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Online Shopping/Buying Disorder and Associated Sociodemographic Characteristics and Quality of Life among Female University Students in Turkey

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ABSTRACT

With the advent of the Internet and cheap electronic devices, people around the globe are living in a hyperconnected online world where any product is available to anyone anywhere on earth through online shopping. Accordingly, problematic online shopping behavior has been increasing worldwide. Children and young people who are born into the online technologies era are at risk for developing various behavioral addictions. Therefore, studies on the epidemiology of behavioral addictions, such as problematic online shopping behavior, are necessary for young people to develop general protective policies. In this study, online shopping tendencies and their association with satisfaction with life were examined with the online shopping addiction version (Compulsive Online Shopping Scale-COSS) of the Bergen Shopping Addiction Scale and The Satisfaction With Life Scale (SWLS) in a sample of female students (n=150) in a foundation university. Mean COSS scores were 20.11 (SD=20.88). Marital status, economic income, occupation, and credit card use did not significantly affect COSS scores. Being younger, living alone, increasing online shopping frequency, and spending longer time online increased COSS scores significantly. A weak negative correlation existed between the total COSS and SWLS scores (rs= -0,322, p<0,05).

In contrast to the increasing world population, people are becoming lonelier because of the pervasive advocacy of individualization. This might decrease satisfaction with life, resulting in more time spent online for self-stimulation. The findings will be discussed in relation to previous studies on problematic online shopping behavior.

Keywords: online shopping, problematic shopping behavior, satisfaction with life, behavioral addiction

Introduction

It has been more than 100 years since Kraepelin's first description of problematic shopping behavior as "oniomania," which is an impulse control disorder characterized by excessive uninhibited shopping and buying despite the adverse financial consequences and the inability to stop or regulate the behavior. Since then, different terms such as compulsive buying, pathological buying, shopping addiction, and buying shopping disorder have been used to define the same phenomena of problematic shopping behavior. [1] The paper will use the name shopping/buying disorder (SBD) following a previous Delphi consensus study.[2] The syndrome is characterized by excessive and dysfunctional preoccupations, impulses and urges, cravings, and behaviors related to shopping and buying, resulting in significant distress and impairment in financial, occupational, social, and personal life.[2] Therefore, it shares the proposed six elements of behavioral addictions: salience, mood modification, tolerance, withdrawal, conflict, and relapse.[3]

The first e-commerce in history dates back to 1948-49 when goods were ordered via telex during the Berlin blockade and airlift. Until the introduction of the World Wide Web in 1991 and the first browser to access it in 1993, e-commerce was conducted by computer-to-computer data interchange (EDI) technology used privately in various industries.[4] Michael Aldrich is reported to be the first entrepreneur to lay the ground for online shopping by connecting television to a real-time multi-user transaction processing computer via a telephone line.[5] In 1995, the leading companies serving ordinary people were launched. Online shopping/buying disorder (OSBD) has attracted attention since 2004.[6] As internet technologies became more efficient and devices for accessing the Internet became more straightforward, online shopping increased exponentially and skyrocketed with the worldwide COVID-19 pandemic. Accordingly, problematic online shopping behavior has been increasing worldwide.

Rose and Dyandahudham stated that society is sensitive to addiction at the stage when a new behavior or substance is first introduced to the culture and that internet technologies were still in their infancy as of 2014 when their article was written.[7] Pubmed research that was done on September 30th, 2024, using "online shopping addiction," "internet addiction," "social media addiction," and "online gambling addiction" resulted in a total of 1325, 5941, 4287, and 1206 papers, respectively, with the year 2022 having the highest number of papers published in all terms. For online shopping addiction, there was an increasing trend in the publications starting from 2014, with ten publications that year and reaching its peak with 26 publications in 2022. Only some of these are research papers, while some are reviews. Even though the debates on properly defining and naming problematic shopping behavior may not be over, this increase in the publication trend suggests that OSBD is better acknowledged. COVID-19, a pandemic with global catastrophic effects broadcast live from every corner of the world via social media, gave scientists from all disciplines a rare opportunity to plan various types of research. This is probably the primary reason for the peak in publications about online behavioral problems in 2022. A secondary reason might be related to an increase in the incidence and prevalence of these problems.[8] During COVID-19 lockdowns and social isolation, people from all demographic groups around the globe, from the city centers to the farthest villages, started living in a hyperconnected online world where any product became available to anyone anywhere on earth through online shopping.

