



The alternative five-factor personality model and compulsive buying among students: The mediating role of coping strategies and sex role

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Abstract

Introduction: This study investigated the relationship between the Zuckerman-Kuhlman Personality Questionnaire (ZKPQ) components and tendencies towards compulsive buying in university students, with the mediating role of coping strategies and masculinity-femininity.

Materials and Methods: The target population included all students of the University of Kurdistan during the academic year 2023-2024, from whom 340 individuals were purposefully sampled. Data collection utilized the Edwards Compulsive Buying Scale (ECBS), ZKPQ-50-CC Personality Questionnaire, Coping Inventory for Stressful Situations (CISS), and Bem Sex Role Inventory (BSRI). Data was analyzed using path analysis, SPSS 26, and LISREL 8.8 software.

Results: The results indicated that the dimensions of the five-factor personality model (neuroticism-anxiety, activity, sociability, impulsive sensation seeking, aggression-hostility), coping strategies, and femininity significantly and directly influenced compulsive buying among students. Additionally, the dimensions of the personality model exerted a significant and indirect effect on compulsive buying through coping strategies ($P=0.001$) and femininity ($P=0.001$). The direct effect of masculinity was not confirmed ($P=0.067$).

Conclusion: Based on the findings, preventive programs addressing compulsive buying among students should consider not only personality traits but also coping strategies and cultural aspects of masculinity and femininity. Therefore, focusing on vulnerability factors such as personality traits, ineffective coping styles, and gender-related characteristics can be beneficial in promoting student well-being.

Keywords: Compulsive behavior, Coping skills, Femininity, Masculinity, Personality

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Introduction

Compulsive Buying (CB) is a significant issue among individuals, especially youth, in contemporary society (1). CB refers to a condition where individuals engage in

repetitive and excessive buying behavior to the extent that they suddenly lose control over their purchasing habits (2). The prevalence and inclination towards CB are notably high among university students (1). This behavior can

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encompass compulsive buying and impulse control behaviors (3). CB may serve as a means to achieve positive emotions or cope with daily stressors (4).

Various psychological factors and characteristics can predict CB; research indicates that personality traits can significantly influence individuals' predisposition towards CB (5). One of the models developed in recent decades in terms of personality traits is the Zuckerman-Kuhlman Alternative Personality Model. The five primary dimensions of personality in the Zuckerman-Kuhlman Alternative Model include neuroticism-anxiety, aggression-hostility, activity, sociability, and impulsive sensation seeking (6). High neuroticism is associated with a greater inclination towards CB (7). A study found that individuals with higher sensation-seeking tendencies are more inclined toward CB (8). Moreover, more active and sociable individuals are more prepared for CB (9). However, personality traits are not the only internal factors influencing CB. A recent study has shown that, in addition to personality traits, there are differences in the use of active and passive coping strategies between CB and non-CB individuals (10). Coping behaviors refer to cognitive or behavioral efforts made by individuals to manage and control challenging internal/external expectations for which individuals do not have sufficient resources (11). Avoidance coping and wishful thinking are two coping behaviors known to be risk factors for students' susceptibility to CB (10). In other words, using fewer problem-focused coping behaviors and engaging excessively in passive-avoidance coping strategies increases the tendency toward compulsive buying. This tendency is more pronounced among women (12). However, according to Bronfenbrenner's ecological systems theory, various environmental layers, including macrosystems encompassing cultural values, laws, and societal beliefs, can influence individuals (13).

