

# Compulsive Buying Disorder among Medicine, Dentistry, and Nursing Undergraduate Students from Chengalpattu District, Tamil Nadu, India: A Cross-sectional Study

A HARI NARAYANAN<sup>1</sup>, VEDAPRIYA DANDE RAJASEKAR<sup>2</sup>, RAJA DANASEKARAN<sup>3</sup>,  
BN SURYA<sup>4</sup>, P MANOJ<sup>5</sup>, S MADHUSH KUMAR<sup>6</sup>, REHANA SYED<sup>7</sup>, R HARISHMA<sup>8</sup>



## ABSTRACT

**Introduction:** Compulsive Buying Disorder (CBD), also known as buying shopping disorder or Oniomania, is a growing concern that affects mental health, relationships, and financial stability. It is characterised by excessive and uncontrollable buying behaviour. With the rise of consumerism and the proliferation of online shopping, compulsive buying has increased, particularly among adolescents and young adults.

**Aim:** To estimate the prevalence of CBD and identify associated risk factors among undergraduate medical, dental, and nursing students.

**Materials and Methods:** A cross-sectional study was conducted in the Chengalpattu district of Tamil Nadu, India from November 2023 to March 2024 among undergraduate students from six colleges. A total of 380 students from medical, dental, and nursing disciplines participated in the study. A pretested semistructured questionnaire was used to collect information on socio-demographic details and various risk factors associated with CBD. The validated Richmond Compulsive Buying Scale (RCBS) was employed to determine the

prevalence of CBD. Data analysis was performed using Statistical Package for Social Sciences (SPSS) version 22.0.

**Results:** Among the participants, 232 (61.1%) were female, and 148 (38.9%) were male, with the majority, 272 (71.6%), being under 21 years of age. Educationally, 201 (55.3%) were medical students, while 85 (22.4%) were from nursing and dental disciplines. CBD was observed in 113 (29.7%) of the participants. Significant associations with CBD included female gender, medical education, family history of shopaholics, online shopping, shopping-induced euphoria, anxiety or distress when unable to shop, and lying to family or friends about shopping expenses ( $p$ -value  $<0.05$ ).

**Conclusion:** The study revealed that 29.7% of undergraduate students exhibited Compulsive Buying Behaviour (CBB). These findings underscore the importance of targeted interventions and awareness campaigns that address identified risk factors, such as gender, academic discipline, family history, and emotional triggers related to shopping. Such efforts could enhance mental health, financial stability, and interpersonal relationships among students.

**Keywords:** Addictive disorder, Compulsive personality disorder, Oniomania, Socioeconomic factors, Stress

## INTRODUCTION

Epidemiological studies have reported that CBD is a common psychiatric condition. The condition known as obsessive shopping disorder, or excessive buying behaviour, has drawn a lot of attention lately. It describes an overwhelming need to buy things even when there isn't a true necessity or desire for them. An increasing number of people are suffering from online shopping addiction as a result of the growth of e-commerce and online shopping platforms, which have made it easier for individuals to engage in compulsive purchasing behaviour. Due to their increased emotional and psychological involvement with shopping, as well as the pressure from society and culture to present themselves well and follow the latest trends, this condition is becoming increasingly prevalent [1].

The effects of obsessive purchasing are often underestimated. Despite not being classified as a distinct category in the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), published by the American Psychiatric Association in 2023, many people still view compulsive shopping as a behavioural addiction [2]. Anxiety, compulsive thinking, and behavioural compulsions that interfere with daily functioning are hallmarks of this disorder. It is characterised by maladaptive behaviour or an obsession with shopping that arises from negative impacts, impeding daily

functioning and leading to financial difficulties. Strong long-term research on this disorder does not yet exist [3].

According to recent research, people with CBD experience distress and cognitive impairment [4]. In addition to the high prevalence of clinically diagnosable CBD, evidence suggests that many individuals experience CBD symptoms without meeting the full criteria for the disorder. Studies have reported that upto a quarter of the population experiences compulsive buying symptoms at some point in their lives [5,6]. The average age of onset for CBB is between 18 and 24 years, a period when perceived social status associated with buying, materialism, and self-esteem gains preponderance among young adults [7]. Previous literature has shown that CBB and online shopping addiction can substantially influence a person's financial and emotional wellbeing. These behaviours can lead to increasing debt, greater stress, and lower self-esteem [8].

The study is particularly relevant to the field of consumer behaviour because it provides a new perspective on addressing both the economic and psychological consequences associated with the disorder, such as distress, financial loss, and social problems, including damage to relationships with family and friends, loneliness, debt, and depression. It also fills a gap in the literature regarding differences in compulsive consumer attitudes, decision-

making, product preferences, the impact of credit card use, and post-purchase perspectives based on the severity of the disorder. The results offer important insights that will be beneficial to both counsellors and policymakers in addressing and mitigating the negative effects of CBB.

The aim of the study is to estimate the prevalence of CBD and identify associated risk factors among undergraduate medical, dental, and nursing students.