In a meta-analysis using 49 prevalence estimates from 16 countries with 10102 participants, the pooled prevalence for SBD was reported to be 4.9 %.[9] The frequency of OSBD was reported as 17.7 %, in Parisian female students 16 %, in Chinese students, 16.7%, and in students from Singapore 9.3 % using different scales to determine OSBD.[10-13] The recency of OSBD might have resulted in higher frequencies than the pooled prevalence for SBD. It might also be explained in the context of the way the studies are carried out with students as subjects in most of them.

Studies show that SBD in stores and OSBD is more common among women.[7,14-18] In-store shopping is a social act where one goes to stores, looks at and evaluates products, and sometimes buys stuff. In many cultures, this social act is attributed to women.[15,18] As girls grow up, they may learn that shopping is a female behavior through observation and internalize it. However, online shopping is so recent that the young generation of 2020's parents may not have set examples for online shopping yet, but their peers might have. Also, online shopping is a solitary behavior, unlike in-store shopping. Therefore, the reasons for the increased tendency of female subjects to shop online might differ from those of in-store SBD. The male dominance in computer and related technology use has been decreasing rapidly with better education of girls. Although women are still treated as second-class citizens compared to men in many countries of the world, social and gender egalitarian policies implemented in developed and developing countries bring equal opportunities to women in many areas. This means many women earn income, can afford themselves, and are more individualized. Although opportunities and freedoms in business and social life have increased, expectations from women, such as being beautiful, well-groomed, and feminine, continue in society. Online shopping in women might be driven by peer pressure, the need to fit into society's beauty and aesthetic expectations of women, and also to gain time in a hectic ever, demanding modern life.

The young generation (Gen Z) is born into internet Technologies, and online activities are part of their daily routine. University students commonly use the Internet for online shopping because it is more convenient in terms of time efficiency.[19,20] Most universities have been using online education facilities for a long time. However, during COVID-19 waves, schools and universities have turned to online lectures globally, which has normalized and increased the time young people spend online. It has been reported that as the time spent online increases, so does online shopping.[21,22] Adolescence is a time of increased impulsivity and risk-taking due to ongoing brain development.[23] Therefore, adolescents may be

more prone to develop various types of addictions.[24] Addiction and SBD are related to executive dysfunction.[25]

One rarely mentioned consequence of online shopping is its effects on climate change. Online shopping requires transportation, which is responsible for 19.2% of carbon emissions.[26] Another environmental impact of online shopping is the production of waste from the packaging materials of the goods.[27,28] Environmental pollution from micro and nano plastics threatens marine life, humans, and other species feeding on seafood and drinking water.[29] Therefore, any interventions to understand and decrease OSBD would benefit the planet.

Satisfaction with life (SWL) is the general judgment or evaluation that an individual makes as a result of comparing their expectations with what they have according to specific criteria that they determine and cover the entire life of the individual.[30] Studies on the effects of internet use on SWL are contradictory. Some studies suggest that the Internet increases SWL because it offers opportunities that make life more practical, such as ease of access to information, socializing, and communication.[31,32] On the other hand, some studies report a decreased SWL because the use of the Internet and the mediums it provides, such as gaming, social network use, and shopping, can become problematic, resulting in academic failure, loneliness, and increased psychiatric disorders, which in turn may decrease SWL.[33,34] Increased materialism increases compulsive buying and decreases life satisfaction.[35-38]

Considering the literature on OSBD and its associations, the present study was planned. The subjects of the current study were university students because research examining university students' online shopping behavior may also guide the necessary arrangements to prevent the development of possible problematic online shopping. Female university students were chosen as in-store, and OSBD is more frequent in women. OSBD was questioned as it is hypothesized to be preferred by university students. SWL was measured because it was hypothesized that SWL would affect OSBD. Additionally, studies on SWL of university students show that it can influence societal development because SWL influences academic and professional life.[39]

ETHICS

The university's ethical committee approved the study ethically. The study followed the Helsinki Declaration of Ethics.

