

# A Study on Online Shopping Addiction among College Students

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**Abstract**—Throughout the past century, technological advancements have posed numerous societal and psychological challenges. However, there remains a significant research gap regarding the psychosocial factors influencing problematic shopping behaviors among college students. Understanding these factors is crucial for uncovering the roots of online shopping addiction and evaluating the risk factors for impulsive shopping behavior. Therefore, the current study aims to address these gaps and provide insights into effective interventions, with the goal of establishing and strengthening measures to mitigate such behaviors. This study identified a positive association between Stress Relief (SR) and online Shopping Addiction (SA) among college students. Additionally, it revealed a positive correlation between Material Success (MS) and habitual shopping behavior. Importantly, higher levels of material success were linked to a greater dependency on shopping, thereby increasing the likelihood of impulsive buying behaviors among college students. Beyond its academic significance, this study carries broader implications for education, particularly in shaping university policies, refining classroom practices, and tailoring individual educational approaches. In this regard, the study aims to elucidate the foundational principles of financial education as a means to prevent problematic shopping behaviors among college students.

**Keywords**—college students, online sales promotions, stress relief, material success, shopping addiction

## I. INTRODUCTION

In recent years, technological advancements and the widespread availability of online platforms have significantly influenced daily life, with the internet playing a pivotal role in enhancing various aspects of consumption (Mohammad *et al.*, 2019). According to Digital 2023: Taiwan, approximately ninety-point-seven percent of the population are internet users, with sixty-point-three percent engaging in online purchases (We are social, 2023). This trend has led to the proliferation of online shopping in Taiwan, with online purchases amounting to four trillion five hundred ninety billion NT dollars by 2020, and significant growth continuing (the Market & Consulting Institute (MIC), 2021).

Online shopping offers numerous advantages, including accessibility at any time, effortless price comparison, access to product reviews for informed decision-making, a wide range of options, and frequent discounts (Haridasan & Fernando, 2018). Consequently, shopping online has become an integral part of daily life for many individuals, particularly college students (Gupta, 2013).

Despite its convenience, online shopping has raised concerns, particularly regarding addiction. Sales figures for online stores surged by sixteen-point one percent in 2020 due to the COVID-19 pandemic, indicating a significant change in consumer behavior (Kang, 2021). The increased exposure to products through online promotions and the perception of shopping as a means of stress relief or status symbol has contributed to the rise in shopping addiction (Hartney, 2022).

Given the prevalence of online sales promotions and their impact on consumer behavior, especially among college students, it is essential to investigate their influence on shopping addiction. Additionally, exploring how stress relief and material success contribute to this phenomenon for college students is crucial for understanding and addressing shopping addiction effectively. Financial education also plays a crucial role in empowering college student shoppers to make informed decisions and manage their finances responsibly.

However, despite extensive research on consumer behavior, there is a lack of studies examining the interplay between online sales promotions, stress relief, material success, and shopping addiction.

This study seeks to fill this gap by investigating the relationship between shopping addiction among college students and three key factors—online sales promotions, stress relief, and material success. Specifically, it aims to address the following research questions in the context of online college student shoppers:

1. What factors contribute to the impulse buying behavior of online college student shoppers?
2. What is the extent of the relationship between online sales promotions and impulse buying behavior among online college student shoppers?
3. How does stress relief affect the impulse buying behavior of online college student shoppers?
4. What is the association between material success and impulse buying behavior among online college student shoppers?

By addressing these questions, the study aims to provide valuable insights into the dynamics of shopping addiction among online college student shoppers and offer a framework for interventions to mitigate its adverse effects. Additionally, it contributes to academia by advancing our understanding of college student consumer behavior in the context of online sales promotions, stress relief, material success, and shopping addiction.

## II. LITERATURE REVIEW

### A. Online Sales Promotions

Online sales promotions, such as gifts, coupons, and discounts, play a crucial role in influencing consumer behavior by enhancing demand, increasing sales, and attracting new customers (Evans, 2009). These promotions strategically alter pricing, shipping costs, and offer incentives like free gifts to stimulate consumer purchasing decisions (Javed, 2013; Bloomidea, 2022). Research highlights that free shipping significantly impacts consumer preferences, with a large majority more likely to make purchases when free shipping is available (Bloomidea, 2022). In Asia, the popularity of online shopping is bolstered by competitive pricing and promotional offers (Keyurkumar *et al.*, 2021).

