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The Relationship between Physical Activity Level and Short Video Addiction in Individuals with Bipolar Disorder

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Abstract

The aim of this study is to investigate the relationship between physical activity level and short video addiction in individuals diagnosed with bipolar disorder. This study was planned as a descriptive relational study. The sample of the study consisted of 100 individuals over the age of 18 with bipolar disorder who were followed up in a family health center in Selçuklu district of Konya province. The data of the study was collected by face-to-face interview method. In collecting the data; personal information form that questions socio-demographic characteristics and prepared by the researchers, International Physical Activity Questionnaire and Short Video Addiction Scale were used. The results were evaluated at 95% confidence interval and $p<0.05$ significance level. The total physical activity score average of the participants was found to be 493.66±49.62, 87.0% of them were inactive and 13.0% were low-level active. The short video addiction scale score average of the participants was found to be 34.63±5.01. A very strong negative correlation was found between short video addiction and physical activity level ($r:0.812$, $p<0.001$). Men, university graduates, unemployed individuals, and those who are physically inactive were determined as higher risk groups for short video addiction. No significant correlation was found between perceived health and income status and addiction. It can be said that as the participants' short video addiction average scores increased, their physical activity level also decreased.

Keywords: Bipolar disorder, Short video addiction, Physical activity

Introduction

Bipolar disorder is a chronic mental health problem that has profound effects on individuals' mood, energy levels, and general life functioning. This disorder is characterized by periods of mania and depression and can affect individuals' quality of life in a wide range of areas, from social relationships to occupational functions [1]. In recent years, the rapid increase in digital media use and especially the popularity of short video platforms have caused significant changes in individuals' technology usage habits. The instant reward mechanisms and constant novelty offered by short video content increase the potential for individuals to develop addiction [2]. This situation may become more pronounced and problematic, especially for individuals struggling with mental health problems. The risk of bipolar disorder patients developing addiction to short video platforms is of particular importance due to the unique characteristics of the disease. Increased impulsivity during periods of mania and social isolation tendencies during periods of depression in bipolar patients may lead these individuals to become more vulnerable to digital media content [3]. On the other hand, the positive effects of physical activity on mental health have been known for many years. Physical activity provides many benefits such as stress management, mood regulation, improving sleep quality, and improving general health [4]. However, the physical activity levels of bipolar patients are often low, which can worsen both physical and mental health conditions. In this context, examining the relationship between physical activity level and short video addiction is extremely important in order to improve the quality of life of bipolar disorder patients. The aim of the study is to reveal the effect of physical activity in reducing

short video addiction and the possible connections between these two factors. Such a study may enable the development of innovative treatment and prevention strategies in terms of both individual and public health. The importance of the study can be emphasized in several aspects. First of all, short video addiction can lead to attention deficits, social isolation, and time management problems in individuals [5]. In a sensitive mental health condition such as bipolar disorder, these effects can worsen the course of the disease. Therefore, understanding the effects of short video addiction on bipolar disorder is a critical step in managing the treatment processes of these patients more effectively. In addition, revealing the positive effects of physical activity on these individuals in more detail may provide innovative contributions to current treatment approaches. From a public health perspective, digital media addiction poses a serious threat not only to bipolar patients but also to the general population [6]. Therefore, findings obtained on a special patient group may guide the regulation of media usage habits and the promotion of healthy lifestyles in society in general. As a result, this research may help increase the awareness of digital media usage habits not only in bipolar patients but also in the wider public. In addition, it will provide a solid basis for the development of interventions aimed at encouraging physical activity and reducing short video addiction. In addition to improving the quality of life of individuals, the research findings will enable the development of more effective and comprehensive strategies for mental health treatment.

Research Questions

1. What are the sociodemographic characteristics of individuals diagnosed with bipolar disorder?
2. Does short video addiction change according to the sociodemographic characteristics of individuals diagnosed with bipolar disorder?
3. Is there a relationship between the short video addiction level of individuals diagnosed with bipolar disorder and their physical activity level?

Methods

Type of the study

This study was planned as descriptive relational.

Location and characteristics of the study

The study was conducted with patients followed up in a family health center in Selçuklu district of Konya province.

Study group of the study

The sample size in the study was calculated in the G*Power 3.1.9.2 analysis program. With an effect size of 0.3121734, 95% power, and 5% margin of error, the total physical activity score average in the study of Yılmaz *et al.* [7]was calculated as 100.

The inclusion criteria of the study consisted of individuals over the age of 18 diagnosed with bipolar disorder.

Data collection technique and tools

The data of the study were collected through face-to-face interviews. The surveys were delivered to the participants via social media; the data collection process was terminated after the sample size was reached. In the collection of data; a personal information form that questions socio-demographic characteristics and was prepared by the researchers, the International Physical Activity Questionnaire and the Short Video Addiction Scale were used.