It is expected that cultural characteristics (including masculinity and femininity) can predict compulsive buying (14). Masculinity/femininity describes the biological tendencies of men and women within a cultural framework (15). In societies with higher levels of masculinity compared to those with lower levels, individuals tend to be more materialistic. Materialism can directly and indirectly predict compulsive buying (16). Evidence suggests that

masculine cultural attitudes can lead to emotional impulse buying (17). Conversely, evidence shows that in masculine societies, individuals are less engaged with emotions; therefore, compared to feminine societies where emotional sensitivity is prominent, impulsive behaviors such as compulsive buying are less observed (18). A research by demonstrated that neuroticism, extraversion, and openness to experience are strong motivators for compulsive buying in women compared to men; conscientiousness and agreeableness reduce the pleasure-seeking buying experience and significantly prevent compulsive buying in women (16). A review of studies indicates that while intrapersonal factors such as personality traits and coping mechanisms can influence CB (10), masculinity-femininity, a cultural factor similar to other cultural influences (e.g., living in a materialistic society), is an external factor that likely increasingly impacts CB. Considering the challenges in students' everyday lives and the potential consequences of CB for them, it is essential to gain a more comprehensive understanding of issues that can disrupt students' mental health. Therefore, the current research aimed to examine the direct and indirect effects of personality traits on CB, with coping strategies and masculinity-femininity playing a mediating role.

Materials and Methods

This study was descriptive with an applied objective, utilizing a path analysis approach for data analysis. The target population comprised all students of Kurdistan University in Sanandaj, Iran, during the academic year 2023-2024. The sample size for this study, using a structural equation modeling approach, was determined based on the number of observed and latent variables in the model, expected effect size, desired probability level, and statistical power (19). A minimum sample size of 330 was initially calculated to detect the specified effect size under the structural complexity of the model. To account for potential subject dropout and enhance external validity, 410 participants were recruited using the purposive sampling. Inclusion criteria included aged between 18 to 40 years, having Iranian nationality, absence of any diagnosed psychosis (based on the structured clinical interview), and enrolled in at least one academic unit during both semesters of the

academic year 2023-2024. The exclusion criteria included participants who refused from participation and incomplete questionnaires.

Research instruments

A) Edwards Compulsive Buying Scale (ECBS): Edwards developed this scale to assess the tendency and severity of compulsive buying behaviors through 29 items. These items cover five domains: tendency to spend, compulsion/urge to spend, feelings about shopping and spending, disruptive spending, and guilt after shopping. Items with low factor loadings were removed, reducing the number of items to 13. Construct validity has been confirmed through both confirmatory and exploratory factor analyses, and the reliability, along with its subscales, has been reported with Cronbach's alpha ranging from 0.76 to 0.91, demonstrating internal consistency (20). In Iran, Damadnejad reported a significant correlation with the Beck Depression Inventory in examining the concurrent validity of the scale. The internal consistency of the questionnaire was also obtained using Cronbach's alpha for the entire test at 0.82 (21). In the present study, the reliability, measured using Cronbach's alpha, was 0.78.

B) Zuckerman-Kuhlman Personality Questionnaire (ZKPQ-50-CC): This questionnaire, developed by Zuckerman and Kuhlman, consists of 50 items based on the Zuckerman five-factor model of personality. The five personality dimensions covered by the questionnaire are anxiety, impulsive sensation seeking, aggression-hostility, activity, and sociability. The scale shows a high correlation (0.90) with the original Zuckerman-Kuhlman Personality Questionnaire and demonstrates good validity and reliability (22). In Iran, Lameei et al. in examining the factor structure, validity, and reliability of the aforementioned questionnaire, the test-retest reliability coefficient for the entire questionnaire was 0.79, Cronbach's alpha was 0.64, and the ICC coefficient was 0.60. The concurrent validity of this questionnaire has been examined through correlation analysis with the Eysenck Personality Inventory (23). In the present study, the reliability, measured using Cronbach's alpha, ranged from 0.72 to 0.92 for the subscales.

C) Coping Inventory for Stressful Situations (CISS): The Endler and Parker Coping Inventory for Stressful Situations is a self-report tool that includes 48 items and has adult

and adolescent forms. It assesses three coping strategies: problem-focused, emotion-focused, and avoidant coping. Sixteen items represent each coping strategy. In the main sample of the scale, the internal alpha coefficient for girls and boys in the problem-focused coping strategy was 0.80 and 0.91, the emotion-focused strategy was 0.76 and 0.81, and the avoidance strategy was 0.77 and 0.83, respectively (24). In Iran, Ghoreyshi validated the coping scale by examining the construct validity using exploratory factor analysis and principal component analysis, she found that the Scale has desirable validity and calculated its reliability through Cronbach's alpha of 0.89 (25). In the present study, the reliability, as measured by Cronbach's alpha, for the problem-focused, emotion-focused, and avoidant subscales was 0.86, 0.81, and 0.79, respectively.

