

Effects of Adolescents' Fandom Activities on Smartphone Dependence Focusing on the Mediating Effects of Depression

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The Asian Conference on Cultural Studies 2025
Official Conference Proceedings

Abstract

Adolescents' fandom activities are being recognized as activities with important cultural characteristics, and their fandom activities were found to have a great influence on their emotional and mental state and growth. The purpose of this study was to examine how adolescents' fandom activities affect their dependence on smartphones, and to examine whether the negative psychological state of depression mediates fandom activities and smartphone dependence. In this study, data from the 3rd year of the Korean Children and Youth Panel Survey 2018 (KCYPS 2018) longitudinal panel established by the National Youth Policy Institute (NYPI) were used. This study included 1,088 adolescents who answered positively to the question 'Do you have a favorite celebrity or athlete?'. Descriptive statistical analyses and mediating effect analysis was used to achieve the purpose of this study. In Conclusion, First, it was confirmed that the effect of fandom activities on depression had a positive significant effect, which means that the more active the fandom activities, the higher the depression of adolescents. Second, fandom activities have a positive effect on smartphone dependence, which means that as fandom activities increase, adolescents' dependence on smartphones also increases. Finally, it was confirmed that there is a mediating effect of depression on the effect of fandom activities on smartphone dependence. Based on the results of this study, social welfare implications were proposed.

Keywords: fandom activities, smartphone dependence, depression, adolescents

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Introduction

Fandom activities are important cultural activities for teenagers, and belonging to and working as a member of the fandom becomes an activity factor that has an important influence on the process of forming their identity. According to previous studies, fandom is a comprehensive concept that includes cultural practices and cultural consumption groups that are formed by gathering individual fans through a specific stardom. It is characterized by “spontaneity,” which allows for the continual reproduction of signs and discourses about stars, as well as all related cultural phenomena mediated by fan activities (Lee, 2015; Oh & Kim, 2022).

Fandom activities, especially among adolescents, show great interest in popular culture and celebrities, and affect many aspects of their overall lives. It acts as an important factor in the process of forming adolescents' companionship and self-identity and also provides a space and opportunity to relieve various needs for recognition and belonging (An et al., 2013; Kim & Kim, 2018; Paik, 2015; Yoon, 2017). In addition, it has been found that through the process of relieving the stress from life and admiring the same star, they fully felt catharsis and fellowship and increased their satisfaction with life by forming relationships with peers and peers (Na, 2017). In other words, it was found that they experience a strong bond and a sense of belonging through fandom activities, experience strong recognition and attachment from others who have intimate relationships, form self-identity, and give the meaning of their existence (An et al., 2013). Recently, it has been shown that the influence of fandom activities on the formation of job views, external values, and beliefs has been remarkable, and through this, fandom activities are an important component of life activities for adolescents (Oh & Kang, 2018).

Meanwhile, since the 2000s, as the Internet and online communication became active, the focus of fandom activities began to shift from offline to online (Son, 2013). Online fandom activities have increased the use of media such as mobile phones and computers, and these media have been used as tools to strengthen online fandom activities (Seo & Yang, 2014). Among these various media, smartphones are by far the most accessible to teenagers, especially. Even now, most idol fans enjoy broadcasting and videos of their favorite celebrities through various online communities and apps including X (Twitter), YouTube, Instagram, and TikTok, and communicate with them through live broadcasts. In other words, fans are most easily obtaining information on objects they are interested in through smartphones. Furthermore, they search and download secondary products about their stars through smartphones and easily create secondary creations and share them with others (G. W. Kim, J. W. Kim, & Park, 2009). In addition, there have been major changes in the aspect of entertainment contents targeting the youth after the COVID-19 pandemic, the biggest change among which is that the main stage of activities has been moved from offline to online. Before the pandemic, offline activities such as concerts, fan signings, and fan meetings were prominent, but after the COVID-19 pandemic, the focus was forced to be on online activities. As a result, online concerts were largely activated, and online video call activities and live communication and communication centered on SNS within the fandom were carried out. The activation of these online fandom activities has led to changes in the peer relationship patterns and participation in the play culture of adolescents. For adolescents, and celebrities have more meaning than just objects of longing and are also used as tools to influence their self-identity formation while also escaping from their reality. As a result, it is a natural phenomenon that the dependence on mobile phones is also strong as the stimulation of adolescents to focus on online fandom activities has increased.

