Compensatory Motivations and Irrational Consumption among College Students: A Mixed Methods Study

Jia Wen Huang[1], Song Ching Fan[2*], Shao Sheng Huang[3], Hao Long[4]

[1]*Lingnan Normal University, Zhanjiang, 524048, China*
[*2]*Lingnan Normal University, Zhanjiang, 524048, China*
[3]*Lingnan Normal University, Zhanjiang, 524048, China*
[4]*Lingnan Normal University, Zhanjiang, 524048, China*

ABSTRACT: *This study aims to explore the relationship between irrational consumption behavior among college students and compensatory psychology theory, as well as the role of compensatory psychology in irrational consumption. A mixed-method approach was adopted. Grounded theory was employed using Nvivo 14 qualitative analysis software to uncover the mechanisms through which compensatory psychology influences consumption behavior. Additionally, a confirmatory factor analysis was conducted through a questionnaire survey, using IBM SPSS AMOS 28 to verify the factors of the Irrational Consumption Behavior and Compensatory Psychology Scale (ICBCPS) and measure the constructs. The results indicate that peer influence, self-regulation capacity, and family background play significant roles in irrational consumption behaviors among college students. Peer consumption behaviors and attitudes were found to influence individuals' consumption choices. Students with higher self-regulation capacity were better able to resist impulsive consumption, while the shaping of consumption values and the guidance of consumption behavior by families also had a notable effect. However, the theoretical model showed poor fit, suggesting that it may not fully reflect the actual situation. This could be attributed to the fact that the scale design did not account for more comprehensive influencing factors. The contribution of this study lies in the initial construction of the Irrational Consumption Behavior and Compensatory Psychology Scale (ICBCPS). Future research can enhance the understanding of the mechanisms influencing irrational consumption behavior among college students by improving the scale design, increasing sample diversity, and considering additional influencing factors.*

Keywords*: Compensatory Motivations, Irrational Consumption, Qualitative In-depth Interviews, ICBCPS*

INTRODUCTION

The purpose of this study is to deeply explore the role of compensatory motives underlying irrational consumption behavior among college students. It aims to develop a psychological assessment scale for irrational consumption behavior, helping college students identify their internal motives and psychological needs when making consumption decisions. This will enable a better understanding of their behavior patterns and decision-making processes, reduce harmful consumption behaviors, and provide essential tools and support for psychological health interventions.

Over the past two decades, compensatory consumption has become an increasingly researched yet highly debated area in consumer behavior studies (Koles et al., 2018). Numerous studies suggest that consumers engage in behaviors such as impulse buying, self-enhancement, and status signaling, with the primary goal of using consumption to compensate for perceived deficiencies (Gronmo, 1988; Son, 2022; Zheng et al., 2023; Wang et al., 2023; Lee & Workman, 2023; Kim & Jang, 2020; Kim et al., 2024). In today's diverse consumer landscape, college students represent a significant segment of the market (Xucong et al., 2023). However, given their generally limited financial resources, temporary social status, and critical stage of late adolescent psychological development, the acquisition of material wealth and consumption often serves as a means of expressing self-worth and social standing. Understanding college students' consumption behaviors is therefore crucial for developing more effective marketing strategies and intervention measures (Xucong et al., 2023). Consequently, investigating the psychological mechanisms by which compensatory motives drive irrational consumption behaviors among college students—namely, how individuals use irrational consumption as a way to address perceived internal deficiencies—becomes essential.

However, many studies on compensatory motives driving irrational consumption predominantly focus on the quantitative exploration of relationships between certain variables and compensatory motives or irrational consumption. The strength of such research lies in its ability to clearly identify how these variables interact or directly and indirectly influence changes between compensatory motives and irrational consumption. Nonetheless, quantitative research has its limitations (DiCicco-

Bloom & Crabtree, 2006; Marshall & Rossman, 2014; Hennink et al., 2020; Hennink & Kaiser, 2022). It cannot, like qualitative interviews, explore the individualized experiences that standardized scales may overlook, nor can it as effectively identify the psychological states of respondents (Wright-Berryman et al., 2023). In particular, in phenomenological studies that aim to capture the richness and depth of life experiences from a first-person perspective, in-depth interviews remain an essential method (Wassler & Kuteynikova, 2020). Through iterative and reflective techniques for coding and analyzing interview data, researchers can construct an empirical understanding of complex social phenomena, uncover latent meanings, and generate themes or theories grounded in the real experiences and perspectives of respondents. This inductive approach is crucial for capturing the complexity and nuances of human phenomena (Roulston, 2018; Saldaña, 2021). Thus, combining quantitative and qualitative data through a mixed-methods research design can significantly enrich our understanding of the topic (Clark & Watson, 2019). The integration of different forms of data provides more comprehensive and robust information, compensating for the limitations of single-method approaches and leveraging their respective strengths, thereby enhancing the credibility and validity of research findings.

This paper offers several marginal contributions. Through qualitative interviews, it deeply explores the subjective experiences and coping mechanisms related to compensatory motives underlying irrational consumption behavior among college students, addressing the limitations of relying solely on quantitative surveys. By capturing themes from real-life experiences and perspectives through qualitative interviews, it fills gaps left by previous quantitative studies. The Irrational Consumption Behavior and Compensatory Psychology Scale (ICBCPS) provides a preliminary tool for future research to refine scale design, increase sample diversity, and consider additional influencing factors to better understand the mechanisms behind irrational consumption behavior among college students.

