

Chinese College Students' Social Compensation and Immersion Level in Game A Study Based on Arena of Valor

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ABSTRACT

Game is indispensable for many young people in the current society. One prominent reason for this phenomenon is that it serves as an essential platform for players to interact and to build social relationships. The current research applies quantitative measures to analyze the potential relation between players' social interaction need and gameplay experience. It identifies two main variables: social compensation (constituted by loneliness, need to belong, and social anxiety) and immersion. The research selects the most popular mobile game in China, *Arena of Valor*, as the basis for the research. With 118 collected samples and further data analysis, the result suggests that players' social compensation and all three of its sub-variables enjoy positive correlations with immersion, and loneliness shows the most prominent correlation with immersion.

Keywords: Mobile game, social compensation, loneliness, social anxiety, immersion.

1. INTRODUCTION

As the information age continues to unfold, society continues to accelerate. College students, as important components of society, have been expected to bear the burden of social development and so are prone to be influenced by the fast-paced society, whose manifestation is high pressure from multi-dimensions. Among all, a prominent one is social interaction pressure. In general, social interaction refers to communication activity for conveying ideas, communicating emotions, and coordinating interpersonal relationships achieved by language and behavior [1]. College students, who live in a society embedding complex social ties, are especially prominent in social needs driven by their instinctive desire of not being alone and the social pressure of not being isolated. However, many college students lack social experiences and have weak social communication skills. Hoping to seek new sources of social support such as friendship, romantic relationships, or organizations, but afraid of being rejected. They feel uncomfortable when engaging in group activities, and when speaking in public, they tend to be nervous [2]. Consequently, one popular alternative for them is to immerse in games.

According to the 47th Statistical Report on Internet Development in China issued by the China Internet Network Information Center (CNNIC), as of December 2020, the number of online game users reached 518 million. The scale of mobile games' players reached 516 million, accounting for 52.4% of mobile Internet users [3]. The mobile game is a popular entertainment method for college students and an important approach for their social interaction [4].

In most massive multiplayer mobile games, player's teammates or opponents are automatically selected by the matching system. Except for teaming up with friends to play games, most people encountered in games are strangers. *Arena of Valor* (AoV), also known as King of Glory in China, is a Multiplayer Online Battle Arena Game (MOBA game). The main competitive form of AoV is based on massive multiplayer battles. Players can have 1V1, 3V3, or other methods of PVP battles. Also, players can participate in various game modes, including adventure mode and entertainment mode [5]. From the Tencent Interim Financial Report in 2020, the total revenue of AoV is 35.988 billion yuan. The average daily active users in the first ten months of 2020 reached 100

million, and the number is continuously increasing [6]. Since its launched, it has been popular among college students due to its thrilling and exciting nature and function of social interaction [7].

Given people's high consumption level of AoV, the massive number of players on it, and the distinctiveness of AoV that it is created and developed in China's society, AoV is undoubtedly a representative for game-related research in China. Though controversy has haunted AoV since its establishment, the fact that it enables social interactions between a massive number of players on the platform and facilitates them to develop social relationships is not neglectable. Therefore, AoV is selected as the basis on this research.

In this research, we focus on the possible role of the game in addressing people's social needs and take the immersion-centered player experience as the measuring dimension of people's interaction with the game. We aim to make an extended reflection on the relationship between games and people. We hope to gain a better insight into the entertainment medium's role as a critical extension of social reality.

2. LITERATURE REVIEW

2.1. Social Compensation

2.1.1. The Definition and Explanation of Social Compensation

Social compensation is considered as the complement of social loafing, which means compared to work alone, individuals would contribute more as a group to compensate for others [8].

However, different interpretation of social compensation has been used in this research. Social compensation occurs when anxious adolescents who are not satisfied with offline social networks and have difficulty developing face-to-face friendships in real life trying to compensate by developing more extensive online social networks [9][10]. Barker did research about social compensation and social network, with a focus on undergraduate Facebook users. He proposed that individuals who think they are unwelcomed in a social group would try to build more valuable relationships online as an act of moving on. Their behaviors can be explained as regarding online relationships as compensation for offline social relationships [11]. Moreover, social compensation is interpreted for introverts for the offline social complement, while extraverts use social networking for social enhancement [12].