Methods

PARTICIPANTS

Participants were undergraduate and graduate female students of a university in Istanbul.The study took place from February to March 2022 at the Faculty of Humanities and Social Sciences campus with permission from the campus manager. This study was from the master's thesis of the first author. The researcher entered each classroom in the Faculty of Humanities and Social Sciences and introduced herself and the study procedures and then distributed the surveys randomly on desks starting from the rear right corner to the front left corner skipping one desk consecutively. Participation in the study was voluntary, and anonymity was ensured by assigning numbers to each participant instead of names on the surveys. The survey included an informed consent form, sociodemographic form, Compulsive Online-Shopping Scale, and Satisfaction with Life Scale, and it took an average of 15-20 minutes to fill out completely.

MEASURES

a. The sociodemographic form included age, marital status, living conditions, economic status, occupation, credit card usage, time spent online, and online shopping frequency.
b. Compulsive Online-Shopping Scale (COSS): The Bergen Shopping Addiction Scale, developed by Andreassen and colleagues in 2016, was adapted to Turkish by Bozdağ and Yalçınkaya-Alkar.[40-41] The aim was to measure compulsive shopping behavior in the online context by adding the expression online to the 28 original scale items. The Compulsive Online Buying Scale's Cronbach Alpha, internal consistency coefficient, was found to be .95. The scale is a 5-point Likert (0 - Completely Disagree, 4 - Completely Agree) type. While the Cronbach Alpha internal consistency coefficient was found to be .87 in the original scale form, it was found to be .95 in the form adapted to Turkish. The scale consists of 5 subscales. (Problem-conflict-relapse, salience, mood modification, withdrawal, and tolerance) High scores obtained as a result of scoring the scale indicate that the level of online compulsive shopping disorder of individuals increases. The highest score on the scale is 112, and the lowest is 0.
c. Satisfaction with Life Scale (SWLS): The one-dimensional, 5-point Likert-type scale (1 - Strongly Disagree, 5 - Totally Agree) was developed by Diener, Emmons, Larsen, and Griffin (1985) to measure Life Satisfaction and consists of 5 items.[42] Dağlı and Baysal adapted the scale to Turkish, and its validity and reliability studies were conducted.[43] The Cronbach's Alpha value of the original scale was found to be .87, and the criterion validity was 0.82. In contrast, the Cronbach's Alpha value of the Turkish adaptation was found to be .88. The scale is scored as "Strongly Disagree (1), Very Slightly Agree (2), Moderately Agree (3), Largely Agree (4) and Totally Agree (5)". High scores obtained as a result of scoring indicate a high level of life satisfaction, while low scores indicate a low level of life satisfaction. The highest score on the scale is 25, and the lowest is 5.

PROCEDURES

This was a quantitative study and the data was collected by the first author. Data from the filled out survey forms were used for descriptive information on sociodemographic variables, COSS and SWLS scores. Afterwards this descriptive data was used for correlational analysis. The dependent variables were COSS and SWLS scores and the independent variables were age, occupation, income level, credit card usage, frequency of online shopping, and time spent on the Internet.

STATISTICAL ANALYSIS

There were 1327 registered female students. Surveys were distributed to 300 students and only 150 surveys

were completed fully. Therefore the margin of error with a confidence interval of 95% was calculated as 7.39 % which was found acceptable.