## MATERIALS AND METHODS

A cross-sectional study was conducted from November 2023 to March 2024 among 380 undergraduate medical, dental, and nursing students from six colleges in the Chengalpattu district, Tamil Nadu, India. Among the six colleges selected randomly, three belonged to the Chettinad Academy of Research and Education (Chettinad Hospital and Research Institute, Chettinad College of Nursing, and Chettinad Dental College). The other three private Institutions were also located in the Chengalpattu district. Undergraduate students from the disciplines of medicine, dentistry, and nursing were included as study participants. Ethical clearance for this study was obtained from the Institutional Human Ethics Committee of the Chettinad Academy of Research and Education (Approval No: IHEC-I/2232/23). Written informed consent was obtained from each participant before the start of the study.

**Sample size calculation:** The sample size was calculated based on a 7.4% prevalence reported in a study by Villardefrancos and Otero-Lpoez JM with a 3% absolute error, a 10% non-response rate, and a 95% confidence interval. The minimum required sample size was determined to be 322 [9].

$$\text{sample size (n)} = \frac{Z^2(1-\alpha/2) PQ}{d^2}$$

$$= \frac{1.96 \times 1.96 \times 7.4 \times 92.6}{3 \times 3}$$

$$n=293$$

taking 10% as non responsive rate=293+29=322. The minimum required sample size was calculated to be 322.

Among the eight blocks in Chengalpattu district, four blocks were randomly selected using a lottery method. A list of colleges in each block was obtained from the college database, and stratification was performed based on the type of college (A: Medical, B: Dental, C: Nursing). Two colleges from each category-Medicine, Dentistry, and Nursing-were randomly chosen using a coin toss method. The sampling frame included all students from the selected colleges. A total of 380 participants were chosen randomly, proportionate to size, from the sampling frame. Before participating, each potential participant was provided with a Participant Informed Consent Form (PICF) and a Participant Information Sheet (PIS), and informed consent was obtained.

**Inclusion and Exclusion criteria:** All undergraduate students aged 18 years and above were included in the study. Students with known psychiatric illnesses or those currently undergoing treatment for any psychiatric conditions were excluded.

### Study Procedure

**Data collection tools:** Using a pretested, semistructured questionnaire developed following a pilot test, data were gathered from eligible individuals who were personally interviewed. The questionnaire covered the following domains: a) sociodemographic details; the total monthly family income was kept open-ended to facilitate understanding for participants. The median income was then calculated, and based on this value, the income was classified into two categories: ≤100,000 and >100,000; b) RCBS; and c) psychological, social, and environmental determinants of CBD.

A pilot study was conducted among 30 participants using the pretested semistructured questionnaire among college students at

different universities (the results from the pilot study were not included in the final analysis). The questionnaire was modified based on the responses and feedback received. The questionnaire was provided to the participants in English as a common language. It was filled out by the subjects. Direct administration allowed participants to answer independently, ensuring privacy and reducing interviewer bias. In cases where participants needed clarification, the interviewer assisted in filling out the questionnaire to ensure accuracy and understanding.

The internal validity of the questionnaire was assessed through reliability analysis. The Cronbach's alpha of the developed questionnaire was 0.85, indicating good consistency in internal validity [10].

Face validity of the tool was assessed by asking experts in the fields of psychiatry, community medicine, and the general population to rate the tool on a 5-point Likert scale, ranging from 1 to 5, with 1 being completely inappropriate and 5 being completely appropriate.

Content validity of the tool was assessed by inter-rater reliability using Kappa statistics. Two independent interviewers, who are experts in community medicine and psychiatry, were involved, and Cohen's kappa coefficient was calculated by comparing their response ratings. A kappa score above 0.60 was considered to indicate good agreement between the raters.

To assess the prevalence of CBD, the RCBS was used. It consists of a 6-item questionnaire, each rated on a 7-point Likert scale. Questions 1-4 are rated from "Strongly Disagree" to "Strongly Agree," while questions 5-6 are rated from "Never" to "Very Often." The scale includes questions about participants' impulse purchasing, being a shopaholic, buying unintended items, and the presence of unopened shopping bags in their closets. A total score of 25 or higher is considered indicative of compulsive buying. This scale provides a structured way to measure the extent to which shopping habits may be excessive or driven by compulsive urges, helping researchers and clinicians identify individuals at risk for CBD. The RCBS was chosen due to its notable psychometric properties and evidence of its validity [11,12].

## STATISTICAL ANALYSIS

Data were entered into MS Excel and analysed using SPSS version 22.0. Categorical variables were presented as frequencies and percentages. The significance of categorical variables was assessed using the Chi-square test, with a p-value of less than 0.05 considered statistically significant. Bivariate logistic regression was conducted to determine the unadjusted odd's ratios. Variables with a p-value of less than 0.05 from the bivariate analysis were included in a multivariate model to calculate adjusted odd's ratios. A 95% confidence interval was used to estimate the effect size.