2.1.2. Social Anxiety as a Key Point in Social Compensation

Previous studies focused on the three most popular variables when evaluating social compensation: loneliness, sense of belonging, and social anxiety. Among them, social anxiety is critical [13].

Social anxiety is nervousness in a social situation. People with high levels of social anxiety have difficulty starting and maintaining conversations [14]. They may show unreasonable anxiety and fear in social interactions, which is different from being shy. Social anxiety is an obstacle that will affect individuals' ability to interact with peers and family members and is prevalent in adolescents [14].

Social anxiety is usually related to social avoidance and lack of positive rewards in social relationships [15]. Compared with less anxious peers, socially anxious teenagers tend to be less popular, refuse to work as a group, and show lower levels of intimacy in a relationship [16].

2.1.3. The Reasons for College Students' Social Interaction Needs

Entering college brings considerable changes to most students; they are prone to social anxiety and loneliness due to the character transition and social adaption. On one hand, the continuous evaluation college students are faced with making them overwhelmed to maintain a high level of academic achievement. On the other hand, though society development in China has provided more opportunities for college students, it has also brought intense competition to them. They are required with more professional skills and qualified certifications when looking for jobs after graduation, and the number of applicants has also increased year by year. As a result, college students are facing both academic pressure and employment pressure. So, they need harmonious interpersonal relationships to make up for their inner loneliness and anxiety [17].

2.2. Games as an alternative to real social life

2.2.1. Players perceived realism in digital games

Online games, simply defined, are games played on an audio-visual device based on a story [18]. The relationship between the constructed virtual world of online games and real social life has been widely discussed in the academic field, whether by qualitative research to identify game realism or quantitative research to unveil its possible measurement [19-21]. Regarding empirical research aiming to provide a paradigm for understanding and examining players' perceived realism of digital games, Rubert and Malliet established a well-recognized seven-factors typology as a representational

one. The two scholars identified simulation, freedom of choice, character involvement, perceptual persuasiveness, subject matter authenticity, characters, and social realism for the dimensional structure of perceived realism [22].

Among the seven factors, social realism and simulation possess strong ties with our research. In the definition provided by Galloway, social realism undertakes aspects of authenticity that underlie a perceived similarity between a person's social life and the actions or storylines present in digital games [23]. In contrast, simulational realism stresses the real rules players interact with within the digital games and the made possible performance of players under the rules, indicating relevant real-life experience of the players as real social life undeniably embeds complex rules [20, 24]. In this sense, social realism focuses on the narrative dimension of reality, while simulational realism focuses on the regulatory dimension of reality. The two factors together form the grand context of the reality in games that is similar to the real everyday social life.

2.2.2. Digital games' social function

Given that the virtual world constructed by digital games shares great similarities with real social life [22], digital games can be regarded as alternatives to reality in a way, and so people may reflect their multiple needs and behaviours in their real-life in digital games. Among all elements of society, social connection (i.e., social relationships) is indispensable, as people have an intrinsic desire for interpersonal attachments [25]. By social interactions, the feelings of belongingness can be installed for people.

According to Esposito [18], an online game is a fictional activity accompanied by rules, time, and space limits and a voluntary interactive activity with other gamers, which highlights the interactions between players. Other scholars have concluded that online games possess the functions of virtual community and instant multiplayer interactivity based on the anonymity, borderlessness, interactivity, and immediacy of the network and the content of online games [26].

The formation of virtual communities is an essential function of online games. A common situation in online games is that experienced players lead new players to get familiar with the game rules, or different players form a team to complete the game tasks. In the process of engaging in online games, players interact and establish special relationships with other players, whom they play the game with. Consequently, in the game world, community members who have never met each other but share similar interests or get along with each other for a long time may gradually develop social relationships such as friendship that in the pre-internet age can only be established in face-to-face interaction and communication in the real world. Players in online games

are not just playing games, but experiencing the process of building complex interpersonal relationships in which they harvest social relationships, gain a sense of connection, and develop feelings and emotions similar to those manifested in real social interactions [27].