The remainder of this paper is organized as follows: Chapter 2 presents the Literature Review, Chapter 3 outlines the Research Questions and Hypotheses, Chapter 4 details the Data and Methodology, Chapter 5 covers the Analyses and Discussion, and Chapter 6 provides the Conclusion. This structure aims to comprehensively present the research process and findings while offering relevant recommendations and future prospects.

LITERATURE REVIEW

Research on irrational consumption has primarily focused on changes in consumption patterns, the retaliatory consumption motives of different emotional groups, and the impact of social media on consumer behavior. A significant body of research suggests that irrational consumption can be explained by compensatory consumption; in other words, individuals engage in shopping to "compensate" for negative emotional responses. This behavior is referred to as compensatory consumption (Kim & Gal, 2024). During the pandemic, negative emotional responses were widespread, and in the tourism industry, the media frequently used the term "revenge travel" to describe the pent-up desire to travel due to pandemic-related restrictions (Shadel, 2020). Shopping motivation is one of the most critical factors influencing consumer purchasing behavior (Tauber, 1972; Wagner & Rudolph, 2010). People shop to alleviate negative emotions (Brooks et al., 2020; Holmes et al., 2020; Joensen et al., 2020; Mahmud et al., 2020).

Some studies highlight a key aspect of compensatory consumption among minority groups, suggesting that individuals lacking power or social status in certain groups often spend significant amounts of money on highly recognizable, aspirational items such as luxury goods (Rucker & Galinsky, 2008; Rucker & Galinsky, 2013). This purchasing behavior fills a gap in social belonging and can be explained by compensatory consumption. Research also supports the idea that aspirational consumption behaviors can be driven by motives of self-enhancement (Mandel et al., 2017; Sivanathan & Pettit, 2010). Upward social comparisons may fuel consumption driven by the desire to attain higher social status, such as through status consumption (Gupta & Srivastav, 2016; Sheth et al., 2011).

However, some studies argue that young people do not engage in compensatory consumption to address specific deficiencies, but rather as a narrative construction to distance themselves from social exclusion and reduce their uncertainty about the future. This study attempts to build a framework that links self-extension theory with compensatory consumption, incorporating theories of self-extension, self-expansion, and compensatory consumption.

A review of the literature reveals differing perspectives and approaches, suggesting the need for further research and investigation. While some studies have made efforts to explore the process of compensatory consumption, the majority remain focused on defining the concept. This focus represents a limitation, especially in terms of the relatively scant attention given to irrational consumption behaviors among young people. Our understanding of the full range of

compensatory motives remains incomplete. Although the motives behind compensatory consumption are diverse, some are not encompassed within the traditional concept of compensatory consumption, yet they are closely related to it.

RESEARCH QUESTIONS AND HYPOTHESES

3.1 Research Questions

The core focus of this study is to explore the relationship between irrational consumption behavior among college students and compensatory psychology theory. Thus, the research questions will center on the role of compensatory psychology in irrational consumption among college students. Additionally, this study aims to develop an assessment scale and identify the core dimensions related to compensatory psychology that should be included in the scale to reflect its impact. Moreover, to uncover influencing factors that may be difficult to capture through quantitative research, this study will employ qualitative methods, such as in-depth interviews, to fill existing research gaps. Based on the above, the research questions are summarized as follows:

3.1.1 What is the relationship between the psychological motives behind irrational consumption behavior and compensatory psychology among college students? What role does compensatory psychology play in explaining irrational consumption?

3.1.2 What core dimensions should be included in an effective assessment scale for evaluating the psychological motives behind irrational consumption among college students? How do these dimensions reflect the influence of compensatory psychology?

3.1.3 Beyond quantifiable psychological assessments, are there other qualitative but important influencing factors that contribute to the occurrence of irrational consumption behavior among college students?

3.2 Research Hypotheses

Based on the above, this study proposes a theoretical model and three hypotheses. In the conceptual diagram (as Figure1), we can observe four concepts arranged in a logical layout. Compensatory psychology is positioned as the direct motivator of irrational consumption behavior. The peer influence mechanism refers to the tendency of adolescents to conform to the social norms of valued or aspirational groups, with their behaviors being easily reinforced by peers. This participation in behaviors that contribute to positive self-identity is crucial.

The hypothesis suggests that when college students experience compensatory psychology due to perceived deficiencies in certain aspects, peer influence significantly amplifies this compensatory drive. The interaction and sense of belonging among peers create a form of assimilative pull, which not only strengthens the compensatory psychology but also further facilitates the manifestation of irrational consumption behavior. Specifically, compensatory psychology, when heightened by peer influence, drives individuals to engage in excessive material purchases without adequately assessing their actual needs, as a means to compensate for perceived personal inadequacies.

Self-regulation theory includes three fundamental processes: self-observation, self-judgment, and self-reaction. It represents a crucial turning point in Bandura's social learning theory, highlighting the various cognitive influences on human behavior. Based on this theory, when college students perceive a deficiency in a particular domain—such as social skills or professional knowledge—they often undergo a self-assessment process. According to self-regulation theory, individuals actively observe and evaluate their performance in a specific area, identifying areas of deficiency. This conscious recognition of the shortfall prompts individuals to react in an effort to compensate for the perceived inadequacy.

In this process, if individuals fail to effectively use self-regulation mechanisms to devise and execute reasonable compensatory strategies, and instead resort to impulsive shopping as a means of seeking psychological satisfaction, irrational consumption behaviors may emerge. Here are the hypotheses for the study:

H1: There is a positive association between irrational consumption behavior among college students and compensatory psychology, with compensatory psychology being one of the significant psychological motivators for this behavior.

H2: An effective scale for assessing the psychological motives behind irrational consumption among college students should include core dimensions that reflect compensatory needs, such as self-worth, sense of belonging, and peer influence.