The data were analyzed using the SPSS Statistics 23 program. Since the number of cases was more than 50 when the values of the COSS and SWLS scores and the skewness and kurtosis coefficients were examined with the Kolmogorov-Smirnov test, it was determined that the data did not conform to a normal distribution (COSS: x: 20.11, SD=20.88, Median= 11.50, Kolmogorov-Smirnov= 0.00, skewness= 1.34, kurtosis= 1.3; SWLS: x: 15.52, SD=4.19, Median= 16, Kolmogorov-Smirnov= 0.04, skewness= -0.22, kurtosis= -0.39), non-parametric tests were used.

Results

The participants' sociodemographic characteristics are presented in Table 1, and the descriptives and frequencies of the scales are presented in Table 2. The Mann-Whitney U analysis of COSS total scores and the variables marital status (U(150)= 1720,50, p=0.106) and employment (U(150)= 2729,50, p=0.872) and the Kruskal-Wallis analysis of economic income (X2(3)= 2,487, p=0.478) and credit card use (X2(2)= 3,160, p=0.206) did not reveal any significant associations.

Table.1. Sociodemographic characteristics of the students

		N	%
Marital status	Married	37	24,7
	Single	113	75,3
Age	18-23 years	57	38
	24-29 years	56	37,3
	30> years	37	24,7
Employment	Employed	66	44
	Unemployed	84	56
Economic status	Low income	71	47,3
	Medium	36	24
	Medium High	34	22,7
	High	9	6
Credit card usage	Do not use credit vard	40	26,7
	I use, I have one credit card	70	46,7
	I use, I have more than one credit card	40	26,7
Living condition	Alone	22	14,7
	Family	114	76
	Friends	14	9,3
Frequency of online shopping	Daily	7	4,7
	Weekly	27	18
	Monthly	53	35,3
	Every few months	51	34
	Several times a year	12	8
Daily time spent online	Less than 1 hour	2	1,3
	1-2 hours	16	10,7
	3-4 hours	67	44,7
	5-6 hours	39	26
	More than 6 hours	26	17,3

Table 2. Mean scores and Standart Derivations (SD) of SWLS total COSS total and COSS sub-scales scores

Subscales	**n**	$\bar{x}$	***SD***
SWLS total	150	15,52	4,19
COSS total	150	20,11	20,88
Problem-conflict-relapse	150	0,3	0,56
Salience	150	1,27	1,04
Mood modification	150	1,14	1,16
Withdrawal	150	0,85	1,1
Tolerance	150	0,81	0,96

Kruskal Wallis H Test analysis between COSS total scores and the variable age was significant [X2(2)= 7,853, p=0.02]. COSS scores of those aged 18-23 and 24-29 were significantly higher than those who are more than 30 years of age, according to the Mann-Whitney U test. Analysis between COSS total scores and the variable living condition was significant [X2(2)= 7,030, p=0.03]. Multiple comparisons of the groups and total COSS scores revealed that those living alone were significantly higher than those living with friends (p=0.016). Kruskal Wallis H Test analysis between COSS total scores and the variable daily time spent online was significant [X2(4)= 20,982, p< 0,05]. Mann-Whitney U test revealed that the COSS scores of those who spent 1-2 hours online daily were significantly lower than those who spent 3-4 hours, 5-6 hours, and more than 6 hours. Those who spent more than 6 hours online daily had significantly higher COSS scores than the rest of the group. Total

COSS scores increased significantly compared to previous groups as the time spent online increased. There was a significant relation between COSS total scores and the frequency of online shopping [X2(4) = 58,152, p< 0,05]. Those who did weekly online shopping had the highest scores, significantly higher than those who shopped online monthly, every few months, and several times a year. Those who did Daily online shopping had significantly higher scores than those who shopped every few times and several times a year. Those who shopped online Daily or weekly had significantly higher scores than those who shopped every few times and several times a year (Table 3).

A negative and weak correlation existed between the COSS total and SWLS score (rs= -0,322, p<0,05). All subscales of COSS had negative and weak correlations with SWLS scores (Table 4).