2.2.3. The Social Functions of Arena of Valor

Arena of Valor serves as an important part of college students' online social interaction. Building social relationships through participation in online games also erase many barriers, for instance, differences and inaccessibility, those what people need to consider in real-world interactions. In particular, since players are relatively independent individuals and barely have interaction in real life, they can express themselves without feeling uncomfortable because of their appearance, gender, and other factors considered in actual strong interpersonal relationships [28]. Thus, individuals who have difficulty establishing real interpersonal relationships [29, 30] may use the interaction in the virtual world as a substitute for real-world social contacts [31]. They satisfy social needs through cooperating in-game tasks, exchanging virtual gifts, developing friendships, and strengthening interaction [32, 33].

2.3. Digital games experience

2.3.1. Overview of gameplay experience

Players' experience of online games is another key focus in the academic field when studying the specific engagement and consumption of people of this particular media that highlight possibilities for participants to see, hear, and manipulate the media environment, just in line with what they are capable of in the real world [34].

IJsselsteijn, Poels, and de Kort proposed that immersion, tension, competence, flow, negative affect, positive affect, and challenge are key elements of the gameplay experience and developed a game experience questionnaire (GEQ) that has been used popularly and approvingly to assess these elements [35]—among these elements, immersion, identified as an exceptional one for gameplay experience due to the enabled manipulation of online game, differentiates it from other media, for instance, movies [36].

2.3.2. Immersion

Murray has provided a generally accepted definition of immersion that likens the state of immersion to the physical experience of being submerged in water. In a participatory medium, immersion incorporates learning to swim, to engage in the possibilities offered by the newly created environment [37]. Additionally, previous research has described that immersion entails being deeply involved in the situation, both physically and

mentally, and emotionally [38, 39]. Furthermore, immersion emphasizes a sense of disconnecting from reality and contrasts to the sensation of being surrounded by a completely different reality. The similarity of the new environment one immerses in, and the controllability of the one when entering the game world is also proposed [40, 41].

2.3.3. Mobile Games and Immersion

The playing experience regarding mobile games is differentiated from the general description of gameplay experience as mobile games' mobility heuristics address characteristics of mobile gaming contexts, including unexpected interruption caused by events in the play's mobile gaming environment, accommodation of the game with surroundings, and quick and easy usage of the game [42]. However, research has proposed that players may develop a stronger awareness of immersion when playing mobile games, possibly due to an increased effort to focus on the gameplay to filter out the surroundings [43].

3. RESEARCH QUESTION AND HYPOTHESIS

With the research topic and reviewed literature, proposed research questions were: (1) Do people get immersed in AoV more prominently if their social anxiety traits, need to belong, and loneliness are more prominent? (2) Are one of the three most popular variables of social compensation has more prominent linkage with immersion than the other two?

The researchers defined four critical variables to solve the puzzle, including loneliness level, need to belong level, social anxiety level, and immersion level when playing AoV. Proposed research hypotheses are as follows:

H1: The higher one's level of loneliness, need to belong, and social anxiety, the higher one's level of immersion in AoV.

H2: The positive relationship between one's social anxiety level and level of immersion in AoV is more prominent than the positive relationship between one's loneliness level or need to belong level and level of immersion in AoV.

4. METHODOLOGY

4.1. Development of Scales

In this research, there are two key focuses: the social compensation and the immersion experience of the players of Arena of Valor.

In regards to their social compensation, according to Rosaen and Dibble, three sub-variables serve as

recognized variables to represent social compensation altogether: loneliness, need to belong, and social anxiety [13]. Therefore, with existing scales for measuring loneliness [44], the need to belong [45], and social anxiety [46], we decided to modify the scales further, change the subject into this research, and merge the three scales. To avoid redundancy, this paper only describes the modification of the loneliness scale as an example: The original loneliness scale contains 20 items; however, some of the items possess weak relevance with our specific research, so they are eliminated. For the rest items, they are merged and adjusted based on the context of the research. As a result, there are ten questions in the developed loneliness scale. Overall, there are 23 questions for measuring social compensation level, ten for loneliness, seven for the need to belong, and 6 for social anxiety.

As for the immersion experience of the players, the immersion scale established by Rigby is applied in the research. The original immersion scale contains 31 items. Considering that the quantity of the items is too much, some items are expressed similarly, and some others are irrelevant given the mobile game's specific context, the developed scale for immersion is shrank and adjusted to 14 items.