For adolescents, mobile phones are both a tool to express themselves and a tool that has the meaning of a cultural space that shares peer culture (Lee & Kang, 2007), so it is easy to lead to excessive use and dependence. Studies on excessive use of mobile phones have used the term “cell phone addiction” (Cho, 2009), where “cell phone addiction” means experiencing discomfort in real life due to excessive use of mobile phones without any clear purpose, and being unable to control them, and using them dependently and compulsively (Lee & Myung, 2007). This over-dependence leads to obsession with cell phone use while experiencing physical, psychological, and social maladjustment, feeling satisfaction when used more and more often, and experiencing extreme anxiety when stopped (Jeong & Lee, 2020). According to a study by Kim and Jo (2019), “cell phone dependence” refers to a phenomenon of showing an anxious reaction when a cell phone is not available, and psychological dependence on an object called a cell phone with psychological stability and feeling separation anxiety from a cell phone. Although the degree of behavior can be considered to be lower than addiction, previous studies have shown that mobile phone use and dependence act as a factor that hinders the healthy development of adolescents (Bae et al., 2020).

On the other hand, adolescence is the period of greatest psycho-emotional growth and change in the entire life cycle, so it is also a period of psycho-emotional weakness, and experiencing psycho-emotional stability increases the likelihood of having a healthy life throughout life. As such, it is necessary to study various approaches for psycho-emotional stability and health in adolescence, and academia has discussed the factors affecting adolescents' psychology and emotions by classifying them into personal factors, family and school factors, and social factors. However, the COVID-19 pandemic that occurred after 2019 and the advent of the un-tact era due to the pandemic have caused individual adolescents to experience psycho-emotional difficulties and greatly changed the form of culture that the youth group has pursued. Since the late 2019 pandemic, social distancing has been implemented due to the coronavirus pandemic, and as opportunities and areas for outside activities have been greatly reduced, people are more likely to release energy in life by anti-compulsory measures (Joo et al., 2021). In addition, adolescents were limited to indoor and outdoor physical activities, school life, and activities with peers, which soon acted as a factor leading to social isolation, negatively affecting adolescents' physical, social, and psychological adaptation (Jang, 2021).

In particular, social distancing and quarantine due to COVID-19 have been strengthened, and the psychological and emotional health of adolescents has begun to emerge as a social problem. According to previous studies, while adolescents' happiness has decreased due to COVID-19, negative psychological and emotional factors such as depression, social atrophy, attention deficit, and hyperactivity disorder have increased. Students' overall satisfaction with school life has decreased due to the formation of companionship and difficulty in communicating with peer relations due to school restrictions, and there is also a concern about the deterioration of social and relationship formation ability (Kim & Park, 2021; Park, 2021). In addition, according to the results of a survey conducted by the ChildFund Korea (2021), the risk group of depression among adolescents after COVID-19 reached 43.2% of the total, indicating that it is necessary to take a closer look at Corona Blue among adolescents.

On the one hand, it can be seen that fandom activities and depression act as mutually influencing factors through previous studies that examined the motivation or motivation to start fandom activities and previous studies that analyzed the negative effects of fandom activities (Oh & Kang, 2018). In particular, negative psychological states such as depression were found to have various effects on adolescents' concentration on fandom activities.