## RESULTS

Among the total of 380 study participants, 232 (61.1%) were females and 148 (38.9%) were males, indicating a higher proportion of female participants. The majority of participants, 272 (71.6%), were less than 21 years of age. In terms of education, 201 (55.3%) of the participants were from medical colleges, while 85 (22.4%) were from nursing and dental colleges. The majority of the study participants, 320 (84.2%), belonged to nuclear families, and approximately 171 (45%) of the participants had a family income of more than 100,000 INR. It was found that 113 (29.7%) participants had CBD [Table/Fig-1].

The association between CBD and various demographic and lifestyle variables among study participants has been depicted in [Table/Fig-2]. The results indicate several significant findings. Individuals aged over 21 years had higher odd's of having CBD compared to those aged 21 or below (odd's ratio=2.087, 95% CI: 1.14-3.814, p-value=0.017). Approximately 70.3% of females demonstrated a higher likelihood of CBD, and the association was found to be statistically significant, with an odd's ratio=1.765 (p-value=0.026). Additionally, Medical College

Questions	Response	Frequency (n)	Percentage (%)
1. My closet has unopened shopping bags in it.	Strongly disagree	120	31.6
	Disagree	80	21.1
	Somewhat disagree	30	7.9
	Neutral	50	13.2
	Somewhat agree	45	11.8
	Agree	35	9.2
	Strongly agree	20	5.2
2. Others might consider me a shopaholic.	Strongly disagree	115	30.3
	Disagree	65	17.1
	Somewhat disagree	25	6.6
	Neutral	55	14.5
	Somewhat agree	50	13.2
	Agree	45	11.8
	Strongly agree	25	6.6
3. Much of my life centers around buying things.	Strongly disagree	115	30.3
	Disagree	65	17.1
	Somewhat disagree	25	6.6
	Neutral	55	14.5
	Somewhat agree	50	13.2
	Agree	45	11.8
	Strongly agree	25	6.6
4. I consider myself an impulse purchaser.	Strongly disagree	90	23.7
	Disagree	65	17.1
	Somewhat disagree	40	10.5
	Neutral	50	13.2
	Somewhat agree	55	14.5
	Agree	45	11.8
	Strongly agree	35	9.2
5. I buy things I don't need.	Never	100	26.3
	Rarely	65	17.1
	Occasionally	55	14.5
	Sometimes	50	13.2
	Frequently	45	11.8
	Often	35	9.2
	Very often	30	7.9
6. I buy things I did not plan to buy.	Never	85	22.4
	Rarely	60	15.8
	Occasionally	60	15.8
	Sometimes	55	14.5
	Frequently	50	13.2
	Often	45	11.8
	Very often	25	6.6

[Table/Fig-1]: Distribution of responses on Richmond Compulsive Buying Scale (RCBS) among study participants (N=380).

S. No.	Variables	Compulsive Buying Disorder (CBD)		Total (N=380)	Chi-square	Unadjusted odd's ratio (95% CI)	p-value
		Present n (%) n=113 (29.7%)	Absent n (%) n=267 (70.3%)				
1.	Age						
	>21 years	41 (36.9)	67 (24.9)	108 (28.4)	5.590	2.087 (1.142-3.814)	0.017*
	≤21 years	70 (63.1)	202 (75.1)	272 (71.6)		1	
2.	Gender						
	Female	78 (70.3)	154 (57.2)	232 (61.1)	5.603	1.765 (1.164-2.787)	0.026*
	Male	33 (29.7)	115 (42.8)	148 (38.9)		1	
3.	Type of family						
	Nuclear	95 (85.6)	225 (83.6)	320 (84.2)	0.223	1.161 (0.624-2.159)	0.637
	Joint	16 (14.4)	44 (16.4)	60 (15.8)		1	

4.	Type of college						
	Medical	70 (63.1)	140 (52)	201 (55.3)	5.253	2.05 (1.093-3.659)	0.024*
	Nursing	24 (21.6)	61 (22.7)	85 (22.4)		1.574 (0.773-3.204)	0.211
	Dental	17 (15.3)	68 (25.3)	85 (22.4)		1	1
5.	Monthly family income (INR)						
	>100000	51 (45.9)	120 (44.6)	171 (45)	0.057	1.055 (0.677-1.645)	0.812
	≤100000	60 (52.1)	149 (55.4)	209 (55)		1	
6.	Tobacco consumption						
	Yes	4 (3.6)	1 (0.4)	5 (1.3)	6.321	10.019 (1.107-90.667)	0.012*
	No	107 (96.4)	268 (99.6)	375 (98.7)		1	
7.	Alcohol consumption						
	Yes	6 (5.4)	8 (3.0)	14 (3.7)	1.309	1.864 (0.632-5.503)	0.253
	No	105 (94.6)	261 (97)	366 (96.3)		1	
8.	Family history of shopaholics						
	Yes	32 (28.8)	35 (13)	67 (17.6)	13.537	2.708 (1.573-4.661)	0.001*
	No	79 (71.2)	234 (87)	313 (82.4)		1	
9.	Shopping preference						
	Online	29 (26.1)	30 (11.2)	59 (15.5)	13.443	2.817 (1.595-4.976)	0.001*
	Offline	82 (73.9)	239 (88.9)	321 (84.5)		1	

**[Table/Fig-2]:** Association between Compulsive Buying Disorder (CBD) and various demographic and lifestyle variables among study participants.