D) Bem Sex Role Inventory-Short Form (BSRI): This inventory consisting of 30 items, was used to assess gender role orientation. This questionnaire is based on the original BSRI and includes 60 descriptive traits or statements. Based on their responses, each individual receives three primary scores: masculinity, femininity, and androgyny. Bem reported Cronbach's alpha coefficients of 0.86 for masculinity, 0.75 for femininity, and 0.85 for androgyny. In Iran, the reliability of the short form was estimated with a Cronbach's alpha of 0.80, with component coefficients of 0.82 for femininity and 0.79 for masculinity, and its validity was confirmed through exploratory factor analysis (26). In the present study, the reliability, as measured by Cronbach's alpha, was 0.79 for masculinity and 0.81 for femininity. The research execution process commenced with a formal request to the Research Office of the University of Kurdistan, where the objectives were thoroughly communicated to the relevant official. Verbal assurances were provided regarding protecting participant privacy and the non-collection of personal data. Subsequently, authorization for the research was granted by the appropriate institutional body. The organization was also assured that the findings would be utilized to inform actionable recommendations. Following the approval, questionnaires were distributed to the identified sample of participants. All questions and concerns raised by the participants were addressed promptly and comprehensively. A call was made to invite

participants to participate in the study. Then, a psychologist reviewed the inclusion and exclusion criteria based on a structured clinical interview. Students who met the criteria filled out the research questionnaires with informed consent and knowledge of the research objectives. Three hundred forty completed questionnaires were entered into the statistical analysis software for further examination. Data analysis was carried out using the Pearson

correlation test and path analysis using SPSS 26 and LISREL 8.8.

Results

In the current study, 340 students (18 to 34 years) of the University of Kurdistan, with the mean age of 22.96 ± 2.91 years participated. Table 1 presents the descriptive findings of the variables.

Table 1. Descriptive findings of research variables

	Variable	Mean	Standard deviation	Skewness	Kurtosis
Compulsive buying	Tendency to spend	34.03	5.41	-0.34	1.03
	Dysfunctional spending	20.43	3.89	-0.69	1.20
	Post-purchase guilt	13.37	3.24	-0.23	-0.49
	Compulsion/drive to spend	17.42	3.23	-0.44	-0.50
	Feelings about shopping and spending	13.46	2.63	-0.30	0.01
	Total score	98.71	13.58	-0.41	1.41
Alternative five factors model	Neuroticism-anxiety	4.42	1.99	0.18	-0.77
	Impulsive sensation-seeking	4.11	1.96	0.27	-0.49
	Activity	3.81	1.85	0.07	-0.57
	Sociability	4.33	1.71	-0.12	-0.80
	Aggression-hostility	4.56	1.60	0.32	0.60
Coping strategy	Problem-focused	53.81	10.46	-0.28	0.04
	Emotion- focused	47.82	12.06	-0.09	-0.67
	Avoidance	51.94	9.72	-0.16	-0.24
Sex role	Femininity	35.03	6.64	-0.32	-0.35
	Masculinity	33.31	6.33	-0.07	0.06

Table 1 shows the mean and standard deviation of the variables of compulsive buying, five personality factors, coping strategies, and sex role. According to the results, the observed skewness and Kurtosis value for the research variables was in the range

(2, 2); in terms of the skewness and Kurtosis of the compulsive buying variables, five personality factors, coping strategies, and sex role are normal, and their distribution was symmetrical. The correlation matrix between research variables is presented in Table 2.