H3: In addition to quantifiable psychological motives, irrational consumption among college students may also be significantly influenced by qualitative factors such as family environment, interpersonal relationships, and social context, which address the sense of inner deficiency.
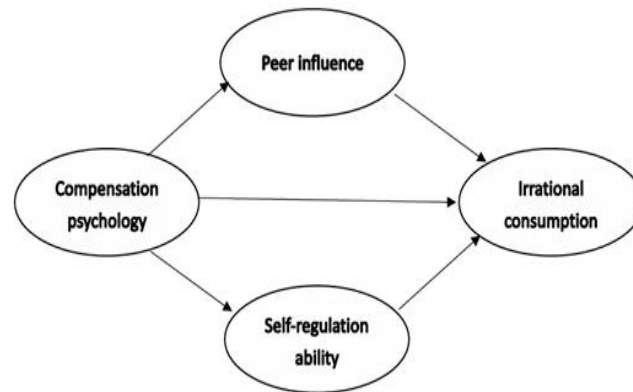

Figure 1 Conceptual Diagram of Compensatory Psychology and Irrational Consumption Behavior

MATERIALS AND METHODS

The core focus of this study is to explore the relationship between irrational consumption behavior among college students and compensatory psychology theory. The study will conduct two case interviews with senior undergraduate students, including both male and female participants. The interviews are scheduled for March 20 and March 31, with each interview lasting 30 to 40 minutes. March was chosen for the interviews because it falls in the middle of the spring semester when students are less burdened by mid-term and final exams, thus having a relatively stable and focused psychological state. This timing provides favorable conditions for conducting in-depth interviews. The 30-40 minute duration is considered appropriate to ensure that respondents remain attentive and provide comprehensive responses (Woodside, 2016).

In April, students who participated in the survey were invited to join the study on a voluntary basis. All participants provided informed consent before participating. Regarding sample size and validity, a total of 367 valid questionnaires were collected. The survey data will be analyzed using SPSS AMOS 28, with exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) conducted to extract common factors and test the construct validity of the scale. Additionally, regression analysis will be performed to examine whether compensatory psychology has a direct association with irrational consumption, thereby verifying the fit between the theoretical model and empirical data. Descriptive statistical analysis will also be conducted to understand the distribution of basic sample information and key variables, and the Cronbach's α coefficient will be calculated to confirm that the reliability of the scale meets the required standards. To further investigate the qualitative factors influencing irrational consumption behavior among college students, the study will conduct semi-structured in-depth interviews with a subset of the survey participants. These interviews will focus on themes related to the triggers, motives, decision-making processes, and experiential aspects of irrational consumption, with particular attention to the respondents' psychological experiences, interpersonal relationships, and consumption contexts. Interview records will be systematically coded and subjected to thematic analysis to identify key themes and insights, complementing the findings from the quantitative research.

ANALYSES AND DISCUSSION

5.1 Utilizing Nvivo 14 for Coding and Thematic Analysis

This study employs the qualitative data analysis software Nvivo 14 to systematically code and generate core themes from the complex content of in-depth interviews. The research team repeatedly reviewed the original interview transcripts, engaging in immersive reading and summarizing to understand the overall content. Open coding was then conducted, analyzing each segment of interview content word-by-word and sentence-by-sentence to extract key terms.

Following independent open coding by two researchers, the open codes were subsequently subjected to axial coding to provide a preliminary organization of core content. Finally, selective coding was applied to clarify the key content of each theme and present specific data evidence to support the credibility of the analysis results.

From the 101 statements in the interview content, a total of 10 word frequencies were extracted. These 10 frequencies served as the basis for open coding in the grounded theory approach, representing the first level of categorization. These open codes were then consolidated into 4 axial codes for further analysis.

Table1 Selective Coding Themes

Selective Coding	Axial Coding	Open Coding
Internal Deficiencies and External Influences Leading to Irrational Consumption	Psychological Needs Compensation	Sense of Deficiency(9) Sense of Belonging Deficit (4) Satisfaction (6)
	External Influences on Consumption Behavior	External Influences (10) Self-Presentation (3)
Guilt and Self-Blame Amplifying Irrational Consumption	Experiential Effects	Irrational Consumption (8) Guilt and Self-Blame (5)
Psychological Counseling Needs for Seeking Regulation	Behavioral Regulation	Emotional Venting (4) Alternative Approaches (3) Psychological Counseling (3)

Theme 1: Inner Deficiencies and External Influences Leading to Irrational Consumption

Analysis reveals that the primary triggers for irrational consumption among university students are twofold: firstly, unmet internal needs such as self-image issues and feelings of social belonging; secondly, the impact of external factors like peer group consumption habits and social media marketing. Under the combined pressure of these psychological and external influences, university students are often driven to seek satisfaction through consumption, leading to impulsive and expectation-driven behaviors.

Theme 2: Guilt and Self-Blame Intensifying Irrational Consumption

During irrational consumption, university students may experience short-term satisfaction; however, this satisfaction is typically fleeting. Concurrently, the recognition of their irrational behavior leads to feelings of guilt and self-blame. This contradictory emotional state exacerbates their anxiety and further stimulates the desire to engage in additional consumption, creating a vicious cycle.

Theme 3: The Need for Psychological Counseling for Regulation

Faced with this dilemma, some interviewed students have attempted alternative methods to manage their consumption desires, such as watching videos or reading, but found these approaches inadequate. They also recognize the potential need for professional psychological intervention to regulate their consumption behaviors. However, there are concerns about receiving overly intrusive interventions, with a preference for more heuristic guidance.