\*p-value <0.05 - Statistically significant at 95% Confidence interval; OR: Odd's ratio;  $\chi^2$ - Chi-square

Students, tobacco consumption, family history of shopaholics, and online shopping were associated with CBD, with odd's ratios of 2.05, 10.1, 2.7, and 2.8, respectively, suggesting potential links between these behaviours and the disorder.

On bivariate analysis, variables that were found to have a statistically significant association with CBD were analysed using binary logistic regression to eliminate confounders. It was found that medical students had an adjusted odd's ratio of 1.96 (95% CI: 1.3-3.7), females had an adjusted odd's ratio of 1.83 (95% CI: 1.1-3.1), a family history of shopaholics had an adjusted odd's ratio of 2.6 (95% CI: 1.4-4.6), and online shopping had an adjusted odd's ratio of 2.4 (95% CI: 1.3-4.3), all of which had a statistically significant association with CBD (p-value <0.05) [Table/Fig-3].

S. No.	Variables	p-value	Adjusted odd's ratio	95% CI
1.	Students (medical)	0.039*	1.964	1.3-3.7
2.	Gender (female)	0.017*	1.833	1.1-3.1
3.	Family history (shopaholics)	0.001*	2.607	1.4-4.6
4.	Online shopping	0.004*	2.404	1.3-4.3
5.	Age >21 years	0.455	1.686	0.8-1.3
6.	Tobacco consumption	0.091	3.455	1.5-5.5

**[Table/Fig-3]:** Binomial logistic regression analysis between Compulsive Buying Disorder (CBD) and various demographic and lifestyle variables.

\*Enter method\* was used for binomial logistic regression

Dependant variable: Compulsive Buying Disorder (CBD); All variables with p<0.05 in bivariate analysis were included as independent variables for logistic regression analysis

\*Statistically significant at 95% Confidence interval, OR: Odd's ratio; AOR: Adjusted odd's ratio

The association between CBD and various emotional and behavioural variables among study participants has been depicted in [Table/Fig-4]. Individuals experiencing a feeling of excitement or euphoria while shopping were significantly more likely to have CBD, with an odd's ratio of 3.850 (95% CI: 2.310-6.416, p-value <0.001). Similarly, experiencing anxiety or distress when unable to shop was associated with CBD, with an odd's ratio of 4.334 (95% CI: 2.554-7.388, p-value <0.001). Other significant associations include lying to family and friends about spending on purchases (p-value=0.024), experiencing a loss of interest in activities other than shopping (p-value=0.004), losing track of time or neglecting responsibilities during shopping (p-value=0.008), and having a desire to purchase items upon seeing advertisements, offers, or discounts (p-value=0.005), with odd's ratios of 2.8, 2.1, 1.98, and 1.94, respectively. These findings suggest that emotional and behavioural aspects play a crucial role in the manifestation of CBD.

On bivariate analysis, variables that were found to have a statistically significant association with CBD were analysed using binary logistic regression to eliminate confounders. It was found that euphoria while shopping had an adjusted odd's ratio of 3.54 (95% CI: 2.1-6.1), experiencing anxiety or distress when unable to shop had an adjusted odd's ratio of 3.20 (95% CI: 1.7-5.8), and lying to family and friends about spending on purchases had an adjusted odd's ratio of 2.28 (95% CI: 1.4-4.6), all of which had a statistically significant association with CBD (p-value <0.05) [Table/Fig-5].

S. No.	Variables	Compulsive Buying Disorder (CBD)		Total (N=380)	Chi-square	Unadjusted odd's ratio (95% CI)	p-value
		Present n (%) n=113 (29.7%)	Absent n (%) n=267 (70.3%)				
1	Feeling of excitement or euphoria while shopping						
	Yes	89 (78.8)	131 (49.1)	220 (57.9)	28.725	3.850 (2.310-6.416)	0.001*
	No	24 (21.2)	136 (50.9)	160 (42.1)		1	
2	Tried to cut down on your shopping						
	Yes	67 (59.3)	141 (52.8)	208 (54.7)	1.347	1.302 (0.834-2.032)	0.246
	No	46 (40.7)	126 (47.2)	172 (45.3)		1	
3	Financial difficulty due to shopping						
	Yes	48 (42.5)	87 (32.6)	135 (35.5)	3.393	1.528 (0.972-2.402)	0.065
	No	65 (57.5)	180 (67.4)	245 (64.5)		1	