#### Stress Relief:

Shopping serves as a form of self-regulation and stress relief, often referred to as retail therapy (Lee & Boettger, 2017; Atalay *et al.*, 2011). While not a formal therapeutic intervention, retail therapy is widely adopted for relaxation and emotional management in contemporary society (Atalay *et al.*, 2011). It provides a sense of control and alleviates sadness, especially during times of emotional distress (Rick *et al.*, 2014). However, excessive shopping can lead to financial strain and potential addiction, depending on individual coping mechanisms (Darby, 2013; Rick *et al.*, 2014).

### B. Material Success

Perceptions of success are often tied to material wealth and possessions, influencing consumer behaviors towards luxury goods as symbols of social status (Francesca, 2019; Wiedmann *et al.*, 2007). This 'Success Effect' reinforces personal identity and influences product choices, although success encompasses broader aspects like personal achievements and relationships (Maslow, 1954). While luxury items signify success for many, true fulfillment derives from inner growth and meaningful engagement, transcending material possessions (Maslow, 1954).

### C. Shopping Addiction

The rise of online shopping has contributed to an increase in shopping addiction, categorized as a behavioral disorder characterized by compulsive buying to alleviate negative emotions like anxiety and depression (Koran *et al.*, 2006). Known as Oniomania, shopping addiction is fueled by societal pressures and consumerism, equating spending with social worth (Hartney, 2022). Despite its prevalence, shopping addiction is a recognized psychiatric disorder with symptoms including loss of control, euphoric spending sprees, and financial repercussions (Black, 2007; Tavares *et al.*, 2008).

### D. Hypotheses

Based on the literature, the study proposes the following hypotheses:

H1: There is a significant correlation between online sales promotions and shopping addiction among college students.

H2: Stress relief significantly influences shopping addiction behaviors.

H3: Material success correlates significantly with tendencies towards shopping addiction.

H4: Online sales promotions, stress relief, and material success collectively predict shopping addiction among college students.

These hypotheses will guide empirical research into understanding how promotional strategies, stress management, perceptions of success, and other factors contribute to shopping addiction among college students.

## III. METHODOLOGY

Online shopping has become an integral aspect of college students' lives. However, excessive engagement in this activity can potentially result in the development of shopping addiction. Therefore, investigating the influence of online sales promotions, stress relief, and material success on shopping addiction is crucial for gaining insights into its formation process and associated factors.

#### Participants and procedure

College students in Taiwan were recruited using a convenience sampling method, and both self-administered pencil-and-paper questionnaires and online questionnaires were employed. Prior to questionnaire completion, students were provided with essential study information, including its purpose, questionnaire structure, and confidentiality assurance. Furthermore, students were required to provide informed consent by ticking a checkbox before proceeding with the questionnaires.

The research sample comprised 380 college students in Taiwan. Of the participants, 257 (67.63%) were male students and 123 (32.37%) were female counterparts. The distribution of their academic years is as follows: 36.32% in their freshman year, 22.37% in their sophomore year, 18.68% in their junior year, and 22.63% in their senior year.

#### Measures

To ensure the effectiveness and reliability of the questionnaire, this study carefully considered the research objectives and research questions while designing it. The questionnaire design was based on the principles of clarity, conciseness, and diversity. The questions in the questionnaire were formulated to be clear and avoid the use of ambiguous terms or difficult-to-understand words. Additionally, the questionnaire was kept as concise as possible, avoiding lengthy descriptions or repetitive questions. Furthermore, it included questions covering multiple aspects and perspectives to obtain a comprehensive understanding.

**Online Sales Promotions (OSP).** This scale is a seven-item, five-point Likert scale used to explore the influence of online sales promotions on shopping addiction. While these promotions provide college students with more shopping opportunities and choices, excessive promotions may trap them into a shopping addiction by encouraging over-consumption due to limited-time offers or discounts.

**Stress Relief (SR).** This scale is an eleven-item, five-point Likert scale used to investigate stress relief as a contributing factor to shopping addiction. With increasing life pressures, college students may turn to shopping as a means to relieve emotional or life stress, leading to habitual behavior and an increased risk of shopping addiction.

**Material Success (MS).** This scale, developed by Richins and Dawson (1992), is a six-item, five-point Likert scale used to assess the role of material success in shopping addiction. College students may over-consume due to their admiration for individuals who own expensive items or their desire to impress others, potentially leading to shopping addiction. The influence of recommendation systems and social media further exacerbates this impact.