Based on the above analysis, the study employs qualitative analysis to explore the intrinsic mechanisms behind irrational consumption behaviors among university students. It finds that the core motivation for irrational consumption is driven by a "pursuit of satisfaction under the influence of internal deficiencies and external orientations." Specifically, students face internal deficiencies related to self-image, belongingness, and psychological needs. Simultaneously, they are influenced by external consumption orientations from peer groups and online media. The interplay of internal motivations and external pressures leads students to seek short-term satisfaction through consumption. However, irrational consumption often fails to address internal deficiencies effectively and instead results in negative emotional experiences.

5.2 Reliability and Validity Analysis

In terms of reliability statistics, Cronbach's α coefficients for both Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) are robust. Specifically, the Cronbach's α for EFA is 0.871, and for CFA, it is 0.859. Additionally, the Cronbach's α for the two dimensions of EFA are 0.867 and 0.857, respectively, while for CFA, the dimensions are 0.857 and 0.860. All values exceed the threshold of 0.8, indicating good reliability of the questionnaire. The Kaiser-Meyer-Olkin (KMO) measure and Bartlett's test of sphericity results show that the KMO value is 0.837 for EFA and 0.820 for

CFA, indicating that the sampling adequacy is appropriate. Furthermore, Bartlett's test yielded p-values less than 0.05, which confirms the significance level and suggests that the data are suitable for factor analysis.

In the EFA, two factors were successfully extracted, explaining 44.086% and 19.661% of the total variance, respectively. Together, these factors account for 63.747% of the variance, demonstrating that these two factors adequately explain the underlying mechanisms of irrational consumption behavior among university students. In CFA, two factors were also extracted, though their explanatory power was adjusted; the first factor explains 33.822% and the second factor explains 21.777%, together accounting for 55.598% of the variance. The relative contributions of each factor to the total variance have shifted, suggesting that there may be a weighting in the key psychological factors influencing irrational consumption behavior among students. The 55.598% of total variance explained by the two factors in CFA is somewhat lower than ideal, as a factor explanation exceeding 60% is generally preferred in social science research. This lower explanatory power may be attributed to limitations within the scale itself, which might not capture all critical dimensions of irrational consumption behavior among university students. Despite further validation and refinement through CFA, the scale still fails to fully reflect the complexity of this phenomenon. Additionally, the heterogeneous nature of the university student population, with variations in background, values, and emotional states, may contribute to the slightly reduced overall explanatory power. Future research with more refined quantitative analysis could reveal the intricate underlying mechanisms. Furthermore, besides psychological factors like compensatory psychology and self-needs, irrational consumption behavior might be influenced by external environmental and socio-cultural factors, such as family and online media, which were not fully incorporated into the research model, contributing to the lower total variance explained.

In CFA, the factor loadings for items under each factor generally improved compared to EFA. For example, the loadings for items under the first factor increased from 0.618-0.833 to 0.624-0.827, and for the second factor, the loadings rose from 0.707-0.870 to 0.560-0.942. This indicates that the association between items and latent factors was further strengthened and optimized in the confirmatory analysis. (see Table 2)

Table 2 : The Analysis Results of Construct Reliability and Convergent Validity

Latent variable	Observational variable	Std. factor loading	R2	CR	AVE
	HM1	0.640	0.410		
	HM2	0.680	0.462		
Herd Mentality	HM3	0.850	0.723	0.858	0.551
	HM4	0.800	0.640		
	HM5	0.720	0.518		
	ER1	0.920	0.846		
	ER2	0.940	0.884		
Emotional Regulation	ER3	0.590	0.348	0.854	0.553
	ER4	0.560	0.314		
	ER5	0.610	0.372		

5.3 Factor Dimension Analysis

In the rotated component matrix of Exploratory Factor Analysis (EFA), the first factor primarily comprises items related to "Emotional Repair" and "Belongingness Deficit," while the second factor includes items related to "Lack of Control" and "Conformity Effect." However, in the subsequent Confirmatory Factor Analysis (CFA) rotation matrix, this clear classification has shifted—"Emotional Repair" and "Belongingness Deficit" are now more concentrated in the second factor, whereas "Lack of Control" and "Conformity Effect" are mainly concentrated in the first factor. For instance, peer influence and emotional repair might be more central driving factors, whereas "Lack of Control" and "Belongingness Deficit" may exhibit relatively weaker explanatory power. In other words, "Emotional Repair" and "Belongingness Deficit" are more closely related in CFA, which may indicate a stronger correlation between university students' consumption behaviors and

their pursuit of emotional security and integration. Conversely, "Lack of Control" and "Conformity Effect" also show a close connection, potentially reflecting the tendency of students to lose autonomy under peer influence.

This shift also highlights limitations in EFA, which did not fully capture the latent structure of irrational consumption behavior among university students. CFA further validated and refined the factor structure, aligning it more closely with actual conditions. Through CFA, the two core factors extracted from the university students' irrational consumption items are renamed as follows:

Factor One: Herd Mentality in Consumption

- **Item 1:** "When a trendy product appears, everyone buys it, and I want to buy it too."

- **Item 2:** "When I see my classmates buying a product, I want to buy it too."

- **Item 3:** "I always like to align my purchases with others' preferences."

- **Item 4:** "I am very impulsive when I shop."

- **Item 5:** "I have a tendency for pre-purchase behavior."

These five items reflect a behavior pattern driven by herd mentality, where individuals blindly follow the latest consumption trends due to peer influence. Therefore, this study names this factor as "Herd Mentality in Consumption."

Factor Two: Consumption for Emotional Regulation

- **Item 1:** "I feel satisfied when I make purchases."

- **Item 2**: "I experience happiness when shopping."