4	Shopping due to peer pressure						
	Yes	27 (23.9)	43 (16.1)	70 (18.4)	3.205	1.635 (0.951-2.811)	0.073
	No	86 (76.1)	224 (83.9)	310 (81.6)		1	
5	Experienced anxiety or distress when you're unable to shop						
	Yes	41 (37.2)	32 (12)	74 (19.5)	32.110	4.334 (2.554-7.388)	0.001*
	No	71 (62.8)	235 (88)	306 (80.5)		1	
6	Have you ever lied to your friends or family about how much you spend on purchases						
	Yes	66 (58.4)	88 (33)	154 (40.5)	21.333	2.856 (1.816-4.492)	0.024*
	No	47 (41.6)	179 (67)	226 (59.5)		1	
7	Have you experienced a loss of interest in activities other than shopping						
	Yes	36 (31.9)	49 (18.4)	85 (22.4)	8.341	2.080 (1.258-3.438)	0.004*
	No	77 (68.1)	218 (81.6)	295 (77.6)		1	
8	Lost track of time or neglect responsibilities when indulged in shopping						
	Yes	46 (40.7)	69 (25.8)	115 (30.3)	8.313	1.970 (1.238-3.135)	0.008*
	No	67 (59.3)	198 (74.2)	265 (69.7)		1	
9	Desire to purchase things on seeing advertisements/offers/discounts						
	Yes	80 (70.8)	148 (55.4)	228 (60)	7.811	1.949 (1.216-3.125)	0.005*
	No	33 (29.2)	119 (44.6)	152 (40)		1	

**[Table/Fig-4]:** Association between Compulsive Buying Disorder (CBD) and various emotional and behavioural variables among study participants.  
\*p-value <0.05 - Statistically significant at 95% Confidence interval; OR: Odd's ratio,  $\chi^2$ - Chi-square

**[Table/Fig-4]:** Association between Compulsive Buying Disorder (CBD) and various emotional and behavioural variables among study participants.

\*p-value <0.05 - Statistically significant at 95% Confidence interval; OR: Odd's ratio,  $\chi^2$ - Chi-square

S. No.	Variables	p-value	Adjusted odd's ratio	95% CI
1.	Euphoria while shopping	0.001*	3.549	2.1-6.1
2.	Anxiety or distress when unable to shop	0.022*	3.203	1.7-5.8
3.	Lied to friends or family about how much spent on purchases	0.001*	2.283	1.3-3.7
4.	loss of interest in activities other than shopping	0.355	3.551	0.6-6.9
5.	Lost track of time or neglect responsibilities when indulged in shopping	0.883	2.106	0.2-4.2
6.	Desire to purchase things on seeing advertisements/offers/discounts	0.065	3.786	2.1-8.8

**[Table/Fig-5]:** Binomial logistic regression analysis between Compulsive Buying Disorder (CBD) and various emotional and behavioural variables.

\*Enter method\* was used for binomial logistic regression

Dependant variable: Compulsive Buying Disorder (CBD); All variables with p<0.05 in bivariate analysis were included as independent variables for logistic regression analysis

\*Statistically significant at 95% Confidence interval; OR: Odd's ratio; AOR: Adjusted odd's ratio

## DISCUSSION

The CBD is a growing concern, especially among college students. The accessibility of online shopping platforms has made it easier than ever for individuals to make impulsive purchases without much thought or consideration of their financial situations. The convenience of shopping from smartphones or laptops allows students to shop anytime and anywhere, contributing to excessive buying behaviour. The present study conducted among undergraduate college students revealed interesting findings, which are discussed below and compared with studies conducted both in India and globally.

In the current study, the prevalence of compulsive buying among university students was found to be 29.7%. In a study conducted by Lejoyeux M et al., the prevalence of compulsive buying was found to be 11% among medical students [13]. Similar results were reported in a study by Maraz A et al., which classified 8.3% of university students as compulsive buyers [14]. The variation in prevalence rates across the studies can be attributed to factors such as the demographic characteristics of the study populations, including age distribution, socioeconomic status, and cultural influences. Different assessment tools, diagnostic criteria, and thresholds for classifying CBB could have resulted in varying prevalence rates. The availability and accessibility of shopping opportunities, cultural attitudes towards consumerism, and media influences can

impact the development and prevalence of compulsive buying tendencies [15].

The findings of present study revealed that the prevalence of compulsive buying among university students was higher among female students (70.3%) compared to male students (29.7%). The results of present study were in concordance with Kaur M et al., who also reported a predominance of female compulsive buyers compared to males [16]. Another study conducted by Amin HS et al., among university students showed that females were more prone to shopping than males [17]. Women tend to be more susceptible to societal pressures related to appearance and fashion, which can contribute to CBBs [18]. This is often reinforced by media portrayals and social comparisons. Additionally, peer pressure and social influences can play a significant role as well. Female students may experience more pressure from peers or social media to conform to certain lifestyle standards that involve frequent shopping or materialistic possessions, contributing to CBBs [19].

In the present study, the prevalence of CBD was higher among medical students compared to nursing and dental students. One potential reason could be the elevated stress levels commonly faced by medical students, attributed to the rigorous demands of their academic curriculum and training. Stress has been linked to impulsivity and CBBs [20]. Medical students, facing rigorous academic requirements, clinical rotations, and often high expectations, may turn to compulsive buying as a coping mechanism. Moreover, the socioeconomic status of medical students may also play a role. Medical education tends to attract students from relatively affluent backgrounds, and financial independence or access to resources can influence buying behaviours. This is supported by studies indicating that higher socioeconomic status is associated with increased rates of compulsive buying [21].