According to previous studies examining the motivation for starting fandom activities, negative psycho-emotional states are affecting the degree of immersion in fandom activities (Oh & Kang, 2018). It can be seen that various psychological factors, especially negative psychological states, are intertwined with adolescents' fandom activities through the fact that low self-esteem and low life satisfaction are linked to fandom activities, that adolescents' participation in fandom activities is an important component of life activities, and that fandom activities have a great influence on adolescents' companionship, self-identity formation, and resolution of various needs for recognition. Therefore, through this study, we want to examine how adolescents' fandom activities have affected their dependence on smartphones, and at the same time, we want to examine how the negative psychological state of depression plays a mediating role between online fandom activities and smartphone dependence.

The research problems of this study are as follows:

1. Do adolescents' fandom activities affect their dependence on smartphones?
2. Does depression mediate the relationship between adolescents' fandom activities and smartphone dependence?

Method

Subject of Study

In this study, data from the 3rd year of the Korean Children and Youth Panel Survey 2018 (KCYPs 2018) longitudinal panel established by the National Youth Policy Institute (NYPI) were used. The time of investigation is 2020, which is a pandemic situation. KCYPs 2018 is a longitudinal panel for confirming the growth and development of children and adolescents, and sampling was allocated in proportion to the number of students in 17 cities and provinces, and sample schools were selected at random by classifying co-educational. This study included 1,088 adolescents who answered positively to the question 'Do you have a favorite celebrity or athlete?'

Research Tool

Smartphone Dependence

The self-diagnosis scale for smartphone addiction by Kim et al. (2012) was used. There were 15 questions, and 3 questions were reverse-coded. From "not at all (1)" to "very much (5)," the higher the score, the higher the dependence on smartphones.

Fandom Activities

This scale was adapted by revising and supplementing the items related to fandom activities by Kim et al. (2020). Fandom activities consist of 5 questions for online activities and 4 questions for offline activities. Responses are asked from 'not at all' to 'multiple times a week', and the higher the score, the higher the degree of participation in fandom activities.

Depression

This study used the 10 questions depression scale from the simple psychiatric Diagnosis Test developed by Kim et al. (1984). Each question of depression consists of a Likert 4-point scale

from “not at all (1)” to “very much (4),” and the higher the score, the more severe the degree of depression is with an average of 10 questions.

Others

Variables known to affect smartphone dependence in previous studies were input as control variables. They are gender, self-esteem, parental attitude, and peer relations. Gender was converted to male adolescents 0 and female adolescents 1. Self-esteem was measured using a scale developed by revising and supplementing the existing questions of Kim et al. (2020), who adapted and used the original items from Rosenberg (1965). Four negative questions out of 10 questions were reverse-coded. The higher the score, the higher the self-esteem. For the parenting attitude, 24 questions on the Korean version of the motivational model for adolescents by Kim and Lee (2017) were used. The 12 questions representing negative parenting attitudes were inverse-scored, and the higher the average, the more positively adolescents perceive the parenting attitude. For the friend relationship, 13 questions on the peer relationship quality scale of Bae et al. (2015) were used. Five questions measuring negative relationships were reverse-coded, and the higher the score, the more positive the peer relationship was.

Data Analysis

Descriptive statistical analysis was conducted to understand the demographic background of the subjects and the characteristics of the main variables, and then the correlation between the main variables was confirmed. Finally, a mediating effect analysis was conducted to confirm the effect of fandom activities on smartphone dependence and the mediating effect of depression. SPSS 22.0 and process macro 4.0 were used.

Results of Analysis

General Characteristics of Survey Subjects

Demographic and sociological characteristics are shown in “Table 1.” Male adolescents accounted for 45.2% and female adolescents 54.8%. As for the residential area, 51.4% were in the metropolitan area and 48.6% were outside the metropolitan area, which was 2.8% higher in the metropolitan area. The average monthly household income was 51.3% for more than 5 million won, 19.9% for more than 4 million won-less than 5 million won, and 16.4% for less than 3 million won-4 million won, indicating that the income level of respondents was generally high. The education level of fathers and mothers is 70.6% and 68.4% for those who graduated from college or higher, respectively. The types of fandom activities in which adolescents mainly participate are viewing and uploading photos and videos (53.7%), SNS, and blogs, commenting (36.3%), fan club/fan cafe activities (21.5%), books, CDs, DVDs, and photo books (16.2%), and making or purchasing goods (14.0%). It was confirmed that online participation was more active than offline activities.