- **Item 3**: "When I purchase certain items, I feel a sense of safety in my body and mind."

- **Item 4:** "When I am feeling very down or very happy, I use shopping as an emotional outlet."

- **Item 5**: "When I am lonely, purchasing desired items makes me feel less lonely."

These items reflect a self-regulation mechanism where individuals use consumption to adjust their emotional states and obtain a sense of inner security. This factor is named "Consumption for Emotional Regulation." Factor One: Herd Mentality in Consumption consists of five items, with items 1, 2, and 3 reflecting peer influence during irrational consumption, and items 4 and 5 reflecting personal impulsivity and pre-purchase tendencies. The high factor loadings for these items indicate a strong explanatory power for this dimension in understanding irrational consumption behavior among university students. Factor Two: Consumption for Emotional Regulation also includes five items, focusing on emotional experiences such as pleasure, satisfaction, safety, and relief from loneliness through consumption. These positive emotional feedbacks are significant drivers of irrational consumption among students. The high scores of these two factors underscore the key psychological mechanisms influencing irrational consumption: external peer pressure and personal impulsivity (Factor One), and internal emotional needs and pursuit of experiences (Factor Two).

5.4 CFA Analysis
The study further employed Structural Equation Modeling (SEM) to assess composite reliability. According to Fornell and Larcker (1981), composite reliability (CR) should exceed 0.6, and Average Variance Extracted (AVE) should exceed 0.5. For the first factor, "Herd Mentality in Consumption," the composite reliability (CR) is 0.858, and the average variance extracted (AVE) is 0.551. For the second factor, "Consumption for Emotional Regulation," the composite reliability (CR) is also 0.858, with an average variance extracted (AVE) of 0.551(see Figure 2). These results indicate good convergent validity. In the CFA analysis, the concepts of "Emotional Repair" and "Belongingness Deficit" are more closely related within the latent factor structure, suggesting that university students' consumption behaviors are strongly linked to their pursuit of emotional security and belonging. This finding has significant implications for understanding the underlying mechanisms of irrational consumption behavior among university students:
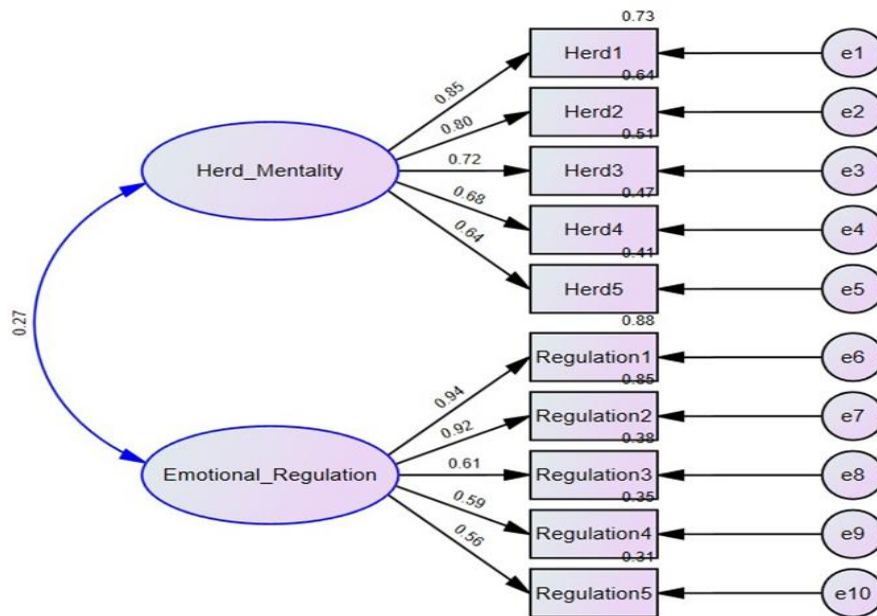
Figure 2 Confirmatory Factor Analysis (CFA)

5.4.1 The association between "Emotional Repair" and "Belongingness Deficit" reflects anxiety and deficiency in self-identity and social integration. Students may use consumption to alleviate feelings of loneliness and insecurity, aiming to gain peer recognition and a sense of belonging.

5.4.2 The link between emotional and social needs reveals the self-concept motivations behind irrational consumption. Students may pursue material wealth and conspicuous consumption to enhance self-image and fulfill social status and identity needs.

5.4.3 Additionally, the results reflect the tendency of students to lose autonomy under peer influence. To gain peer acceptance and integration, they may tend to conform blindly, losing independent judgment and choice, leading to irrational consumption behaviors.

The Goodness of Fit Index (GFI) is closer to 1, indicating better model fit. The GFI value for this study's model is 0.826, while the Adjusted Goodness of Fit Index (AGFI) is 0.718. According to Hu and Bentler (1999), in some exploratory studies, GFI values greater than or equal to 0.85 and AGFI values greater than or equal to 0.75 are considered acceptable, albeit marginally. The model in this study slightly falls short of these acceptable standards, as indicated by the regression analysis showing that the explanatory power of compensatory psychology on irrational consumption is relatively low. This suggests that the theoretical model may not fully reflect the actual situation, contributing to the suboptimal fit indices of this study. (Table 3)

The Root Mean Square Error of Approximation (RMSEA), as suggested by MacCallum et al. (1996), can be considered acceptable in exploratory research if it is below 0.10. However, the RMSEA for this study is 0.156, indicating that the model fit is less than ideal and the theoretical model does not adequately reflect the actual situation, resulting in a higher RMSEA value.

The Tucker-Lewis Index (TLI) is a relative fit index where values greater than 0.90 indicate good model fit. The TLI for this study is 0.80, which suggests that the model fit is within an acceptable range (Hu et al., 1999).

