full price immediately, while BNPL is referred to as paying the same amount in smaller amounts within a defined period. The study experimentally compares whether BNPL or lump-sum payment increases compulsive buying by perceiving a purchase as affordable. The study also evaluates whether the fear of missing out (FOMO) strengthens the relationship between perceived affordability and compulsive buying. A structured questionnaire was developed to assess this relationship. Two separate questionnaires were developed to gather the data. Both questionnaires had the same questions regarding demographic variables, lump sum payment, FOMO, and compulsive buying, except for the scenario. In a lump sum questionnaire, the consumer is presented with a hypothetical scenario regarding full payment and asked to identify the relevant payment mechanism. Whereas, in the BNPL questionnaire, the consumers are exposed to an installment payment mechanism. The rest of the questions were the same in both questionnaires. Consumers are randomly assigned to these questionnaires. The empirical results indicate that the BNPL payment mechanism alters the consumer perception regarding the total price. When the smartphone price was presented as a lump-sum payment, the full financial burden was more visible. However, when the same price was divided into smaller installments, respondents perceived the purchase as more affordable. The results indicate that installment-based payment framing can reduce the psychological weight of payment and make expensive purchases appear more financially manageable.

This study investigated the effect of BNPL framing on compulsive buying by making it more accessible, and whether this effect is mediated by FOMO. The results indicate that BNPL increases the perceived affordability and that BNPL is linked to higher compulsive buying as compared to a lump-sum payment. The findings are in line with the larger theory that the way people pay affects their psychology, even when the amount they pay is the same. The study also reveals that the conditional-process model proposed is not fully supported in the present sample. Perceived affordability did not statistically mediate the relationship between payment method and compulsive buying, and FOMO did not moderate the pathway between perceived affordability and compulsive buying. FOMO, on the other hand, has become a stand-alone risk factor for compulsive buying. The study thus offers a more balanced conclusion: BNPL has a psychological impact, but it needs to be tested further to understand how it works.

6.1. Policy and Managerial Implications

Consumers should see the total cost of the product, including installment costs, on the e-commerce site, so that they can calculate the full cost of the transaction instead of just the small installment. BNPL providers should add repayment calendars, total obligation reminders, and friction-based prompts before confirmation, especially when making high-dollar purchases. These include visual cues that reduce the overall cost of the purchase and/or integrate BNPL reminders with scarcity messaging, countdown timers, and social-emotion messaging. Consumer-education programs should make consumers aware of the "affordability illusion" caused by installment framing, even if the overall price of the product remains the same. Regulators should ensure that the terms and conditions of repayment are clearly and accurately communicated, including when it is probable to be missed and the impact of such missed payments, while avoiding prohibitions on valid consumer options. Finally, the limitations and future research are stated.

6.2. Limitations and Future Research

The results are limited by several considerations. First, the number of valid responses to the sample analyzed was low ($N = 69$), and this is especially problematic for mediation tests and moderated-mediation tests. Second, attention-check performance was poor, and the quality of responses was an issue. Thirdly, the experiment was conducted with a hypothetical "smartphone" context, instead of actual behavior in purchasing. Fourth, the cells in the experiment were not "fully balanced," restricting the strength of comparisons of the conditions. The future research should involve automated random assignments, balancing experimental cells, implementing proper attention-check design, and evaluating the model on several product categories, which are planned to have 300 or more respondents. Longitudinal studies with real users of BNPL, real purchase data, actual repayment behavior, or field experiments would offer more solid evidence on the extent to which perceptions of affordability via installments lead to future compulsive buying.

Declarations: Ahsan Tufail was engaged in conceptualizing, designing the questionnaire, collecting data, analyzing the data, interpreting the findings, and preparing the manuscript. Moin Ahmed Moon was involved in conceptualizing and supervising the study.

Conflict of Interest: The author has no conflict of interest. No specific funding agency was used for this research.

Ethical Statement: The participants were asked to participate voluntarily, and it was explained that the information they provided would be used for academic research.

Data Availability: The authors can provide the data on reasonable requests, considering privacy issues and institutional requirements.

References

- Aguinis, H., & Bradley, K. J. (2014). Best Practice Recommendations for Designing and Implementing Experimental Vignette Methodology Studies. *Organizational Research Methods*, 17(4), 351-371. <https://doi.org/10.1177/1094428114547952>
- Ashby, R., Sharifi, S., Yao, J., & Ang, L. (2025). The influence of the buy-now-pay-later payment mode on consumer spending decisions. *Journal of Retailing*, 101(1), 103-119. <https://doi.org/10.1016/j.jretai.2025.01.003>
- Berg, T., Burg, V., Keil, J., & Puri, M. (2025). The economics of "Buy Now, Pay Later": A merchant's perspective. *Journal of Financial Economics*, 171, 104093. <https://doi.org/10.1016/j.jfineco.2025.104093>
- deHaan, E., Kim, J., Lourie, B., & Zhu, C. (2024). Buy Now Pay (Pain?) Later. *Management Science*, 70(8), 5586-5598. <https://doi.org/10.1287/mnsc.2022.03266>
- Etikan, I. (2016). Comparison of Convenience Sampling and Purposive Sampling. *American Journal of Theoretical and Applied Statistics*, 5(1), 1. <https://doi.org/10.11648/j.ajtas.20160501.11>
- Faber, R. J., & O'Guinn, T. C. (1992). A Clinical Screener for Compulsive Buying. *Journal of Consumer Research*, 19(3), 459. <https://doi.org/10.1086/209315>