Table 2. Correlation matrix of research variables

	Variable	1	2	3	4	5	6	7	8	9	10	11
1	Compulsive buying	1										
2	Neuroticism-anxiety	0.38**	1									
3	Impulsive sensation-seeking	0.36**	0.32**	1								
4	Activity	-0.30**	-0.20**	-0.17**	1							
5	Sociability	-0.43**	-0.37**	-0.23**	0.29**	1						
6	Aggression-hostility	-0.35**	-0.19**	0.22**	0.30**	0.36**	1					
7	Problem-focused	-0.45**	-0.28**	-0.23**	0.28**	0.33**	0.20**	1				
8	Emotion- focused	0.55**	0.40**	0.23**	-0.25**	-0.30**	-0.22**	-0.39**	1			
9	Avoidance	0.30**	0.15*	0.24**	-0.24**	0.26**	0.11	-0.43**	0.35**	1		
10	Femininity	0.49**	0.23**	0.20**	-0.30**	-0.15**	-0.10	-0.33**	0.41**	0.33**	1	
11	Masculinity	-0.06	-0.13*	0.10	0.22**	0.17**	0.11	0.24**	-0.03	0.17**	-0.18**	1

* $P < 0.05$, ** $P < 0.01$

According to the results of the correlation matrix (Table 2), there was a positive and significant relationship between compulsive buying with neuroticism-anxiety, impulsive sensation-seeking, emotion-focused, avoidance,

and femininity at the level of 99% and with activity, sociability, aggression-hostility, problem-focused had a negative and significant relationship at the level of 99%. Path analysis was used to investigate the direct and indirect

effects of five personality factors on compulsive buying, with the mediation of coping strategy

and sex role. The research model is presented in T-value mode in the following.

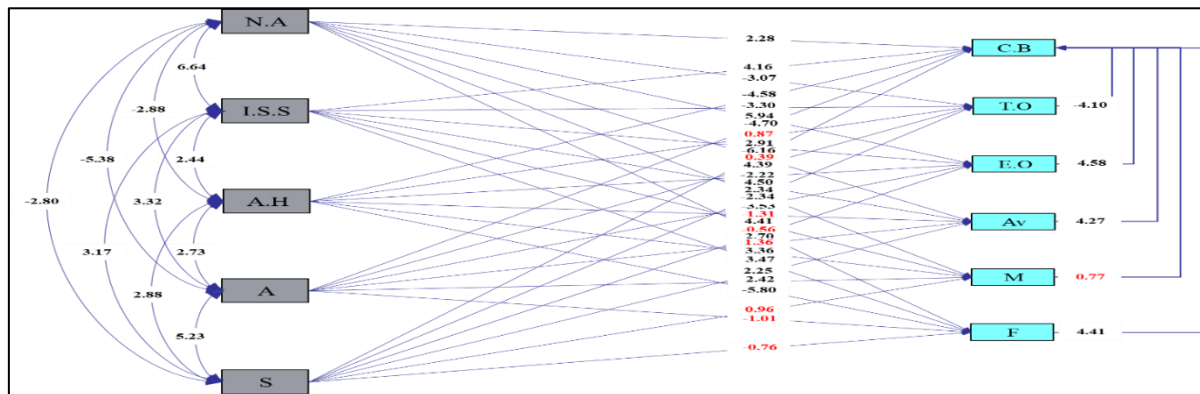


Figure 1. Research model test (in T-value mode)

The results of the fit indexes (CFI= 0.91, NFI= 0.92, GFI= 0.91, χ^2 = 2.64, and RMSEA= 0.072) showed that the research model is approved in terms of meaningful and fit indexes. The direct effects of 5 personality

factors on compulsive buying, coping strategy, and sex role and the direct effect of coping strategy and sex role on compulsive buying are presented in Table 3.