Table 3: Analysis Result of the Overall Model fit of the Measurement Models

Indicators	Good fit	Default model	Independence model	Appraisal
Absolute fit index				
GFI	≥0.90	0.826	0.383	Fair
RMR	≤0.05	0.30	0.873	Poor
RMSEA	≤0.08	0.156	0.350	Poor
AGFI	≥0.90	0.718	0.246	Poor
Incremental fit index				
NFI	≥0.90	0.836	0.00	Fair
IFI	≥0.90	0.850	0.00	Fair
RFI	≥0.90	0.782	0.00	Poor
CFI	≥0.90	0.849	0.00	Fair
TLI	≥0.90	0.80	0.00	Fair
Parsimony fit index				
PGFI	≥0.50	0.510	0.313	Good

5.5 Hypothesis Testing

H1: There is a positive association between irrational consumption behavior among college students and compensatory psychology, with compensatory psychology being one of the significant psychological motivators for this behavior.

Table 4 : Model Summary

Model	R	R2	Adjusted R2	Standard estimation error	Significance	Collinearity statistics (VIF)
1	0.439a	0.193	0.191	1.15198	0.00	1.00

From the Table 4, it is observed that the R-squared value is 0.193, indicating that the single independent variable, compensatory psychology, accounts for 19.3% of the variance in irrational consumption. The adjusted R-squared value is 0.191, suggesting a slight reduction in the model's explanatory power for the overall population, but it remains relatively high. The standard error is 1.152, which reflects that the average error between predicted and actual observed values is only 1.152 units. This indicates that compensatory psychology as an independent variable predicts and explains irrational consumption behavior with considerable precision, providing important insights into the internal mechanisms of student consumption behavior.

The F-value of the regression model is 87.358, which is significant ($p < 0.001$). This suggests that the prediction effect of compensatory psychology on the dependent variable, irrational consumption, is significant, indicating a notable linear relationship between the two variables. In other words, stronger compensatory psychology is associated with more pronounced irrational consumption behavior. This result provides robust empirical support for Hypothesis H1, affirming that compensatory psychology is indeed a significant psychological factor leading to irrational consumption among university students, with a significant positive correlation between the two.

Pearson correlation analysis was used for a two-tailed significance test. The correlation coefficient between compensatory psychology and irrational consumption is 0.439, reaching significance ($p < 0.001$). This further validates the significant positive correlation between the two variables: stronger compensatory psychology is associated with higher levels of irrational consumption. From a theoretical perspective, this result provides new empirical support for the application of compensatory consumption theory within the student population. This theory posits that when individuals' basic needs are unmet, they attempt to compensate and fill the emotional void through consumption behaviors. The findings of this study

indicate that university students do exhibit a psychological mechanism where consumption is used to compensate for unmet needs such as self-worth and belonging. This discovery is significant for understanding the underlying motivational mechanisms of irrational consumption behavior among university students. It suggests that irrational consumption is not solely driven by external social influences but is more rooted in internal psychological needs. When needs related to self-identity and social status are frustrated, students are inclined to engage in excessive consumption to assert their self-worth and gain peer recognition, thereby compensating for feelings of insecurity and inadequacy. Additionally, these results offer new perspectives for higher education institutions in addressing student consumption behaviors. Traditional consumer education often focuses too heavily on promoting rational consumption concepts, overlooking the impact of individuals' internal psychological needs on consumption behavior. This study indicates that by addressing students' psychological needs for self-awareness and belonging, and guiding them in developing healthy self-concepts and social needs, it may be possible to more effectively curb irrational consumption behavior.

The standardized regression coefficient (β) for compensatory psychology is 0.439, and this value is statistically significant ($p < 0.001$). This indicates that, holding other variables constant, a one-unit increase in compensatory psychology is associated with an increase of 0.439 units in irrational consumption.

Furthermore, the collinearity diagnostic results show that the tolerance for compensatory psychology is 1.0, and the variance inflation factor (VIF) is also 1.0, which is well below the threshold of 10. This suggests that there are no issues with multicollinearity. Thus, compensatory psychology can serve as a distinct predictor variable, providing an independent explanation for irrational consumption behavior.

Overall, the statistical analysis results indicate that compensatory psychology is indeed a significant predictor of irrational consumption behavior among college students. It is not only significantly positively correlated with irrational consumption but also accounts for nearly 20% of the variance, demonstrating substantial explanatory power. However, this also implies that 80.9% of the variance remains unexplained by compensatory psychology alone. This suggests that other important predictor variables, beyond compensatory psychology, influence irrational consumption behavior.

This finding highlights that compensatory psychology is neither the sole nor sufficient explanation for irrational consumption among college students. Other potential psychological, social, and environmental variables could play crucial roles in explaining this behavior. Literature also supports the influence of factors such as self-concept, peer influence, and self-regulation abilities on irrational consumption behavior. Additionally, external factors like family background, economic conditions, and the online environment may also partially explain this phenomenon.

In conclusion, while compensatory psychology is an important explanatory factor, there are evidently other variables that have not yet been explored. Future research should aim to expand the theoretical foundation and employ diverse analytical methods to achieve a more comprehensive understanding. This will contribute to refining relevant theories and provide more effective evidence for practical interventions. In summary, Hypothesis H1 is supported. Compensatory psychology indeed proves to be one of the significant psychological motives behind irrational consumption among college students, with a notable positive correlation between the two variables. This finding provides new empirical support for the application of compensatory consumption theory within the college student population.