The present study revealed the association between online shopping and CBD, which is consistent with findings from other studies, such as those by Trotzke P et al., and Rose S and Dhandayudham A [22,23]. These studies found a significant correlation between CBD and online shopping behaviour. While the convenience and accessibility of online shopping have been a boon for consumers, it has also led to the rise of CBB and online shopping addiction. Online retailers often use advanced marketing strategies and targeted advertising based on user preferences and browsing history. These personalised advertisements can stimulate impulsive buying tendencies and tempt individuals with CBD to make

unplanned purchases, further reinforcing the association between CBD and online shopping [24].

In present study, author found that CBD was associated with a family history of shopaholics. A similar result was observed in a study conducted by Black DW et al., which stated that compulsive buying tends to run in families [25]. Twin studies done by Bratko D et al., and Vernon PA et al., have demonstrated that the tendency for impulsive buying is heritable [26,27]. Growing up in a family where excessive shopping is common can make such behaviours seem normal and increase the chances of developing similar patterns. Peer influences and social norms within the family circle can create a social and cultural environment where excessive shopping is considered acceptable or even desirable [15].

The present study highlighted that CBD was associated with feelings of euphoria or excitement while shopping. Black DW et al., conducted a study on the phenomenology of compulsive buying [4]. They found that individuals with CBD often experienced a sense of euphoria or excitement during their shopping episodes. This excitement reinforced their buying behaviour and contributed to the compulsive nature of their shopping habits. Similar results were seen in a study conducted by Lejoyeux M et al., where participants with repetitive and impulsive buying behaviour exhibited euphoria or excitement before purchases [13]. The anticipation and act of shopping can trigger the release of dopamine, which creates a sense of pleasure and happiness [28]. Shopping can also fulfill social and status-related needs. Acquiring new possessions may enhance self-esteem, create a sense of belonging, or signal social status. These positive feelings are often experienced while shopping [6].

The present study showed that CBD was associated with lying to friends or family about how much was spent on purchases. A study conducted by Maraz A et al., revealed that individuals with CBD may experience feelings of shame or guilt about their excessive spending habits [14]. Lying about the amount spent on purchases can be a way to avoid judgment or criticism from others, especially friends or family members who may question or disapprove of their buying behaviour. The fear of being judged or confronted about their shopping habits leads people with CBD to hide the truth about their spending. They create a false image to maintain a positive reputation or avoid conflicts related to their excessive shopping [25].

In the present study, participants with CBD reported experiencing anxiety or distress when they were unable to shop. This finding is consistent with several other studies that have also highlighted the link between CBD and emotional distress related to shopping behaviours.

A study conducted by Mishra S et al., investigated the relationship between CBD and various emotional states, including distress. The study found that individuals with CBD were more likely to experience heightened emotional distress when faced with situations that limited their shopping activities [20]. Another study by Tarka P et al., on consumers' personality and CBB showed a correlation between CBD and feelings of anxiety or distress when individuals were unable to make purchases [29].

The CBD often develops as a way for people to cope with emotions such as stress, anxiety, or depression. When faced with situations that restrict their ability to shop, individuals with CBD may experience emotional distress because they are deprived of their primary coping mechanism [30]. The temporary pleasure derived from shopping may serve as a coping mechanism for emotional distress or as a means to seek excitement, contributing to the persistence of CBBs.

### Limitation(s)

Since CBD is an emerging concern, particularly among young adults in a consumer-driven society, longitudinal studies are needed to better understand the causal relationship between CBD and its

associated risk factors. The present study, which is cross-sectional in design, has its limitations, as it only allows for the computation of prevalence and associated factors. Cohort studies would be required to assess the incidence and progression of CBD over time. A cross-sectional study design was chosen for the present study primarily due to feasibility, time constraints, and resource limitations. Conducting a cohort study, though ideal for assessing the incidence and progression of CBD, requires a prolonged follow-up period, substantial financial and logistical resources, and high participant retention rates over time. Given the emerging nature of CBD as a research area and the exploratory objective of determining its prevalence and associated factors, a cross-sectional design was appropriate as a preliminary step. Furthermore, if present study had included students from government Institutions, it could have provided a more comprehensive understanding of CBD across diverse socioeconomic backgrounds.

## CONCLUSION(S)

This study on CBD among undergraduate medical, dental, and nursing students in the Chengalpattu district revealed a notable prevalence rate of 29.7%. The identified risk factors, including gender, field of study, family history, online shopping habits, emotional responses to shopping and deceptive spending practices, underscore the complexity of this condition. Targeted interventions addressing these factors are crucial for promoting healthier shopping behaviours and overall wellbeing among students. Initiatives focusing on financial literacy, psychological support, and awareness programs can play a pivotal role in mitigating the negative impact of CBD.