Table 3. Variables With Significant Relations to the COSS Total Score

Score	Variable	Groups	n	Rank average	X^2	sd	p	Significant difference
COSS Total	Age	18-23 years	57	81,74				
		24-29 years	56	80,61	7,853	2	0,02*	18-23 years - >30 24-29 years - >30
		>30 years	37	58,16				
COSS Total	Living condition	Alone	22	93,61				
		Family	114	74,53	7,030	2	0,03*	Alone-friends (0,016)
		Friends	14	54,93				
COSS Total	Daily time spent online	< 1 hour	2	63,75				1-2 hours - 3-4 hours
		1-2 hours	16	43,41				1-2 hours - 5-6 hours
		3-4 hours	67	74,15	20,982	4	0,000*	1-2 hours - >6 hours
		5-6 hours	39	72,10				3-4 hours - >6 hours
		>6 hours	26	104,73				5-6 hours->6 hours
COSS Total	Frequency of online shopping	Daily	7	93,50				Daily- Every few months
		Weekly	27	113,87				Daily - Several times a year
		Monthly	53	89,04	58,152	4	0,000*	Weekly - Monthly Weekly - Every few months
		Every few months	51	48,25				Weekly - Several times a year
		Several times a year	12	34,67				Monthly- Every few months Monthly- Several times a year

*p<0,05

Table 4. Spearman's Rank Correlation Between COSS Total Scores and Sub-scale Scores and SWLS Score

		SWLS Score
Problem-conflict-relapse score	r_s	-255*
	p	0,002
	n	150
Salience score	r_s	-277*
	P	0,001
	n	150
Mood modification score	r_s	-327*
	p	0,000
	n	150
Withdrawal score	r_s	-0,273*
	p	0,001
	n	150
Tolerance score	r_s	-0,226*
	p	0,006
	n	150
COSS total score	r_s	-322*
	p	0,000
	n	150

*p<0,05
rs = Spearman's correlation coefficient

Discussion

This study measured the frequency of online shopping tendencies and its association with some sociodemographic variables and satisfaction with life in female university students. Marital status, economic income, occupation, and credit card use did not significantly affect average COSS scores. Being younger, living alone, increased online shopping frequency, and spending longer time online increased COSS scores significantly. A weak negative correlation existed between the average COSS and SWLS scores (rs= -0,322, p<0,05).

Online shopping tendencies were measured with COSS with a mean of 20.11 (Sd: 20.88), which is similar to the means from previous studies from Turkey with the same scale: 22.06 (SD=19.84) in 264 female students, 19.31 SD:2.08, 20.28 (SD=22.22) among 235 female university students and 26.00 (SD=25.03) among nurses (female and male).[44-47] The same scale was used in two other studies from Italy and Iran without the mean COSS scores in the published articles, so the scores of the present study and these previous two studies cannot be compared.[48,49]

Problematic shopping behavior starts in the early twenties and becomes addictive behavior later on.[16] Likewise, according to some studies, online shopping is more common in younger people than in-store shopping/buying.[2,50] The younger one is introduced to the Internet, the more they are prone to be addicted to online behaviors.[51,52] In a master's thesis from Turkey, white-collar female workers aged 20-36 had higher online shopping tendencies than those older than 36.[53] Per the mentioned literature, the participants' scores in the present study aged 18-23 and 24-29 were statistically significant and higher than those of participants aged 30 and over. Those younger than 30 years were born at a time when the Internet was becoming widespread, which is a period when society was at the highest risk of becoming addicted to this new technology.[7] Participants younger than 30 do not know a time without the Internet, and online shopping is probably normalized. However, for those older than 30 years, there probably was a time without the Internet and online shopping, making it more challenging to get accustomed to online shopping. The study was carried out in 2022 while some COVID restrictions were still going on with students who had just spent one year of their university life with online education, which might have contributed dramatically to normalizing time spent online. On the other hand, some studies find no association between age and OSBD.[49,54] With the introduction of smartphones, internet technologies have become easier for people from all demographic groups to use, making online shopping available for everyone. The elderly discovered the ease of digital technology and online shopping during the COVID-19 pandemic.[55] Therefore, the authors presume that contrary to this study's findings, age will no longer be a predictor factor for OSBD.