As a result of conducting a basic analysis with the correlation of major variables (Table 2), it was confirmed that fandom activities, smartphone dependence, and depression were positively correlated ($p < .001$), and all were normally distributed.

Table 1
General Characteristics of the Study Subjects

Classification	People (%)	Classification	People (%)
gender	male 492(45.2)	fan club/fan cafe activities	234(21.5)
	female 596(54.8)	Writing fan letters, sending messages	64(5.9)
Residence Area	the metropolitan area 559(51.4)	Fandom activities (online)	Commenting on social media, blogs, etc 395(36.3)
	outside the metropolitan area 529(48.6)		View and upload photos and videos 584(53.7)
Household Income	Less than 2 million won 53(4.9)	Fandom activities (offline)	Making or purchasing goods 152(14.0)
	More than 2 million won - less than 3 million won 82(7.5)		Attending the fan meeting 5(.5)
	More than 3 million won - less than 4 million won 178(16.4)		going to a broadcasting station /performance hall/event hall, etc 50(4.6)
	More than 4 million won - less than 5 million won 217(19.9)		Send a gift 19(1.7)
	More than 5 million won 558(51.3)		Buy books, CDs, DVDs, and photo books 176(16.2)
father's educational level	a high school graduate or lower 276(25.4)	mother's educational level	a high school graduate or lower 324(29.8)
	a college graduation or higher 768(70.6)		a college graduation or higher 744(68.4)
	Not sure/not applicable 44(4.0)		Not sure/not applicable 20(1.8)

Table 2
Descriptive Statistics and Correlation Analysis of Key Variables

variable	Correlation Analysis						
	Fandom activities	Depression	Smart phone dependence	Gender	self-esteem	Parenting attitude	peer relationship
Fandom activities	1	.110***	.126***	.343***	-.051	.042	.120***
Depression		1	.296***	.081**	-.615***	-.378***	-.391***
Smart phone dependence			1	.091**	-.269***	-.319***	-.269***
Gender				1	-.044	.061*	.106***
self-esteem					1	.459***	.449***
parenting attitude						1	.452***
peer relationship							1

$n = 1,088$, * $p < .05$, ** $p < .01$, *** $p < .001$

Mediating Effects of Depression in the Relationship Between Fandom Activities and Smartphone Dependence

We analyzed the effect of fandom activities on depression (model 1), confirmed the direct effect of fandom activities on smartphone dependence (model 2), and finally confirmed the mediating effect of fandom activities and depression on smartphone dependence (model 3).

First, it was confirmed that the effect of fandom activities on depression had a positive significant effect ($\beta = .07$, $p < .001$), which means that the more active the fandom activities, the higher the depression of adolescents. Next, it was analyzed that fandom activities have a positive effect on smartphone dependence ($\beta = .08$, $p < .001$), which means that as fandom activities increase, adolescents' dependence on smartphones also increases. Finally, it was confirmed that there is a mediating effect of depression on the effect of fandom activities on smartphone dependence ($\beta = .11$, $p < .001$). Bootstrap was conducted to confirm whether the magnitude of the indirect effect of the mediating model was statistically significant (Shrout & Bolger, 2002). As a result, it was confirmed that the Direct effect (.073), Indirect effect (.008), and Total effect (.081) were all significant. Taken together, it is judged that when adolescents' fandom activities increase, depression increases and their dependence on smartphones increases.