- Federal Reserve Board, F. (2026). Report on the economic well-being of U.S. households in 2025. <https://www.federalreserve.gov/publications/2026-economic-well-being-of-us-households-in-2025-executive-summary.htm>
- Fornell, C., & Larcker, D. F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research*, 18(1), 39-50. <https://doi.org/10.1177/002224378101800104>
- Gerber, A., Arceneaux, K., Boudreau, C., Dowling, C., Hillygus, S., Palfrey, T., Biggers, D. R., & Hendry, D. J. (2014). Reporting Guidelines for Experimental Research: A Report from the Experimental Research Section Standards Committee. *Journal of Experimental Political Science*, 1(1), 81-98. <https://doi.org/10.1017/xps.2014.11>
- Glückert, I. K., Huffstadt, K., & Müller, N. (2025). Buy Now Pay Later: Between Flexibility and Financial Control – An Analysis of Psychological and Social Factors. In C. Stephanidis, M. Antona, S. Ntoa, & G. Salvendy (Eds.), *HCI International 2025 Posters* (Vol. 2528, pp. 304-314). Springer Nature Switzerland.
- Good, M. C., & Hyman, M. R. (2021). Direct and indirect effects of fear-of-missing-out appeals on purchase likelihood. *Journal of Consumer Behaviour*, 20(3), 564-576. <https://doi.org/10.1002/cb.1885>
- Hair, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., Danks, N. P., & Ray, S. (2021). *Partial Least Squares Structural Equation Modeling (PLS-SEM) Using R: A Workbook*. Springer International Publishing.
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115-135. <https://doi.org/10.1007/s11747-014-0403-8>
- Kumar, A., Salo, J., & Bezawada, R. (2024). The effects of buy now, pay later (BNPL) on customers' online purchase behavior. *Journal of Retailing*, 100(4), 602-617. <https://doi.org/10.1016/j.jretai.2024.09.004>
- Lakens, D. (2022). Sample Size Justification. *Collabra: Psychology*, 8(1), 33267. <https://doi.org/10.1525/collabra.33267>
- Maesen, S., & Ang, D. (2025). Buy Now, Pay Later: Impact of Installment Payments on Customer Purchases. *Journal of Marketing*, 89(3), 13-35. <https://doi.org/10.1177/00222429241282414>
- Mutz, D. C., & Pemantle, R. (2015). Standards for Experimental Research: Encouraging a Better Understanding of Experimental Methods. *Journal of Experimental Political Science*, 2(2), 192-215. <https://doi.org/10.1017/XPS.2015.4>
- Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879-903. <https://doi.org/10.1037/0021-9010.88.5.879>
- Prelec, D., & Loewenstein, G. (1998). The Red and the Black: Mental Accounting of Savings and Debt. *Marketing Science*, 17(1), 4-28. <https://doi.org/10.1287/mksc.17.1.4>
- Przybylski, A. K., Murayama, K., DeHaan, C. R., & Gladwell, V. (2013). Motivational, emotional, and behavioral correlates of fear of missing out. *Computers in Human Behavior*, 29(4), 1841-1848. <https://doi.org/10.1016/j.chb.2013.02.014>
- Raghubir, P., & Srivastava, J. (2008). Monopoly money: The effect of payment coupling and form on spending behavior. *Journal of Experimental Psychology: Applied*, 14(3), 213-225. <https://doi.org/10.1037/1076-898X.14.3.213>
- Ridgway, N. M., Kukar-Kinney, M., & Monroe, K. B. (2008). An Expanded Conceptualization and a New Measure of Compulsive Buying. *Journal of Consumer Research*, 35(4), 622-639. <https://doi.org/10.1086/591108>
- Roberts, J. A., & Jones, E. (2001). Money Attitudes, Credit Card Use, and Compulsive Buying among American College Students. *Journal of Consumer Affairs*, 35(2), 213-240. <https://doi.org/10.1111/j.1745-6606.2001.tb00111.x>
- Shadish, W. R., Cook, T. D., & Campbell, D. T. . (2002). Experimental and quasi-experimental designs for generalized causal inference. *Houghton Mifflin*.
- Soman, D. (2001). Effects of Payment Mechanism on Spending Behavior: The Role of Rehearsal and Immediacy of Payments. *Journal of Consumer Research*, 27(4), 460-474. <https://doi.org/10.1086/319621>
- Spector, P. E. (2019). Do Not Cross Me: Optimizing the Use of Cross-Sectional Designs. *Journal of Business and Psychology*, 34(2), 125-137. <https://doi.org/10.1007/s10869-018-09613-8>

- Thaler, R. (1985). Mental Accounting and Consumer Choice. *Marketing Science*, 4(3), 199-214. <https://doi.org/10.1287/mksc.4.3.199>
- Williams, A. D., & Grisham, J. R. (2012). Impulsivity, Emotion Regulation, and Mindful Attentional Focus in Compulsive Buying. *Cognitive Therapy and Research*, 36(5), 451-457. <https://doi.org/10.1007/s10608-011-9384-9>