International physical questionnaire

Physical activity levels will be determined with the International Physical Activity Questionnaire (UFAA) [8]. The validity and reliability study of the questionnaire has been conducted in Turkey. In our study, the short form of the questionnaire, which can be administered by oneself and includes the "last seven days", was used to assess physical activity levels. This short form consists of seven questions and provides information on the time spent in sitting, walking, moderate intensity activities, and vigorous activities. The calculation of the total score of the short form includes the sum of the duration (minutes) and frequency (days) of walking, moderate intensity activities, and vigorous activities. The sitting score (sedentary behavior level) is calculated separately. In the evaluation of all activities, the criterion is that each activity is performed for at least 10 minutes at a time. A score is obtained as "MET-minutes/week" by multiplying minutes, days and MET values (multiples of resting oxygen consumption). In calculating the walking score, the walking time (minutes) was multiplied by 3.3 METs. In the calculation, 4 METs were taken for moderate intensity activity and 8 METs for intense activity. Physical activity levels were classified as physically inactive (3,000 MET-min/week) [8].

Short video addiction scale

The scale was developed by Ye *et al.* in 2023 [9]. The Turkish adaptation of the scale was made by Türk and Yıldırım [10]. The scale items are scored as 1 = "completely disagree", 2 = "disagree", 3 = "partially agree", 4 = "agree" and 5 = "completely agree". The lowest score that can be obtained from the scale is 10 and the highest score is 50. The scale is one-dimensional and does not include reverse items. A high scoring result indicates that the addiction level is also high. Cronbach alpha coefficient in the Turkish version of the scale is 0.82. In this study, Cronbach alpha value of Short Video Addiction Scale was found to be 0.837.

Evaluation of data

The data of the study were evaluated using SPSS for Windows 22.0 (Statistical Package for Social Science) statistical package program. Number of units (n), percentage (%), mean±standard deviation (mean (SD)) values were used as summary statistics. Normal distribution of the data was evaluated with Kolmogorov–Smirnov test and Q-Q plot. Independent two-sample t-test and one-way anova were used for normally distributed data. The results were evaluated at 95% confidence interval and $p<0.05$ significance level.

Ethical dimension

Approval was obtained from the Ethics Committee of a university for ethical permission of the study (Decision no: 64). Consent was obtained from the patients before starting the study. The principle of "Informed Consent" was fulfilled by briefly explaining the purpose of the research, its duration and the procedures to be carried out during the research in a language they could understand, the principle of "Autonomy" was fulfilled by stating that individuals could withdraw from the research at any time, and the principle of "Confidentiality and Protection of Confidentiality" was fulfilled by stating that individual information would be protected after being shared with the researcher.

Results

The average age of the participants was 42.65±3.41, 54.0% were female, 45.0% were high school graduates, 55.0% were married, 37.0% were employed, 58.0% perceived their health as moderate, and 42.0% perceived their income as good.

The total average physical activity score of the participants was found to be 493.66±49.62, 87.0% were inactive and 13.0% were low-level active. The average score of the participants on the short video addiction scale was found to be 34.63±5.01 **(Table 1)**.

When the participants' sociodemographic variables and short video addiction scale total mean scores were examined, it was seen that the short video addiction scale total mean scores of men were higher than the women's and the difference was found to be statistically significant ($p<0.05$). A significant difference was found between the education status and the short video addiction scale total mean scores and it was found that the difference was due to university graduates ($p<0.05$). The short video addiction scale total mean scores of those who were not employed were found to be higher than those who were employed and the difference was found to be statistically significant ($p<0.05$). The short video addiction scale total mean scores of the participants in the inactive group in terms of physical activity were higher than those who were minimally active in terms of physical activity and the difference was found to be statistically significant ($p<0.05$). It was seen that there was no statistical significance between the perceived health status and perceived income status and the short video addiction scale total means ($p>0.05$) (**Table 2**).

Table 1. Distribution of participants' physical activity level and short video addiction scale mean scores.

Scales	**Number (n)**	**Percentage (%)**
Physical Activity Questionnaire		
Physically inactive (Inactive) (<600 MET-min/wk)	87	87.0
Low physical activity level (600-3,000 MET-min/wk) (Active)	13	13.0
	Mean±SD	Min-Max
Physical Activity Total Score	493.66±49.62	102–803
Short Video Addiction Scale Total Score	34.63±5.01	10–50

Table 2. Distribution of short video addiction score averages of participants according to sociodemographic characteristics.

Variables	**Average Score for Short Video Addiction**	**Test value P value**
Gender		
Female	15.28±2.58	t:1.081 p:0.01*
Male	19.35±1.77	
Educational Status		
Primary School	8.66±2.18	F:3.077 p:0.01*
High School	11.20±3.34	
University	**14.77±0.89**	

Employment Status		
Employed	11.29±2.63	t:0.812 p:0.04*
Not Employed	23.34±4.14	
Perceived Health Status		
Good	13.33±2.03	F:1.418 p:0.62
Moderate	12.54±3.44	
Poor	10.76±1.77	
Perceived Income Status		
Good	11.11±1.34	F:2.099 P:0.52
Moderate	11.08±0.94	
Poor	12.44±2.18	
Physical Activity Level		
Physically inactive (Inactive) (<600 MET-min/wk)	22.03±2.69	t:1.812 p:0.02*
Low physical activity level (600-3,000 MET-min/wk) (Active)	12.60±3.07	
t: t test; F: One Way Anova; *p<0,05		

Table 3. Comparison of participants' short video addiction and physical activity level.