**Shopping Addiction (SA).** This scale, developed by Andreassen *et al.* (2015), is a seven-item, five-point Likert

scale used to assess the inner thoughts and states, as well as the behavior of addictive shopping. College students were asked to indicate the propensity of their responses on a Likert scale ranging from strongly disagree to strongly agree.

Data Analysis

In this study, data were analyzed using SPSS. First, descriptive statistics were calculated. Next, normality assumptions were examined by assessing the skewness and kurtosis values of the research measures. Cronbach’s alpha was employed to examine the item-level internal consistency reliability of the scales. Pearson’s correlations were utilized to determine the bivariate correlations between OSP, SR, MS, and SA. Furthermore, the relationships of OSP, SR, MS, and SA were investigated using multiple regression models. All tests had two-tailed *p*-values, with a significance level set at *p* < 0.05.

IV. RESULTS

The college student participants had a mean (SD) score of 3.60 (0.71) on the OSP, 4.46 (0.65) on the SR, 3.08 (0.62) on the MS, and 2.42 (0.79) on the SA. Additionally, the skewness coefficients ranged from 0.044 to 0.290, and the kurtosis coefficients ranged from 0.006 to 0.454. These values indicate that OSP, SR, MS, and SA are normally distributed, as per the guidelines proposed by Muthèn and Kaplan (1985).

The Cronbach’s alpha values for this study were 0.858, 0.602, 0.663, and 0.887 for OSP, SR, MS, and SA, respectively. All values were above the threshold of 0.60, indicating that the research scales used in this study are reliable (Raharjanti *et al.*, 2022).

The OSP (*r* = 0.286, *p* = 0.000), SR (*r* = 0.444, *p* = 0.000), and MS (*r* = 0.292, *p* = 0.000) were found to be significantly positively correlated with SA. This suggests that higher levels of OSP, SR, and MS are associated with a higher severity of SA behaviors among college students.

Additionally, the magnitude of correlation between SR and SA was larger than those between OSP and SA, as well as MS and SA. Thus, hypotheses 1 to 3 were supported.

Table 1. Correlation matrix between study variables

Variable		OSP	SR	MS	SA
OSP	Pearson Correlation	1	0.396*	0.223*	0.286*
	<i>p</i> value		0.000	0.000	0.000
SR	Pearson Correlation	0.396*	1	0.120*	0.444*
	<i>p</i> value	0.000		0.000	0.000
MS	Pearson Correlation	0.223*	0.120*	1	0.292*
	<i>p</i> value	0.000	0.000		0.000
SA	Pearson Correlation	0.286*	0.444*	0.292*	1
	<i>p</i> value	0.000	0.000	0.000	

\* Correlation is significant at the 0.05 level (2-tailed).  
OSP= Online sales promotions scale; SR=Stress relief scale; MS= Material success scale; SA=Shopping addiction scale

The result of the regression analysis is summarized in Table 2. The variance inflation factor values ranged from 1.054 to 1.231, suggesting no multicollinearity among the research variables. The research variables explained 25.5% of the total variance in the model (*F* (3, 376) = 44.146, *p* = 0.000).

The results identified SR as a significant predictor in this model ( $\beta$  = 0.384, *t* = 7.950, *p* = 0.000, 95% CI [0.352, 0.584]). Meanwhile, MS was also a significant predictor in the model ( $\beta$  = 0.227, *t* = 4.985, *p* = 0.000). Therefore, Hypothesis 4 was partially supported.

Table 2. Results of multiple regression analysis

Model	Unstandardized Coefficients		Standardized Coefficients	<i>t</i>	<i>p</i>	95.0% Confidence Interval for B		Collinearity Statistics	
	B	S. E.	Beta			Lower Bound	Upper Bound	Tolerance	VIF
Constant	-0.889	0.291		-3.056	0.002	-1.461	-0.317		
OSP	0.092	0.055	0.083	1.686	0.093	-0.015	0.200	0.812	1.231
SR	0.468	0.059	0.384	7.950	0.000	0.352	0.584	0.842	1.187
MS	0.289	0.058	0.227	4.985	0.000	0.175	0.403	0.949	1.054

Note: OSP= Online sales promotions scale; SR=Stress relief scale; MS= Material success scale; SA=Shopping addiction scale

V. CONCLUSION

Over the past century, technological advancements have brought about a surge in societal and psychological challenges. Despite this, there has been a noticeable lack of research on the psychosocial characteristics preceding problematic shopping behaviors among college students. Understanding these factors is essential for uncovering the roots of online shopping addiction and evaluating the risk factors for impulsive shopping behavior. Thus, the current

study aims to bridge these gaps and provide insights into effective interventions, establishing and reinforcing measures to combat such behaviors specifically among college students.

