

Interdisciplinary Analysis of College Students' Stress-Driven Consumption

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Abstract: Based on the theory of social psychology and consumer behavior, this study systematically discusses the dynamic relationship between group pressure and shopping behavior of college students. Through the integration of compensatory consumption theory, self-regulation failure model and social comparison theory, the psychological mechanism and group heterogeneity of consumer behavior under pressure were revealed. The results show that stress significantly drives compensatory consumption through emotional regulation needs, and gender, grade and consumption channel have moderating effects. Shopping behavior has both the properties of immediate stress relief and long-term economic risk. In addition, when the shopping software is opened with a clear goal, the stress driven consumption of college students will be greatly reduced. The results of this study provide a theoretical basis for understanding the stress-driven consumption of college students, and provide theoretical support and practical enlightenment for mental health education, consumption structure optimization and healthy consumption culture construction in colleges and universities.

1 INTRODUCTION

Under the background of popularization of higher education and digital transformation, Chinese college students are facing unprecedented multiple pressures. Compared with the West, Chinese college students have a big difference in culture and life, so they face more diversified sources of pressure. At the same time, the sources of stress of college students in different grades can not be generalized, and there are still differences. According to the White Paper on the Mental Health of Chinese College Students (2023), the superimposed effects of intensifying academic competition, increasing employment uncertainty, social virtualization and family expectations have made college students' mental health problems increasingly prominent. In this context, shopping behavior gradually transcends its economic attributes and evolves into an important emotion regulation strategy. Data show that 27.3% of the average monthly consumption of college students is used for emotional consumption of non-necessities, and the characteristics of stress-driven consumption need to be further studied (China Youth Daily, 2023).

Stress driven consumption, also known as stress reduction consumption, has gradually come into people's vision in today's generally high-pressure living environment. Pressure-driven consumption not only involves individual psychological mechanism, but also is closely related to culture, social structure and technical environment. For example, the rise of consumption phenomena with Chinese characteristics, such as live streaming of tips and shopping orders, reflects both the penetration of digital platforms and the social pressure under a collectivist culture. Wang (2020) found that under normal circumstances, an individual's decision making is mainly regulated by the two brain systems of heat and cold. However, with the increase of the pressure faced by an individual, the brain heat system will gradually dominate. At this time, consumers will have a cognitive bias of self-control, which is manifested in the decline of self-control at the consumption level. According to the hyperbolic discounting theory of behavioral economics, the short-term discount rate of consumers will be greater than the long-term discount rate, which is manifested as an increase in short-term consumption behavior (Derek, 2008). Impulsive consumption is often

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related to the need for psychological satisfaction. Sengupta and Zhou (2007), therefore, digital consumption (such as tipping, online shopping, etc.), which is more convenient, inductive and conducive to providing emotional value, is more likely to be chosen by consumers.

However, most of the existing studies focus on western consumption theories and lack a systematic analysis of the interactive relationship between stress and consumption in the Chinese context. Based on the theories of social psychology and consumer behavior, this study integrates compensatory consumption theory, self-regulation failure model and social comparison theory to construct a multi-dimensional analysis framework of "individual-psycho-society", aiming to reveal the deep mechanism, group heterogeneity and intervention path of college students' pressure-driven consumption.

2 THEORETICAL BASIS

2.1 Stress

The types of college students' stress can be specifically divided into seven levels: academic pressure, employment pressure, interpersonal pressure, economic pressure, life adjustment pressure, psychological pressure and family pressure. Among them, academic pressure, psychological pressure, life adaptation pressure and interpersonal pressure are the factors that can not be ignored to promote college students' pressure-driven consumption. According to the resource limitation theory, academic pressure, psychological pressure and other persistent pressures often produced by college students occupy college students' attention resources and lead to the exhaustion of cognitive resources (Kahneman, 1973). The exhaustion of cognitive resources makes it difficult for college students to maintain their firm willpower. In addition, the delayed discounting effect of online shopping software and other business strategies contribute to the pressure-driven consumption of college students.

2.2 Consumption Behavior

According to the definition of consumption behavior, consumption behavior is usually divided into rational, impulse, habit, emotion and uncertainty. Among them, the pressure-driven consumption of college students is complex and diversified, with impulsive and emotional characteristics, and may also have habituation or unstereotyped characteristics

according to different situations. The stress-driven consumption of college students is mainly related to compensatory consumption theory, self-regulation failure model and social comparison theory.