Participants of the current study who had significantly increased COSS scores spent 5-6 hours or more on the Internet. Griffiths has argued that spending a long time on the Internet results in addiction to the services provided by the Internet, not to the Internet per se.[56] For someone with problematic online shopping behavior, being online might be similar to sitting in a bar with people around them drinking alcoholic beverages when they have an alcohol use disorder. Many reports show a positive correlation between time spent online and compulsive online buying behaviors.[1,11,47,53] Among 200 Parisian university students, time spent online shopping per day predicted OSBD.11 Internet and social media use increases exposure time to advertisements and promotions, facilitating impulse buying.[52]

In the current study, increased online shopping frequency was positively correlated with an increased COSS mean score. A previous study with nurses (female and male) found that the frequency of Internet access and online shopping predicted OSBD.[47] In another study from Iran, the frequency of online buying was a strong predictor of OSBD, not the time spent on the Internet.[49]

People are becoming lonelier than ever in an over-populated and hyperconnected World. The results of a meta-analysis of 32 studies on loneliness and internet addiction revealed a moderately positive correlation between loneliness and internet addiction.[57] Loneliness describes the feelings of a person's detachment from society and is a risk factor for OSBD.[58,59] Loneliness was not questioned in the current study. However, those living with their friends had significantly lower COSS scores. It might be argued that living with friends was a protective factor for OSBD in the current sample. This is in accordance with a previous study of 1123 Chinese university students, which showed that online shopping decreased with increasing social support.[60] Living alone might pose a risk for problematic shopping behavior.

In the present study, the mean total COSS scores were 78.77 for the single group (n=113, 75.3%) and 65.50 for the married group (n=37, 24.7 %). The association is non-significant, but it can be seen that the mean score in the single group is higher than the married group, suggesting a higher tendency towards online shopping in singles. Although loneliness is a subjective experience and married people can feel lonely, marriage is expected to decrease loneliness, increase social support, and increase responsible expenditure. The effects of marital status on online shopping and OSBD are contradictory. In some studies, marital status has no association with online shopping.[10,61,62] In a study of 405 subjects, being single was significantly associated with internet addiction alongside increased online shopping behavior.[52] Being single predicted compulsive online buying behavior in 253 nurses.[47]

Satisfaction with life (SWL) is a subjective evaluation or a general judgment that one makes as a result of comparing their expectations with what they have in life according to specific criteria that they determine and cover the entire life of the individual.[30] SWL is not fixed and may progress over time, especially during transition periods like emerging adulthood. Proctor et al. emphasize the importance of SWL in youth, stating that SWL is more than an epiphenomenon.[63] SWL has a mediator role between the environment one is exposed

to and one's behavior, acting as a buffer to protect from negative consequences of stressful life events and is protective against the development of psychological disorders. In a previous study with 224 female students, the SWLS mean was 21.7 (SD=6.3, and in a multi-center study during the first wave of COVID-19, SWLS scores among 310 Turkish students were measured as 16.64 (SD=6.89).[64,65] SWLS average in the current study was 15.52 (SD=4.19). Although COVID-19 was not questioned, SWLS might have been measured lower as a result of the ongoing life difficulties of the pandemic. Re-evaluation of SWL in the same group of participants after the pandemic would have clarified this suggestion.