Table 3. Direct effects

Variable			Path coefficients	T-value	Standard error	P
Neuroticism-anxiety	→	Compulsive buying	0.11	2.28	0.130	< 0.01
Neuroticism-anxiety	→	Problem-focused	-0.16	-3.07	0.045	< 0.01
Neuroticism-anxiety	→	Emotion- focused	0.30	5.94	0.022	< 0.01
Neuroticism-anxiety	→	Avoidance	0.02	0.39	0.113	> 0.01
Neuroticism-anxiety	→	Femininity	-0.13	-2.34	0.065	< 0.01
Neuroticism-anxiety	→	Masculinity	0.14	2.70	0.052	< 0.01
Impulsive sensation-seeking	→	Compulsive buying	0.16	4.16	0.110	< 0.01
Impulsive sensation-seeking	→	Problem-focused	-0.17	3.30	0.042	< 0.01
Impulsive sensation-seeking	→	Emotion- focused	0.15	2.91	0.041	< 0.01
Impulsive sensation-seeking	→	Avoidance	0.25	4.50	0.029	< 0.01
Impulsive sensation-seeking	→	Femininity	0.23	4.41	0.033	< 0.01
Impulsive sensation-seeking	→	Masculinity	0.18	3.47	0.040	< 0.01
Activity	→	Compulsive buying	-0.17	-4.58	0.085	< 0.01
Activity	→	Problem-focused	0.04	0.87	0.216	> 0.01
Activity	→	Emotion- focused	-0.11	-2.22	0.072	< 0.01
Activity	→	Avoidance	-0.07	-1.31	0.189	> 0.01
Activity	→	Femininity	0.17	3.36	0.37	< 0.01
Activity	→	Masculinity	-0.29	-5.80	0.025	< 0.01
Sociability	→	Compulsive buying	-0.18	-4.70	0.065	< 0.01
Sociability	→	Problem-focused	0.23	4.39	0.031	< 0.01
Sociability	→	Emotion- focused	-0.18	-3.53	0.033	< 0.01
Sociability	→	Avoidance	0.08	1.36	0.176	> 0.01
Sociability	→	Femininity	0.13	2.42	0.058	< 0.01
Sociability	→	Masculinity	-0.05	-1.01	0.166	< 0.01
Aggression-hostility	→	Compulsive buying	-0.22	-6.16	0.030	< 0.01
Aggression-hostility	→	Problem-focused	0.12	2.34	0.068	< 0.01
Aggression-hostility	→	Emotion- focused	-0.03	-0.56	0.209	> 0.01
Aggression-hostility	→	Avoidance	0.12	2.25	0.071	< 0.01
Aggression-hostility	→	Femininity	0.05	0.96	0.315	> 0.01
Aggression-hostility	→	Masculinity	-0.04	-0.76	0.182	< 0.01
Problem-focused	→	Compulsive buying	-0.17	-4.10	0.034	< 0.01
emotion- focused	→	Compulsive buying	0.20	4.58	0.028	< 0.01
Avoidance	→	Compulsive buying	0.16	4.27	0.038	< 0.01
Femininity	→	Compulsive buying	0.03	0.77	0.240	> 0.01
Masculinity	→	Compulsive buying	0.18	4.41	0.031	< 0.01

According to Table 3, the direct effect of personality factors, coping strategies, and masculinity on compulsive buying is significant at the 99% confidence level. The Sobel test was used to investigate the indirect effect of personality factors on compulsive

buying with the mediation of coping strategies and masculinity-femininity. To determine the intensity of the indirect effect through mediation, a statistic called VAF was used. The results are presented in Table 4.