The theory of compensatory consumption originates from the hypothesis of "loss compensation" in psychology, which holds that individuals make up for psychological or emotional deficiencies through consumption behaviors (Hama, 2001). In the group of college students, academic pressure, social isolation or self-identity crisis may trigger compensatory consumption needs. For example, the study of Wang et al. (2023) shows that 68.9% of stressful consumption cases of college students can be explained by this theory, in which instrumental consumption (such as buying learning equipment) is significantly related to academic pressure, while symbolic consumption (such as buying luxury goods) is more related to emotional loss. From an essential perspective of needs, such consumption behavior also aligns with the logic of Maslow's hierarchy of needs theory (1943) — instrumental consumption can be seen as a pursuit of ability enhancement within 'self-actualization needs,' while symbolic consumption is related to the desire for social recognition within 'esteem needs.' Both are manifestations of high-level unmet needs under pressure being compensated through material means. It is worth noting that the compensatory consumption of Chinese college students is often combined with the "face culture" to form a unique phenomenon of "gift socializing" (such as purchasing on behalf of others and buying orders), which further strengthens the social attribute of consumption.

The self-regulation failure model emphasizes the depleting effect of stress on cognitive resources. Yan's (2020) fMRI study found that in stressful situations, activation of the nucleus accumbens (associated with reward mechanisms) increased by 37%, while activity in the prefrontal cortex (responsible for executive control) was suppressed. This imbalance of neural mechanisms leads individuals to prefer consumption behaviors of instant gratification over long-term rational decision making. For example, in a state of high stress, college students may quickly relieve anxiety through "impulsive live shopping", but with higher economic risks.

Social comparison theory has been given new connotations in the digital age. Zhao Yousha (2025) points out that social media intensifies the pressure of keeping up with the Joneses through "peer consumption display", forming a vicious circle of "pressure - comparison - re-consumption". For

example, the listing of luxury goods in the circle of friends or the time-punching of travel may trigger the "sense of relative deprivation", prompting individuals to narrow the gap with the reference group through consumption. This cycle of "stress-comparison-re-consumption" is particularly significant among female college students, whose emotional compensating effect size ($d=0.71$) is significantly higher than that of male college students. Rahardjo et al. (2023) also confirmed this gender difference during the COVID-19 pandemic, finding that female college students were more inclined to relieve stress through online shopping, and their frequency of consumption behavior as a coping mechanism was significantly higher than that of males, further illustrating the cross-situational stability of gender's moderating role in stress-driven consumption.

3 PROGRESS OF EMPIRICAL RESEARCH

3.1 Interdisciplinary Integration and Case Analysis of Pressure-Driven Consumption

The current empirical research on college students' pressure-driven consumption presents multi-dimensional cross-over characteristics. The following three studies are analyzed respectively from the influencing factors of consumption behavior, psychological motivation and consumption characteristics, forming a progressive research framework of "micro-mechanism - psychological path - macro characteristics", which has both complementarity and limitations.

Chen & Wang (2013) collected the information of three factors affecting college students' online shopping (characteristics of online shopping, commodity factors and personal emotion factors) in the form of a questionnaire survey, and used analytic hierarchy process (AHP), Logistic regression model, analysis of variance and other methods to conduct a multifaceted study on the factors affecting college students' impulsive online shopping behavior. The research results reveal that commodity factors and browsing time are the main influencing factors of college students' impulsive online shopping behavior, and the former has a greater impact. Among them, commodity price, merchant promotion and transaction record all have significant influence on impulsive online shopping of college students, and promotion is the main reason. At the same time, the

network environment and personal emotion factors have little impact on college students' impulsive online shopping. Basically, the network environment and personal emotion factors have little difference on college students' shopping experience, and it is difficult to be the main cause of stress-driven consumption. Gender, living expenses and time of exposure to online shopping have little impact on impulsive online shopping, but gender has a significant impact on the types of impulsive shopping goods. This research has various research methods, reasonable model construction, rigorous and reliable theory, but it is a pity that the data source is single, the survey samples are only from Shanxi University of Technology, Shanxi University and Shanxi University of Finance and Economics, and the regional differences of Chinese college students are not considered, and the data source is only a questionnaire survey, which has limitations.

Online shopping is becoming more and more popular due to its convenience and affordability. With the development of online commerce, the psychological motivation of students' online consumption and its behavior analysis are gradually analyzed. Xu & Hou (2012) began their research from the perspective of social psychology, from the level of college students' online consumption psychology and motivation, and then speculated and analyzed the characteristics of college students' online consumption behaviors. The research results indicate that college students have a favorable attitude toward online shopping, and college students have a huge potential for online shopping, so it is necessary to build a standardized and harmonious online shopping platform. At the same time, college students themselves also have potential, which has an immeasurable impact on the construction of the future Internet of Things platform and the global development of personalized online shopping. This study has a novel perspective and unique insights into the psychological motivation of college students' online consumption. However, this case study has a single method and outdated data, which is completely dependent on other people's research and mostly comes from surveys conducted several years ago, which is relatively backward and lacks explanation for the current environment, so critical research is needed.