Additionally, to enrich the possible analysing dimension in the research, three demographic questions about the participants' gender, grade, and based city are asked in the final part of the questionnaire. The questionnaire has 40 questions in total.

4.2. Reliability and Validity test

4.2.1 Reliability Test

To assess the reliability and validity of the scales, factor analyses were performed (using maximum likelihood, Promax rotation, factors with eigenvalues greater than 1). Each resulting scale was tested for internal consistency using Cronbach alpha. See table 1.

4.2.2 Validity Test

The factor analysis of the validity test revealed six factors explaining 78% of the variance, with factor 1 explaining 35.59% of the variance. The following five factors could be generated as three: loneliness, need to belong, and social anxiety, explaining 42.41% of the variance in all. The first factor (14 items) represented immersion; these 14 items posted high reliability ($\alpha=0.83$), which could be verified. The second and third factors comprised loneliness items (10 items), and the rest could be divided into the need to belong scale and social anxiety separately. Together, the four factors could explain 78% of the variance. Also, the statistical significance was zero, and the KOM index was 0.834,

greater than 0.8, indicating the high validity of these factors.

Table 1. Descriptive statistics for scales

	Reliability Statistics			
	Immersion	Loneliness	Need to Belong	Social Anxiety
Cronbach's Alpha	.830	.690	.749	.700
N of Items	14	10	7	6

4.3. Sample and Procedure

Convenient sampling is used in the research. The questionnaire was designed and disseminated on wenjuan.com, a professional platform for online questionnaire design, and is distributed in the form of QR codes on social media platforms including WeChat, QQ, and Weibo. Participants are required to fill in the questionnaire only once.

The target participants of the research must meet two basic requirements: (1) Players of AoV (2) College students. Moreover, to select the core participants of the research, who are determined as players of AoV, the first question was set as "Are you a player of AoV?"

4.4. Data analysis

SPSS is applied for data analysis. With collected data, Pearson correlation and Linear Regression analysis were used to test the mentioned hypothesis. One-way ANOVA, T-test, and Chisquare were also applied for the deeper connection of the tested hypothesis.

5. RESULTS

There are a total of 118 out of 165 participants who played or are still playing the Arena of Valor. Among them, 56 were males, and 62 were females. Responses to negatively scored items were inverted (e.g., 5 becomes 1, 4 becomes 2). Immersion, Loneliness, Need to Belong, Social Anxiety scores were calculated by summing all questions respectively. Among the players, mean loneliness scores (M=27, SD=3.7) were higher than need to belong (M=23.7, SD=3.4) and social anxiety (M=21.1, SD=4). While for the non-players, three variables' mean scores are all lower than players (M=26.89, SD=3.8; M=23.3, SD=4.13; M=20.7, SD=4.46). Players showed slightly higher social needs.

Since the primary purpose of this research is to examine the relationship between immersion level and three variables of social compensation, we performed Pearson correlation analysis on the following variables:

1. the level of immersion;
2. the level of loneliness;
3. the level of need to belong;
4. the level of social anxiety;
5. gender;
6. age;
7. location.

The results are presented in Table 2.

Influence exists between loneliness, need to belong, social anxiety, and immersion, and they are positively related ($r > 0$, $p < 0.05$). Also, loneliness level impacts immersion level slightly stronger ($r = 0.226$) than social anxiety and need to belong level.

Gender and location do not differ in the four primary variables (immersion, loneliness, need to belong, and social anxiety) we focus on in this research, so we will not discuss them here. However, older college students showed a higher level of immersion, loneliness, and need to belong, and their desire for belonging appeared more ($r = 0.243$, $p = 0.008$) than other variables of social compensation.

To investigate which factor (loneliness, need to belong, and social anxiety) has a more prominent correlation with immersion level, we performed three linear regression analyses, respectively. Results are presented in table 3.

All three factors showed strong and positive correlations with immersion level ($p < 0.05$, $b > 0$), with loneliness level being the most prominent factor ($b = 0.497$), followed by the need to belong ($b = 0.461$) and social anxiety ($b = 0.432$).