Table 4. Indirect effects

Research hypothesis				T-Sobel	Standard path coefficient	VAF	P
Neuroticism-Anxiety	→	Problem-focused	→	2.657	0.027	0.198	< 0.05
		Emotion- focused		6.914	0.060	0.353	< 0.05
		Avoidance		0.411	-	-	> 0.05
		Masculinity		0.203	-	-	> 0.05
		Femininity		2.706	0.025	0.186	< 0.05
Impulsive Sensation-Seeking	→	Problem-focused	→	3.109	0.029	0.153	< 0.05
		Emotion- focused		3.573	0.030	0.158	< 0.05
		Avoidance		4.199	0.040	0.200	< 0.05
		Masculinity		0.526	-	-	> 0.05
		Femininity		3.524	0.032	0.168	< 0.05
Activity	→	Problem-focused	→	0.534	-	-	> 0.05
		Emotion- focused		2.220	0.022	0.115	< 0.05
		Avoidance		0.690	-	-	> 0.05
		Masculinity		0.391	-	-	> 0.05
		Femininity		5.685	0.052	0.235	< 0.05
Sociability	→	Problem-focused	→	4.232	0.039	0.178	< 0.05
		Emotion- focused		4.382	0.036	0.167	< 0.05
		Avoidance		0.765	-	-	> 0.05
		Masculinity		0.224	-	-	> 0.05
		Femininity		0.800	-	-	> 0.05
Aggression-hostility	→	Problem-focused	→	1.988	0.020	0.089	< 0.05
		Emotion- focused		0.586	-	-	> 0.05
		Avoidance		1.776	-	-	> 0.05
		Masculinity		0.019	-	-	> 0.05
		Femininity		0.667	-	-	> 0.05

According to the indirect t-statistic (T-Soble), between the variables of five personality factors with compulsive buying, with the mediation of coping strategies and masculinity-femininity, which is outside the range (1.96 and -1.96). Therefore, in addition to the direct effect, the variables of personality factors indirectly affect compulsive buying through the variable of coping strategies and masculinity-femininity. According to the amount obtained for the VAF statistic, it can be seen that the effect of neuroticism-anxiety is 19.8%, the effect of impulsive sensation-seeking is 15.3%, the effect of sociability is 17.8%, and the effect of aggression-hostility is 8.9% on compulsive buying through the problem-focused variable. Also, the effect of neuroticism-anxiety is 35.3%, the effect of impulsive sensation-seeking is 15.8%, the effect of activity is 11.5% on compulsive buying through the emotion-

focused variable, and the effect of impulsive sensation-seeking is 20% on compulsive buying through the avoidance. The effect of neuroticism-anxiety is 18.6%, and the effect of impulsive sensation-seeking is 16.8% on compulsive buying through femininity.

Discussion

The present study investigated the relationship between the dimensions of the Alternative Five-Factor Model (AFFM) and compulsive buying, with the mediating roles of coping strategies and masculinity-femininity among university students. The results indicated that personality dimensions directly affect Compulsive Buying (CB) behavior. These findings align with previous studies (5,7-9). As observed, the personality traits of neuroticism-anxiety and impulsive sensation seeking were

positively related to CB, while sociability, activity, and aggression-hostility were negatively related. Mikołajczak et al. (9) showed that the individuals who are more active and sociable are more prepared for CB. It can be posited that CB may serve as a compensatory mechanism for individuals with high levels of neuroticism, helping them counteract the negative emotions they might experience (15). Considering that Zuckerman et al. (6) described activity as a dimension of extraversion, it can be said that individuals with low levels of activity have a minimal inclination toward experiencing positive emotions, suffer from severe feelings of isolation, and have significantly impaired perceptions of receiving social support from others, which ultimately renders their self-concept vulnerable. For these individuals, buying behavior may serve as a compensatory mechanism (27). Isolated students may find achieving a sense of belonging and pleasure in everyday life very challenging. Socially rejected students might immediately experience pleasure through problematic buying behavior, as it can provide them with a sense of re-connection with society (28). This trait reflects maladaptive personality traits and stimulates creative thinking in situations requiring innovative responses (29). Thus, this thinking likely leads to a reduction in compulsive behaviors, including CB. The results indicated that coping strategies (problem-focused, emotion-focused, and avoidant) have a direct effect on CB among students. This finding aligns with previous research outcomes, such as (12). Otero-López et al. (10) showed that CB can be viewed as an avoidant coping strategy for academic stressors, where students may resort to compulsive buying to protect their short-term well-being by avoiding problems. However, in the long term, it can become a strong reinforcer for avoiding stressful events and turn into a problematic behavior itself. Students in ambiguous and confused situations likely use CB as a cognitive and behavioral strategy to avoid uncertainty (30). Therefore, problem-focused coping strategies seek the best solutions to address the problem and likely reduce CB by fostering a sense of control.