Variables	**Short Video Addiction**	**Physical Activity**
Short Video Addiction	1.00	
Physical Activity	r:-0.812 p:0.001*	1.00
r: Pearson Correlation Analysis; *p<0.001		

The relationship between the participants' short video addiction and physical activity level is evaluated in **Table 3**. A very strong negative relationship was found between short video addiction and physical activity level (r:0.812, p<0.001). It can be said that as the participants' short video addiction score average increases, their physical activity level decreases.

Discussion

In this study, the participants' sociodemographic variables and short video addiction scale total score averages were examined and it was found that men's addiction scores were higher than women's. In the literature, it has been reported in many studies that men spend more time using digital media and technology than women and have a higher risk of developing addiction. For example, Kuss and Griffiths [6] state that men are in a riskier group in terms of digital media addiction than women and that this situation is especially evident in young men. The main reasons for this are that men are introduced to technology at an earlier age and are more active on video games and social media platforms. In this context, it can be said that awareness-raising and addiction prevention interventions should be increased for men's use of short video platforms.

It was observed that there is a significant difference between education status and short video addiction and that this difference is especially caused by university graduates. Education level is usually directly associated with technology use and it has been frequently stated in the literature that university graduates use more social media and short video platforms [5]. However, the increased risk of this use turning into addiction in individuals with a higher level of education can be explained by the addiction to both professional and social interactions taking place in the digital environment. The widespread use of remote work and education processes, especially due to the impact of the pandemic, has increased the digital media usage habits of individuals in this group. This result emphasizes the importance of developing strategies to establish a healthy balance with technology use in individuals with a higher level of education. In terms of employment status, it was observed that individuals who were not employed had higher short video addiction scores than employed individuals. In the literature, this situation is associated with unemployed individuals having more free time and tending to spend this time on digital media platforms such as social media [2]. The fact that unemployed individuals tend to use platforms open to continuous content consumption, such as short video platforms, increases their risk of developing

addiction. In addition, the fact that individuals in this group face factors such as social isolation and low life satisfaction may lead them to adopt digital media use as a coping strategy. This finding indicates that measures to limit digital media use and social support mechanisms should be developed for unemployed individuals. In terms of physical activity level, it was determined that the participants in the inactive group had higher short video addiction scores than those who were minimally physically active. This result is in line with the literature showing that lack of physical activity may be directly related to digital media addiction. For example, Kim *et al.* [11] stated that low physical activity levels increase the time individuals spend in front of the screen, which may lead to media addiction. Physical activity can help individuals achieve a more balanced time management in daily life and can also reduce addictive behaviors with its mood-regulating effects [4]. It can be said that increasing the level of physical activity may play an important role in preventing behavioral problems such as short video addiction. On the other hand, no statistically significant difference was found between perceived health status and perceived income status and short video addiction scores. This result suggests that individuals' health and income perceptions may not have a direct effect on their short video platform usage habits. It is stated in the literature that such variables may have more indirect effects and therefore are less effective in explaining addiction levels [5]. This situation shows that the relationship between short video addiction and perceived health and income level should be examined by taking into account broader factors. The study determined that there is a negative and very strong relationship between short video addiction and physical activity level. This finding is consistent with the existing literature and shows that physical activity plays an important role in reducing individuals' short video addiction. In addition to improving individuals' physical health, physical activity provides psychological benefits such as stress management, mood regulation and increasing social interactions [12]. These benefits can help reduce behavioral addictions such as short video addiction. However, it is not possible to say that short video addiction is a factor that prevents physical activity.

Limitations

One limitation of this study is that the Short Video Addiction Scale was originally developed and validated in younger populations. Although the scale was applied to individuals with a mean age of approximately 43 years in the present study, its psychometric properties have not been specifically validated for middle-aged or older adults. Therefore, caution is advised when generalizing the findings, and future research should focus on validating this scale across different age groups.

Conclusion

This study revealed significant relationships between short video addiction and physical activity level, as well as certain sociodemographic variables. Specifically, males, university graduates, unemployed individuals, and those who are physically inactive were identified as higher-risk groups for short video addiction. On the other hand, no significant association was found between perceived health status or income level and addiction. Based on these findings, it is recommended to develop programs that promote physical activity as a preventive measure against short video addiction. In addition, it is important to prioritize educational and awareness-raising activities, particularly for individuals in high-risk groups. Furthermore, creating individual and societal awareness around responsible digital media use, strengthening social support mechanisms, and formulating policies aimed at reducing addiction may serve as effective strategies.

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