According to compensatory consumption theory, when individuals' fundamental needs are unmet, they attempt to compensate for and fill the inner void through consumption behavior. The results indicate that college students exhibit a psychological mechanism where consumption is used to compensate for deficiencies in self-worth, belonging, and other needs. In other words, irrational consumption among college students is not solely driven by external social influences but is significantly influenced by internal psychological needs. When needs related to self-identity and social status are thwarted, students tend to engage in excessive consumption to assert their self-image and gain peer recognition, thereby compensating for internal insecurity and deficiencies.

This provides important insights into the underlying motivational mechanisms of irrational consumption behavior among college students, emphasizing the role of internal psychological needs in driving such behaviors.

H2: An effective scale for assessing the psychological motives behind irrational consumption among college students should include core dimensions that reflect compensatory needs, such as self-worth, sense of belonging, and peer influence**.**

The research results fully validate Hypothesis H2, which aligns closely with the core tenets of compensatory consumption theory. This theory posits that individuals use material consumption to fill gaps in psychological needs related to self-identity and social status. Therefore, the scale design in this study accurately reflects these core dimensions of compensatory needs.

This finding not only enhances our understanding of the psychological motivations behind irrational consumption among college students but also provides valuable insights for future research and scale development. The study employed both quantitative and qualitative analyses. Although the two extracted factors were not directly labeled as "self-worth," one factor, namely "peer influence," effectively represents the psychological need of college students to reinforce peer recognition and group identity through conformity in consumption, which is closely related to the pursuit of self-worth and status.

Furthermore, in-depth interviews corroborated that irrational consumption among college students is significantly influenced by factors such as self-identity, belonging, and peer influence. Thus, designing a scale that encompasses dimensions of self-worth and belonging can offer a more precise assessment of the intrinsic drivers of irrational consumption behavior in this unique demographic. This approach provides valuable theoretical support and empirical grounding for research in consumer psychology.

H3: In addition to quantifiable psychological motives, irrational consumption among college students may also be significantly influenced by qualitative factors such as family environment, interpersonal relationships, and social context, which address the sense of inner deficiency.

The study investigates how qualitative factors, such as family environment, interpersonal relationships, and social contexts, significantly impact irrational consumption behaviors among college students, in addition to quantifiable psychological motivations. In-depth interviews revealed the profound influence of family environment on college students' consumption attitudes and behaviors.

Firstly, students from economically constrained backgrounds, having experienced a long-term lack of material wealth, often develop a strong craving for luxury brands. Once their financial situation improves, they are prone to excessive consumption to display their elevated status. Conversely, students from affluent families may have been indulged from a young age, leading to a pronounced materialistic tendency and obsession with luxury brands, often resulting in unrestrained consumption patterns.

Furthermore, family atmosphere affects students' self-identity and emotional management. Students who lack parental affection are more likely to engage in compensatory consumption as a means of seeking emotional solace through shopping. In contrast, students from harmonious family environments generally exhibit more rational consumption behaviors. The study not only confirms Hypothesis H3 but also broadens the understanding of factors influencing irrational consumption among college students.

Qualitative factors such as family environment and interpersonal relationships may indirectly affect students' consumption decisions by shaping their values and consumption habits. Consequently, consumer education for college students should address both their psychological health and the positive guidance from external environments. This approach offers new perspectives and strategies for universities and families in intervening and guiding students' consumption behaviors, promoting the development of healthy consumption practices and values.

CONCLUSION

6.1 Findings

The study's in-depth interviews revealed additional influential factors beyond family environment, such as the role of online advertising, the source of funds, and their interplay with internal psychological motivations like compensatory needs, self-regulation, and self-need. These three "major culprits" are intricately linked and collectively contribute to the proliferation of irrational consumption behaviors among college students.

With the rapid development of the internet, college students have become a primary target for online advertising. Interviews revealed that various forms of online marketing strategies, including hard and soft ad placements, have a profound impact

on students' consumption decisions. For instance, impulse buying driven by endorsements from influencers or celebrities is prevalent among students. The online environment significantly amplifies the peer influence effect; students may unconsciously engage in irrational consumption to compare themselves with influencers or meet their peers' preferences.

Additionally, the source of funds plays a crucial role in shaping students' consumption behavior. Students who rely entirely on family funding often lack financial planning awareness, making them more prone to unnecessary waste. In contrast, students who earn their living expenses through their own efforts tend to exhibit a higher sensitivity to money and more rational consumption motives.

These findings not only enrich the application of compensatory consumption theory but also provide practical insights for consumer education and school-family collaborations. The study highlights the following points:

First, impact of Online Advertising: The pervasive influence of online ads and marketing tactics can lead students to impulsively buy products endorsed by influencers or celebrities. This effect is magnified by the online environment, which intensifies peer pressure and irrational consumption.

Second, source of Funds: Students' financial sources significantly affect their spending behavior. Those dependent on family support often exhibit less financial prudence, while students who earn their own money are generally more mindful of their expenditures.

Third, interplay with Internal Psychological Motivations: These external factors interact with internal psychological motives such as compensatory needs and self-regulation. The combined effect of these variables contributes to the widespread occurrence of irrational consumption among college students.

These insights underline the necessity for comprehensive consumer education that addresses both psychological motivations and external influences. Additionally, they offer valuable strategies for universities and families to guide students towards healthier consumption behaviors and better financial management.