The results indicated that femininity has a positive and significant relationship with CB. However, no relationship between masculinity and CB was observed, which aligns with previous research (16). Tarka et al. (16) showed

that in Poland, impulsive behaviors such as CB are less common in male-dominated societies than in female-dominated societies characterized by paying attention to emotions. This finding may be attributed to the social norm that portrays shopping as pleasurable and enjoyable for women, whereas it is considered somewhat inappropriate for men. The cultural trait of masculinity likely leads men to engage in more cautious, problem-focused coping strategies when shopping, thus providing them with a sense of control (31). This could explain why no relationship between masculinity and CB was observed in the current study.

The results indicated that personality dimensions indirectly affect CB through coping strategies. As the findings of this study revealed, students with higher levels of neuroticism tend to use more emotion-focused coping strategies. To explain this, neuroticism is a trait that predisposes individuals to experience anxiety and prepares them to interpret events in a threatening manner, thereby undermining their adaptive responses (7). Some aspects of neuroticism disrupt how individuals assess stressful events, causing them to perceive these events negatively and reducing their ability to employ effective coping strategies (e.g., problem-solving, cognitive restructuring) (9). Individuals with high levels of activity exhibit prominent traits of impulsivity and sensitivity to rewards, which are recognized as risk factors for employing emotion-focused coping strategies. On the other hand, evidence showed that students with higher levels of impulsive sensation-seeking use more avoidant coping strategies. The results indicated that personality dimensions have indirect effects on CB through femininity. The findings revealed that only femininity mediates the relationship between anxiety-neuroticism, impulsive sensation seeking, and activity. This can be explained by the observation that women show higher levels of compulsive buying than men and have a greater propensity for impulsive buying to regulate their emotions and mood. Additionally, women have a stronger inclination towards pleasure-oriented shopping compared to men. Due to gender norms, shopping is perceived as an activity that women, rather than men, should enjoy and engage in. Regardless of these gender norms, specific personality traits (neuroticism, impulsive sensation seeking, and activity) encourage the experience of pleasure-oriented

shopping, particularly for women, which leads to compulsive buying. This study, like all other research, had its limitations. As a cross-sectional study, estimating causal relationships from the findings was impossible. Additionally, all data were collected via questionnaires, which could introduce bias or result in misinterpretation of questions by participants. The length of the questionnaire, which required a significant amount of time to complete, was another limitation and sometimes led to reluctance among participants to engage fully in the study. Future research should consider using other research methods, such as longitudinal studies, to explore developmental trends and establish causal relationships. Incentive tokens could be employed to increase participant willingness. Subsequent studies could also use interviews to obtain deeper insights and reduce errors associated with paper-based tools. Given the relationship between personality traits and CB, it is recommended that screening programs be implemented to identify at-risk students and provide educational and therapeutic programs aimed at reducing the risk of engaging in CB.

Conclusion

The results of this study highlight that personality traits, coping strategies, and femininity-masculinity variables significantly

and directly impact compulsive buying among students. Additionally, the study found that personality traits indirectly affect compulsive buying through coping strategies and femininity.

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Conflict of Interests

The authors declare no conflict of interest.

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Ethical Considerations

Vice Chancellor of Kurdistan University in Sanandaj approved this study. This research was completed independently, and the subject was given the required instructions on executing the relevant questionnaires in case of any ambiguity when filling out the questionnaires. Furthermore, ensuring the confidentiality of the information and preparing participants for the research sample was one of the ethical points of this research. This study was conducted under the Declaration of Helsinki.

Authors' Contributions

First author: Data gathering, statistical analysis, manuscript drafting, and final edition. The second and third authors: The concept and design, supervise the research process and write the final version of the manuscript.

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