Table 3

Mediating Effects of Depression in the Effects of Fandom Activities on Dependence on Smartphones

[model 1] Fandom Activities -> Depression				[model 2] Fandom Activities -> Dependence on Smartphones				[model 3] Fandom Activities · Depression -> Dependence on Smartphones			
B(se)		t		B(se)		t		B(se)		t	
constant	4.74	0.13	36.03***	constant	3.69	0.13	28.41***	constant	3.16	0.19	16.53***
Gender	0.06	0.03	1.96	Gender	0.07	0.03	2.47*	Gender	0.07	0.03	2.26*
self-esteem	-0.67	0.04	-18.11***	self-esteem	-0.10	0.04	-2.72**	self-esteem	-0.03	0.04	-0.61
parenting attitude	-0.13	0.04	-3.27**	parenting attitude	-0.26	0.04	-6.61***	parenting attitude	-0.24	0.04	-6.25***
peer relationship	-0.21	0.04	-5.05***	peer relationship	-0.19	0.04	-4.56***	peer relationship	-0.16	0.04	-3.97***
Fandom activities	0.07	0.02	3.54***	Fandom activities	0.08	0.02	4.12***	Fandom activities	0.07	0.02	3.72***
								Depression	0.11	0.03	3.70***
R ²	0.41			R ²	0.16			R ²	0.17		
F	151.96***			F	40.32***			F	36.28***		

$n=1,088$, * $p < .05$, ** $p < .01$, *** $p < .001$

Table 4

Verifying the Significance of Mediating Effects (bootstrap)

Classification	Effect	se	LLCI	ULCI
Direct effect	.073	.0196	.034	.111
Indirect effect	.008	.0035	.002	.016
Total effect	.081	.0196	.042	.119

Figure 1

Mediating Effects of Depression in the Effects of Fandom Activities on Dependence on Smartphones



Conclusions

The purpose of this study was to examine how adolescents' fandom activities affect their dependence on smartphones, and to examine whether the negative psychological state of depression mediates fandom activities and smartphone dependence. As mentioned in the introduction, adolescents' fandom activities are being recognized as activities with important cultural characteristics, and their fandom activities were found to have a great influence on their emotional and mental state and growth. Therefore, it is judged that extensive research on adolescents' fandom activities should be continued in the future. The conclusion of this study is as follows. In addition, fandom activities are a culture that has already been established in the youth generation, and due to the development of media, it is a social phenomenon that youth can easily access through the Internet and smartphones. Therefore, rather than forcibly controlling the use of smartphones, social support should be provided so that it can be a positive activity to relieve various stresses in life and strengthen a sense of belonging and solidarity through peer relationships (Na, 2017).

Second, it was confirmed that depression increases as fandom activities increase, and these results are consistent with the research results of Oh and Kang (2018). However, there is a limit to uncovering the specific process and reason for fandom activities to be linked to adolescents' negative mental state, that is, depression, through the results of this study. Since it is difficult to materialize the cause only with quantitative research, it is judged that it is necessary to investigate and study it later, including qualitative research methods.

Third, it was confirmed that depression mediates the process of fandom activities on smartphone dependence. There are positive aspects of fandom activities, such as experiencing a sense of bond and belonging in relationships with peers and forming self-identity, but it has been confirmed that excessive immersion in fandom activities can have a negative effect on increasing the negative psychology of depression and strengthening dependence on smartphones. It is necessary to conduct education on the psychological emotions and use of smartphones of adolescents who engage in fandom activities, and to conduct campaigns so that adolescents can recognize the mechanisms and risks of being excessively immersed in fandom activities in online spaces such as the Internet and smartphones. In order to increase access to campaigns for adolescents, it will be necessary to conduct related campaigns on online media where they often work. It is also necessary to approach the depression of adolescents from various perspectives. In addition to providing individual counseling services for adolescents, a wide range of youth depression solutions should be presented, including

changes in the perception of social members to alleviate youth depression and institutional improvement to bring about the creation of a youth-friendly environment.

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