## REFERENCES

- [1] Sathya J, Babu M, Gayathri J, Indhumathi G. Compulsive buying behaviour and online shopping addiction of women. *Inf Sci Lett.* 2023;12(5):1641-50. Doi: 10.18576/isl/120512.
- [2] "DSM 5: Obsessive-Compulsive and Related Disorders I Psych Central"; Available from: <https://psychcentral.com/ocd/dsm-5-changes-obsessive-compulsive-and-related-disorders>. Accessed on May 9, 2024.
- [3] Müller A, Laskowski NM, Trotzke P, Ali K, Fassnacht DB, de Zwaan M, et al. Proposed diagnostic criteria for compulsive buying-shopping disorder: A Delphi expert consensus study. *J Behav Addict.* 2021;10(2):208-22. Doi: 10.1556/2006.2021.00013.
- [4] Black DW. A review of compulsive buying disorder. *World Psychiatry.* 2007;6(1):14-18.
- [5] Adamczyk G. Compulsive and compensative buying among online shoppers: An empirical study. *PLoS ONE.* 2021;16(6):e0252563. Doi: 10.1371/journal.pone.0252563.
- [6] Granero R, Pardo-Garrido A, Carpio-Toro IL, Ramírez-Coronel AA, Martínez-Suárez PC, Reivan-Ortiz GG. Compulsive buying behaviour: Clinical comparison with other behavioural addictions. *Front Psychol.* 2016;7:914. Doi: 10.3389/fpsyg.2016.00914.
- [7] Yurchisin J, Johnson KKP. Compulsive buying behaviour and its relationship to perceived social status associated with buying, materialism, self-esteem, and apparel-product involvement. *Fam Consum Sci Res J.* 2004;32(3):291-314. Doi: 10.1177/1077727X03261178.
- [8] Erzincanlı Y, Akbulut G, Çubukcu BB, Taş HG. Role of self-control, financial attitude, depression, anxiety, and stress in predicting consumers' online shopping addiction. *Frontiers in Public Health.* 2024;12:1382910.
- [9] Villardefrancos E, Otero-López JM. Compulsive buying in university students: Its prevalence and relationships with materialism, psychological distress symptoms, and subjective well-being. *Compr Psychiatry.* 2016;65:128-35. Doi: 10.1016/j.comppsy.2015.11.007.
- [10] Taber KS. The use of Cronbach's Alpha when developing and reporting research instruments in science education. *Res Sci Educ.* 2018;48:1273-96. Available from: <https://doi.org/10.1007/s11165-016-9602-2>.
- [11] Ridgway NM, Kukar-Kinney M, Monroe KB. Richmond Compulsive Buying Scale (RCBS). *APA Psyc Tests.* 2008. Available from: <https://doi.org/10.1037/t69488-000>.
- [12] Ye J, Lam SC, He H. The prevalence of compulsive buying and hoarding behaviours in emerging, early, and middle adulthood: Multicentre epidemiological analysis of non-clinical chinese samples. *Front Psychol.* 2021;12:568041. Doi: 10.3389/fpsyg.2021.568041.
- [13] Lejoyeux M, Richoux-Benham C, Betizeau A, Lequen V, Lohnhardt H. Money attitude, self-esteem, and compulsive buying in a population of medical students. *Front Psychiatry.* 2011;2:13. Doi: 10.3389/fpsyg.2011.00013.
- [14] Maraz A, Griffiths MD, Demetrovics Z. The prevalence of compulsive buying: A meta-analysis. *Addict Abingdon Engl.* 2016;111(3):408-19. Doi: 10.1111/add.13223.
- [15] Jameel A, Khan S, Alonazi WB, Khan AA. Exploring the impact of social media sites on compulsive shopping behaviour: The mediating role of materialism. *Psychol Res Behav Manag.* 2024;17:171-85. Doi: 10.2147/PRBM.S442193.