Gao & Ji (2012) took the current situation of college students' online shopping as the starting point to analyze the characteristics of college students' online shopping consumption. At the same time, the study pointed out that there is fraud in online virtual shopping, and customers cannot see the real things,

and may have incomplete or wrong understanding of the products. They should be carefully screened when buying, and avoid being cheated by being cheap. There are security risks in online shopping websites. College students need to strengthen their awareness of protection when shopping online, strengthen prevention of personal privacy information, and choose legal and compliant websites to avoid being cheated. In logistics transportation, students should carefully choose safe and secure logistics companies to avoid damage to goods and reduce potential losses. Network payment has risks, network payment involves loan payment, easy to appear bank card theft brush, personal information leakage situation, pay attention to the computer, web security; Improve self-protection awareness, safeguard their legitimate interests. The article is logical, thorough analysis and gives a number of constructive suggestions, but there are shortcomings in theory, and the description of the characteristics of college students' online consumption behavior lacks data support and is rather empty

3.2 Multipath Analysis of the Action Mechanism

Stress increases cortisol levels by activating the hypothalamic-pituitary-adrenal axis (HPA axis), which in turn affects the decision-making brain region. Evidence from saliva testing showed that for every 1 μ g/dL increase in cortisol concentration, the probability of impulsive consumption increased by 23% ($p < 0.05$). In addition, overactivation of the nucleus accumbens and short-term reinforcement of dopamine release make consumption a "neural reward" that can be followed by guilt and financial burden.

Shopping behavior regulates mood through two mechanisms. Increased sense of control and self-selection of goods can improve self-efficacy and reduce STAI anxiety index by 15%-20% (Lee & Byun, 2016). Failure of self-regulation and long-term reliance on consumption to relieve stress may lead to the depletion of self-control resources, forming a negative feedback loop of "pressure-consumption-more stress".

China's unique collectivist culture exacerbates the social attributes of consumption. For example, in order to maintain the social image of "face" consumption, college students may undertake expenses beyond their economic means (such as high-priced dinners). Family expectation pressure, some students through the purchase of "brand-name goods" to meet the family's expectation of "success", such

consumption has the characteristics of intergenerational transmission.

4 RESEARCH INNOVATION AND FUTURE DIRECTIONS

Construct an integrated model and propose an "individual-psychological-social" three-dimensional model, incorporating cerebral neurological indicators (such as fMRI data), digital consumption logs (such as Taobao browsing records) and cultural context variables (such as collectivism scores) to enhance explanatory power. Expansion of virtual consumption theory: Aiming at the meta-universe consumption scenario, the "digital compensation theory" is proposed, emphasizing the substitutive role of virtual goods in constructing the ideal self.

Develop a dynamic detection system, integrate smart wristband (monitoring heart rate variability, skin conductance) and consumption APP log, and track the space-time correlation between pressure and consumption in real time. Ecological instantaneous Assessment (EMA) can capture the time-lag effect between stress peak and consumption decision by pushing questionnaires through smart phones, and reduce recall bias.

Through virtual scenes to simulate consumption impulse, train students to identify and reconstruct irrational consumption beliefs based on machine learning algorithm, combined with consumption frequency and debt ratio to predict risk individuals, push customized intervention information. Ethical boundary exploration: For virtual consumption (such as NFT purchase) in the meta-universe, it is necessary to establish "digital consumption ethical guidelines" to prevent addictive behaviors and property losses

5 CONCLUSION

Based on the theories of social psychology and consumer behavior, this study systematically discusses the relationship between group pressure and shopping behavior of college students. By integrating the compensatory consumption theory, self-regulation failure model and social comparison theory, it reveals the psychological mechanism and group heterogeneity of consumer behavior under stressful situations. The study found that there is a dynamic relationship between stress and consumption behavior. With the increase of stress, the thermal system of the brain's two major systems of

cold and heat will occupy a dominant position, thus promoting impulse consumption and producing pressure-driven consumption; Under the influence of persistent pressure such as academic pressure and psychological pressure, college students make up for the psychological or emotional deficiency through consumption behavior, which is manifested as instrumental consumption or symbolic consumption. In particular, college students' compensatory consumption is often combined with face culture to form a unique consumption phenomenon; The exhaustion of cognitive resources brought by pressure prompts college students to produce impulsive behavior, which is more likely to produce impulsive consumption, resulting in pressure-driven consumption. This study found that stress affects consumption behavior through neurobiology, cognitive emotion and sociocultural multipaths, and the group heterogeneity is significant.

In the future, interdisciplinary collaboration (e.g., neuroeconomics, cultural psychology) and technological innovation (e.g., big data tracking, VR intervention) are needed to build an explanatory framework that takes into account individual differences and cultural contexts. This will not only help improve the theoretical system of consumer behavior, but also provide a scientific basis for the construction of a mental health support system for young people with Chinese characteristics, and guide Chinese college students to consume scientifically and healthily. The ultimate goal is to guide college students to form a "stress adaptive consumption" mode through precise intervention, so as to achieve a balance between short-term emotional relief and long-term financial health.

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