There was a weak negative correlation between the average COSS score and SWLS score (rs= -0,322, p<0,05), making it hard to make a bold statement about the association between SWL and online shopping tendencies. Previous studies on in-store SBD point to a negative relationship between SWL and problematic purchasing behavior, and SWL has a mediating effect on SBD.[66-68] Tian et al. (2018) studied the effects of some internet activities with addictive potential and SWL on 5215 students and found that loneliness and depression had adverse mediating effects on online shopping.[69] Yeşil et al. (2022) conducted a study to examine the effects of compulsive online purchasing behavior on SWL with 384 university students, and it was determined that compulsive online purchasing behavior negatively affected the level of life satisfaction only in terms of problem conflict, and relapse sub-domains.[70]

In most of the studies in the literature, there is no significant association between income and in-store or online SBD.[44,45,49] The findings of the present study are in line with the literature. Credit cards might have compensated for the lack of economic income. Credit card usage facilitates buying behavior, creating the illusion that people are not spending real money.[71] Most people in Turkey use at least one credit card, and many stores and banks permit deferred payment sales. Forty people (26.7%) had no credit card, 40 (46.7%) had more than one credit card, and 40 people (26.7%) had one credit card. In Kukar-Kinney's study, compulsive buyers owned 4.18 credit cards and used 2.59 cards.[10] The authors predicted that there would be a significant association between total COSS scores and credit card usage and credit card numbers. Mean total COSS scores were 66.21, 76.33, and 83.34 for having no credit card, having one credit card, and having more than one credit card, respectively. As can be seen, mean COSS scores increased with credit card usage and credit card numbers, but the association was not significant. Deferred payment sales with a credit card are common in Turkey but were not questioned in the study.

Limitations and Suggestions

Using a non-probabilistic sampling method might have resulted in a bias because only those willing to participate were included. Therefore, the sample does not represent all female university students. Hiding shopping and buying behavior is one of the symptoms of SBD.[2,7,14] Students with probable OBSD might have rejected participation in the study even though they were informed that it was anonymous.

This study was restricted to online SBD. Although in-store and online SBD share similarities in the preoccupation and impulses with shopping and buying, emotional difficulties in regulating the shopping buying behavior, and the resultant negative financial, social, and occupational consequences, some authors consider they might also have some differences. Müller et al.(2019) ran a post hoc analysis of pooled data from previous studies of people with (BSD).[2] They found that the probability of online BSD increased as the severity of BSD increased. A further study questioning in-store and OBSD in the same participants can help understand how much online SBD and OBSD differ.

Students might prefer online shopping because of time constraints related to their academic work, and online shopping sites might be cheaper than stores. The main motives for online shopping and information regarding the types and patterns of online purchases were not questioned. Marketing literature provides information regarding these questions. In future studies, patterns of online shopping and the type of purchases need to be explored among people with probable OSBD to differentiate normal buying behavior from problematic buying.

In the article, some of the findings are explained regarding the continuing effects of the COVID-19 pandemic. However, the participants' COVID-19 experience should have been explicitly addressed with any questions in the study questionnaire. The explanations must be regarded as no more than assumptions based on the COVID-19 context.

Moreover, there is literature on decreased online shopping after the initial panic buying spree.[71] As the time spent online increased, so did the COSS total scores. The participants' reasons for being online were not asked. Therefore, this study makes it hard to say whether spending a long time on the Internet causes problematic online shopping behavior or whether problematic online shopping behavior causes spending a long time online.

SWLS is a reliable and valid assessment tool for measuring SWL. However, the scale has only five items, which might make it hard to interpret the individual's real SWL. A qualitative approach using semi-structured interviews with individuals who scored lower in SWLS might give better information. So far, it is not possible to conclude a dissatisfied life that is compensated with online shopping.

Conclusion

Problematic online shopping tendencies, some associated sociodemographic factors, and satisfaction with life were assessed among female university students. Being younger, spending more time on the internet, increasing frequency of online shopping, and living alone were associated with increased online shopping tendencies. Life satisfaction had minor effects on online shopping. Online shopping is and will be part of everyone's daily

lives, so consumers who are environmentally responsible are needed to cope with and find solutions to the climate problem that concerns the world. Strategies and policies to prevent behavioral online addictions must be developed that will target young and especially lonely people who are constantly online, which might benefit the planet as well.

Conflicts of Interest:

The authors have no conflicts of interest to declare

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