- [16] Kaur M, Maheshwari SK, Kumar A. Compulsive buying behaviour and online shopping addiction among health science teachers. *International Journal of Nursing Care*. 2019;7(1):74-80.
- [17] Amin HS, Binobaid AA, Nagshabandi KN, Alammari OB, Alshunaybir OH, Alhammad SA, et al. Compulsive buying disorder (CBD) among medical students in colleges of medicine, dentistry and pharmacy at King Saud University in Riyadh. *J Family Med Prim Care*. 2022;11(11):6876-84.
- [18] Dittmar H, Long K, Bond R. When a better self is only a button click away: Associations between materialistic values, emotional and identity-related buying motives, and compulsive buying tendency online. *J Soc Clin Psychol*. 2007;26(3):334-61. Doi: 10.1521/jscp.2007.26.3.334.
- [19] Xu X, Han W, Liu Q. Peer pressure and adolescent mobile social media addiction: Moderation analysis of self-esteem and self-concept clarity. *Front Public Health*. 2023;11:111566. Doi: 10.3389/fpubh.2023.1115661.
- [20] Mishra S, Singh A, Kar SK, Ganesan S. Compulsive buying behaviour and its association with emotional distress, depression, and impulsivity in general population: An online survey. *CNS Spectr*. 2023;28(5):592-96. Doi: 10.1017/S1092852922001109.
- [21] Maraz A, Yi S. Compulsive buying gradually increased during the first six months of the Covid-19 outbreak. *J Behav Addict*. 2022;11(1):88-101. Doi: 10.1556/2006.2022.00002.
- [22] Trotzke P, Starcke K, Müller A, Brand M. Pathological buying online as a specific form of internet addiction: A model-based experimental investigation. *PLoS One*. 2015;10(10):e0140296. Doi: 10.1371/journal.pone.0140296.
- [23] Rose S, Dhandayudham A. Towards an understanding of internet-based problem shopping behaviour: The concept of online shopping addiction and its proposed predictors. *Journal of Behavioural Addictions*. 2014;3(2):83-89.
- [24] Sathya J, Babu M, Gayathri J, Indhumathi G. Compulsive buying behaviour and online shopping addiction of women. *Inf Sci Lett*. 2023;12(5) [Online]. Available from: <https://digitalcommons.aaru.edu.jo/isl/vol12/iss5/12>.
- [25] Biolcati R. The role of self-esteem and fear of negative evaluation in compulsive buying. *Frontiers in psychiatry*. 2017;8:74.
- [26] Bratko D, Butkovic A, Bosnjak M. Twin study of impulsive buying and its overlap with personality. *J Individ Differ*. 2013;34(1):08-14. Doi: 10.1027/1614-0001/a000091.
- [27] Vernon PA, Villani VC, Vickers LC, Harris JA. A behavioural genetic investigation of the dark triad and the Big 5. *Personal Individ Differ*. 2008;44(2):445-52. Doi: 10.1016/j.paid.2007.09.007.
- [28] Bromberg-Martin ES, Matsumoto M, Hikosaka O. Dopamine in motivational control: Rewarding, aversive, and alerting. *Neuron*. 2010;68(5):815-34. Doi: 10.1016/j.neuron.2010.11.022.
- [29] Tarka P, Kukar-Kinney M, Harnish R. Consumers' personality and compulsive buying behaviour: The role of hedonistic shopping experiences and gender in mediating-moderating relationships. *J Retail Consum Serv*. 2022;2022:102802. Doi: 10.1016/j.jretconser.2021.102802.
- [30] Williams A. Evaluation of the mood repair hypothesis of compulsive buying. *Open J Psychiatry*. 2012;2:83-90. Doi: 10.4236/ojpsych.2012.22012.

#### PARTICULARS OF CONTRIBUTORS:

1. Postgraduate, Department of Community Medicine, Chettinad Hospital and Research Institute, Chettinad Academy of Research and Education, Kelambakkam, Tamil Nadu, India.
2. Professor and Head, Department of Community Medicine, Chettinad Hospital and Research Institute, Chettinad Academy of Research and Education, Kelambakkam, Tamil Nadu, India.
3. Professor, Department of Community Medicine, Chettinad Hospital and Research Institute, Chettinad Academy of Research and Education, Kelambakkam, Tamil Nadu, India.
4. Assistant Professor, Department of Community Medicine, Chettinad Hospital and Research Institute, Chettinad Academy of Research and Education, Kelambakkam, Tamil Nadu, India.
5. Assistant Professor, Department of Community Medicine, Chettinad Hospital and Research Institute, Chettinad Academy of Research and Education, Kelambakkam, Tamil Nadu, India.
6. Assistant Professor, Department of Community Medicine, Chettinad Hospital and Research Institute, Chettinad Academy of Research and Education, Kelambakkam, Tamil Nadu, India.
7. Postgraduate, Department of Community Medicine, Chettinad Hospital and Research Institute, Chettinad Academy of Research and Education, Kelambakkam, Tamil Nadu, India.
8. Postgraduate, Department of Community Medicine, Chettinad Hospital and Research Institute, Chettinad Academy of Research and Education, Kelambakkam, Tamil Nadu, India.

#### NAME, ADDRESS, E-MAIL ID OF THE CORRESPONDING AUTHOR:

BN Surya,  
Chettinad Health City, Rajiv Gandhi Salai, Kelambakkam, Chengalpattu District,  
Chennai-603103, Tamil Nadu, India.  
E-mail: [suryauk4@gmail.com](mailto:suryauk4@gmail.com)

#### PLAGIARISM CHECKING METHODS: [\[Jain H et al.\]](#)

- Plagiarism X-checker: Oct 18, 2024
- Manual Googling: Dec 12, 2024
- iThenticate Software: Dec 14, 2024 (15%)

#### ETYMOLOGY: Author Origin

EMENDATIONS: 5

#### AUTHOR DECLARATION:

- Financial or Other Competing Interests: None
- Was Ethics Committee Approval obtained for this study? Yes
- Was informed consent obtained from the subjects involved in the study? Yes
- For any images presented appropriate consent has been obtained from the subjects. NA

Date of Submission: **Oct 17, 2024**

Date of Peer Review: **Nov 18, 2024**

Date of Acceptance: **Dec 16, 2024**

Date of Publishing: **Jan 01, 2025**