This study identified a positive association between Stress Relief (SR) and online Shopping Addiction (SA), consistent with prior research (Hassan *et al.*, 2023; Ningtyas & Vania, 2022). Additionally, a positive correlation was found between Material Success (MS) and habitual shopping behavior. Specifically, greater severity of MS correlated with higher dependency on shopping, leading to increased

likelihood of impulsive buying behaviors (Benli & Ferman, 2019).

Acknowledging various limitations is crucial when interpreting study findings. Primarily, the study's focus on Taiwanese university students limits the generalizability of conclusions. Moreover, reliance on a convenience sample further restricts the representativeness of findings to this specific demographic. Additionally, the use of self-reported questionnaires introduces validity and reliability concerns.

To mitigate these limitations, future research should explore predictors of online shopping addiction using more diverse and representative samples. Incorporating external measures and employing multiple assessment tools can enhance the validity and generalizability of conclusions. Investigating potential cultural or regional differences in predicting online shopping addiction through studies with diverse samples is warranted. Furthermore, future research should delve into the impact of offline/online identity incongruence on susceptibility to impulsive shopping behaviors.

Despite these constraints, this study significantly contributes to the literature on online shopping addiction and impulsive buying behaviors prevalent in modern society. It sheds light on previously unexplored relationships among online sales promotions, stress relief, material success, and online shopping addiction behaviors.

In addition to its academic significance, the study holds broader implications for education, particularly in university policies, classroom practices, and individual educational approaches. In this context, the study aims to elucidate the foundational principles of financial education to prevent problematic shopping behaviors among students.

#### CONFLICT OF INTEREST

The authors declare no conflict of interest.

#### AUTHOR CONTRIBUTIONS

LCC and TCT contributed to data collection, data analysis, interpretation, manuscript preparation, and editing; ET contributed to the conceptualization and study design, as well as the introduction and conclusion sections of the manuscript; YXL, SHW, YKL, YCK, and HFL contributed to data collection, study design, and manuscript preparation and editing; all authors had approved the final version.