1). Core reasons for irrational consumption among college students: The study reveals that college students' irrational consumption is primarily driven by the need to compensate for deficiencies in self-worth and belonging. This finding directly supports the applicability of compensatory consumption theory within this demographic. The lack of basic psychological needs such as self-value and belonging drives students to engage in excessive consumption to fill the void and gain peer approval and social status. This insight uncovers the deep-seated motivational mechanisms behind irrational consumption among students, suggesting that these behaviors are not solely a result of external social influences but are more deeply rooted in imbalances in their internal psychological needs. Understanding this provides a new perspective on student consumption behavior, helping to identify targeted educational and intervention strategies that address these self-needs and mitigate irrational consumption.

2). Impact of psychological factors beyond compensatory needs: In addition to compensatory psychology, factors such as self-concept, peer influence, and self-regulation abilities significantly impact irrational consumption among college students. The formation of irrational consumption behavior is a multifactorial process involving more than just compensatory needs. Personal psychological traits, including self-concept development, peer pressure, and deficiencies in self-control, also play crucial roles. This broadens the theoretical perspective on explaining irrational consumption by integrating multiple psychological mechanisms such as compensatory needs, self-cognition, and social influence. It also provides a basis for designing more comprehensive consumer education programs, which should not only address compensatory needs but also focus on students' self-management skills and social adaptation.

3). Influence of external factors: External factors such as family background and online environments exacerbate irrational consumption among college students. Family economic conditions and online media environments can indirectly promote irrational consumption by shaping individual values and consumption habits. This indicates that consumer education for students should not focus solely on individual psychological factors but also consider external factors like family and social environments to implement more comprehensive intervention measures. Moreover, this suggests that universities and families should collaborate to guide students in developing appropriate consumption attitudes and fostering good self-management skills.

6.2 Conclusions
The primary objective of this research is to analyze the association between irrational consumption behavior and compensatory psychology among college students. The results indicate a significant relationship, particularly with respect to compensating for emotional needs. Additionally, peer influence and impulsive tendencies emerge as other critical drivers. Overall, the quantitative analysis provides a robust explanation of the causes of irrational consumption from the perspective of psychological motivation.

The findings from both the survey and interviews confirm that compensatory psychology is indeed a major psychological motive driving irrational consumption among college students. Many students exhibit psychological needs such as a lack of recognition and self-affirmation, often compensating for these deficiencies through material consumption. For example, pursuing luxury brands for status symbols or engaging in blind conformity to reinforce peer approval. Furthermore, factors like self-concept development, peer pressure, and deficits in self-control also play significant roles in irrational consumption. College students' consumption behaviors are closely linked to their self-image, where peer evaluations have a considerable impact, and combined with insufficient self-restraint, this leads to impulsive purchases.

In-depth interviews have also revealed that multiple factors, including family environment, online advertising, and financial pressure, significantly contribute to irrational consumption among college students. Overall, the interplay of compensatory psychology, self-needs, peer influence, and self-regulation capabilities collectively drives the occurrence of irrational consumption behaviors among students. If educational institutions and families place greater emphasis on this issue, and employ various channels such as mental health education, consumer education, and emotional counseling to enhance students' self-awareness and self-regulation skills, it could help mitigate irrational consumption and promote holistic development. The implications of the research findings can be summarized as follows:

1). This study provides new empirical evidence for the application of compensatory consumption theory within the college student population, thereby enriching the explanatory power of the theory: The research extends and refines the applicability of compensatory consumption theory, which has traditionally been applied to general consumer populations, to a college student context. This successful application demonstrates the theory's generalizability across different backgrounds. The findings contribute to the deepening and refinement of compensatory consumption theory by further exploring specific psychological mechanisms influencing compensatory consumption, such as deficiencies in self-value and belongingness. The results offer new perspectives and support for future theoretical innovations and knowledge expansion in related fields.

2). This study provides new insights for universities in developing student consumption education by highlighting the need to address not only rational consumption concepts but also the psychological needs and environmental factors affecting students: Traditional approaches to student consumption education often focus primarily on imparting rational consumption principles, overlooking the influence of individual psychological needs on consumption behavior. This research reveals that irrational consumption among college students largely stems from deficiencies in psychological needs such as self-identity and belongingness. Therefore, consumption education should also address the fulfillment of these needs. Additionally, external environmental factors, such as family background and online media, also influence student consumption behavior to some extent. Educational strategies should incorporate these environmental aspects. This offers universities new perspectives and foundations for formulating consumption education policies, emphasizing the need to balance internal psychological needs with external environmental guidance to achieve comprehensive behavioral intervention.

3). The development of a scale for assessing irrational consumption motives among college students provides an effective research tool for future studies: The scale designed in this study includes multiple core dimensions such as compensatory needs, self-concept, and peer influence, allowing for a comprehensive evaluation of the psychological motives behind irrational consumption among college students. This provides a reliable quantitative tool for subsequent research, facilitating more precise measurement and analysis of the key factors influencing irrational consumption. The development and validation of the scale offer a methodological foundation for future researchers conducting empirical analyses in this field. This contributes to establishing a systematic and complete theoretical model for a deeper understanding of the mechanisms underlying irrational consumption behavior among college students.

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Appendices
Irrational Consumption Behavior and Compensatory Psychology Scale (ICBCPS)

Item(s)	Construct
Item 1	When a trendy product appears, everyone buys it, and I want to buy it too.
Item 2	When I see my classmates buying a product, I want to buy it too.
Item 3	I always like to align my purchases with others' preferences.
Item 4	I am very impulsive when I shop.
Item 5	I have a tendency for pre-purchase behavior.
Item 6	I feel satisfied when I make purchases.
Item 7	I experience happiness when shopping.
Item 8	When I purchase certain items, I feel a sense of safety in my body and mind.
Item 9	When I am feeling very down or very happy, I use shopping as an emotional outlet.
Item 10	When I am lonely, purchasing desired items makes me feel less lonely.