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#### REFERENCES

- Andreassen, C. S., Griffiths, M. D., Pallesen, N. S., Bilders, R. M., Torsheim, T., & Aboujaoude, E. 2015. The Bergen shopping addiction scale: Reliability and validity of a brief screening test. *Frontiers in Psychology*, 17(6): 1374.
- Atalay, A. S., & Meloy, M. G. 2011. Retail therapy: A strategic effort to improve mood. *Psychology & Marketing*, 28(6): 638–660.
- Benli, B., & Ferman, M. 2019. The effect of cultural dimensions on conspicuous consumption and online compulsive buying behavior: a comparative study among Turkish and American consumers. *Journal of Management Marketing and Logistics*, 6(2): 103–127.
- Bhargava, V., & Velasquez, M. 2021. Ethics of the attention economy: The problem of social media addiction. *Business Ethics Quarterly*, 31(3): 321–359.
- Blackwell, D. R., Miniard, P. W. & Engel, J. F. 2001. *Consumer behavior*, 9th ed., Harcourt, Inc.
- Bloomidea. 2022. *9 types of promotions you can do in an online store*. Available: <https://bloomidea.com/en/blog/9-types-of-promotions-you-can-do-in-an-online-store>.
- Bucko, J., Kakalejic, L., & Ferencova, M. 2018. Online shopping: Factors that affect consumer purchasing behavior. *Cogent Business & Management*, 5(1): 1535751.
- Darby, M. 2013. *Retail therapy through online shopping cannot 'cure' depression, but it is addictive*. Deseret News. Available: <https://www.deseret.com/23584933/retail-therapy-online-shopping-depression-addictive>.
- Dwivedi, Y., Hughes, L., Baabdullah, A. M., Ribeiro-Navarrete, S., Giannakis, M., Al-Debei, M. M., & Wamba, S. F. 2022. Metaverse beyond the hype: Multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research, practice and policy. *International Journal of Information Management*, 66: 102542.
- Evans, D. S. 2009. The online advertising industry: economics, evolution, and privacy. *Journal of Economic Perspectives*, 23(3): 37–60.
- Gupta, A., Bansal, R., & Bansal, A. 2013. Online shopping: A shining future. *International Journal of Techno-Management Research*, 1(1): 1–10.
- Hassan, N., Taf, B., & Tajuddin, R. S. 2023. The impact of the covid-19 pandemic on compulsive buying behaviour and online shopping addiction for apparel purchasing in Malaysia: An overview of generation y and generation Z. *International Journal of Education, Psychology and Counseling*, 8(52): 176–188.
- Haridasan, A. C., & Fernando, A. G. 2018. Online or in-store: Unravelling consumer's channel choice motives. *Journal of Research in Interactive Marketing*, 12(2): 215–230.
- Hartney, E. 2022, December 15. *What Is a Shopping Addiction?* Verywell Mind. Retrieved March 28, 2023, Available: <https://www.verywellmind.com/shopping-addiction-4157288>
- Javed, L. Online marketing through consumers: A study of effectiveness of various tools. *British Journal of Management*. 1(4): 11–19.
- Kang, R. 2021, April 22. *Covid-19 accelerates shift to digital channels by Taiwan's department stores*. HKTDC Research.
- Keyurkumar, M. N., Viral, B., & Jigar, N. 2021. Measuring impact of factors influencing to consumer buying intention with respect to online shopping. *International Journal of Management*, 12(1): 232–240.
- Koran, L. M., Faber, R. J., Aboujaoude, E., Large, M. D., Serpe, R. T. 2006. Estimated prevalence of compulsive buying behavior in the United States. *The American Journal of Psychiatry*, 163(10): 806–812.
- Lee, L., & Boettger, T. 2017. The therapeutic utility of shopping: Retail therapy, emotion regulation, and well-being. *The Routledge Companion to Consumer Behavior*, 38–61.
- Maslow, A. H. (1954). *Motivation and personality*. Harpers.
- MIC 2021, February 2. *Over 40% of Taiwanese consumers aged 26-45 prefer mobile payment: MIC*. Retrieved March 28, 2023, Available: [https://mic.iii.org.tw/english/PressRelease\\_Detail.aspx?sqno=13119](https://mic.iii.org.tw/english/PressRelease_Detail.aspx?sqno=13119).
- Mohammad, A., Bright, A., Irina, M., Mikhail, S., & Yang, Z. 2019. The Internet of Things and benefits at a glance. *International Journal of Science and Engineering Investigations*, 8(89): 98–104.
- Muth ñ, B. & Kaplan, D. 1985. A comparison of some methodologies for the factor analysis of non-normal Likert variables. *British Journal of Mathematical and Statistical Psychology*, 38(2): 171–189.
- Nugrahadi, N. R., Roekman, A. E., Saroso, O., Ramadianto, A. S., Levania, M. K. 2022. Translation, validity and reliability of decision style scale in forensic psychiatric setting in Indonesia. *Heliyon*, 8(7), e09810.
- Raharjanti, N. W., Wiguna, T., Purwadianto, A., Soemantri, D., Indriatmi, W., Poerwandari, E. K., Mahajudin, M. S., Ningtyas, M. N. & Vania, A. 2022. Materialism, financial literacy, and online impulsive buying: A study on the post millennial generation in a pandemic period. *Journal of Theory and Applied Management*, 15(1): 1–12.
- Rangaswamy, E., Nawaz, N., & Changzhuang, Z. 2022. The impact of digital technology on changing consumer behaviours with special reference to the home furnishing sector in Singapore. *Humanities and Social Sciences Communications*, 9(1): 8.

- Richins, M. L. & Dawson, S. 1992. A consumer values orientation for materialism and its measurement: Scale development and validation. *Journal of Consumer Research*, 19: 303–316.
- Rick, S. I., Pereira, B., & Burson, K. A. 2014. The benefits of retail therapy: Making purchase decisions reduces residual sadness. *Journal of Consumer Psychology*, 24(3): 373–380.
- Tavares, H., Lobo, D., Fuentes, D., & Black, D. 2008. Compulsive buying disorder: A review and a case vignette. *Brazilian Journal of Psychiatry*, 30: S16–S23.
- Wiedmann, K. P., Hennigs, N., & Siebels, A. 2007. Measuring consumers'

luxury value perception: A cross-cultural framework. *Academy of Marketing Science Review*, 7: 333–361.

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