In addition, summing up all the responses of these three factors gives a value of social compensation, ranging from 23 to 96. We also analyse linear regression between immersion level and social compensation, which is strongly correlated ($p < 0.05$).

Table 2. The correlation of immersion level and various factors

		Correlations						
		immersi on	loneline ss	Need to belong	Social anxiety	gend er	age	locati on
immersion	Pearson Correlation	1	.226*	.196*	.212*	0.002	.190*	0.165
	Sig. (2-tailed)		0.014	0.033	0.021	0.986	0.04	0.074
	N	118	118	118	118	118	118	118
loneliness	Pearson Correlation	.226*	1	.606**	.541**	0.139	.187*	0.017
	Sig. (2-tailed)	0.014		0	0	0.133	0.043	0.859
	N	118	118	118	118	118	118	118
Need to belong	Pearson Correlation	.196*	.606**	1	.412**	0.03	.243**	0.028
	Sig. (2-tailed)	0.033	0		0	0.746	0.008	0.761
	N	118	118	118	118	118	118	118
Social anxiety	Pearson Correlation	.212*	.541**	.412**	1	0.167	0	0.118
	Sig. (2-tailed)	0.021	0	0		0.07	0.998	0.204
	N	118	118	118	118	118	118	118
gender	Pearson Correlation	-0.002	0.139	-0.03	0.167	1	0.034	.194*
	Sig. (2-tailed)	0.986	0.133	0.746	0.07		0.715	0.035
	N	118	118	118	118	118	118	118
age	Pearson Correlation	.190*	.187*	.243**	0	0.034	1	-0.254**
	Sig. (2-tailed)	0.04	0.043	0.008	0.998	0.715		0.006
	N	118	118	118	118	118	118	118
location	Pearson Correlation	-0.165	0.017	-0.028	0.118	.194*	-0.254**	1
	Sig. (2-tailed)	0.074	0.859	0.761	0.204	0.035	0.006	
	N	118	118	118	118	118	118	118

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Table 3. Correlations of immersion level with various factors

loneline ss	ANOVA						
	Model		Sum Squares	of df	Mean Square	F	Sig.
	1	Regression	390.389	1	390.389	6.217	.014b
		Residual	7284.568	116	62.798		
		Total	7674.958	117			
a. Dependent Variable: immersion							
b. Predictors: (Constant), loneliness							
Coefficients							

		Unstandardized Coefficients	Standardized Coefficients			
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	33.028	5.425		6.088	0
	loneliness	0.497	0.199	0.226	2.493	0.014
a. Dependent Variable: immersion						
Need to Belong	ANOVA					
Model		Sum Squares	of df	Mean Square	F	Sig.
1	Regression	294.903	1	294.903	4.635	.033b
	Residual	7380.054	116	63.621		
	Total	7674.958	117			
a. Dependent Variable: immersion						
b. Predictors: (Constant), need to belong						
Coefficients						
		Unstandardized Coefficients	Standardized Coefficients			
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	35.506	5.128		6.925	0
	need to belong	0.461	0.214	0.196	2.153	0.033
a. Dependent Variable: immersion						
Social Anxiety	ANOVA					
Model		Sum Squares	of df	Mean Square	F	Sig.
1	Regression	346.151	1	346.151	5.479	.021b
	Residual	7328.807	116	63.179		
	Total	7674.958	117			
a. Dependent Variable: immersion						
b. Predictors: (Constant), social anxiety						
Coefficients						
		Unstandardized Coefficients	Standardized Coefficients			
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	37.302	3.969		9.399	0
	loneliness	0.432	0.184	0.212	2.341	0.021
a. Dependent Variable: social anxiety						

6. DISCUSSION

This research finds support for the correlation between social compensation and the immersion level in

Arena of Valor. Those who do not play the game seem more sociable in real life since both their need to belong, and social anxiety levels are lower than players. For the players, their immersion level is found positively

correlated with social compensation, which supports H1. It also agrees with the previous research by Yee, indicating that excepted being an entertainment, the mobile game is also an approach for social interaction, a compensation for the lack of social communication in real life [10]. Three distinguished sub-variables constitute the social compensation in this research. There are found positive relations between all three variables and immersion; different possible explanations are proposed.

Before discussing the positive correlation between one's loneliness and immersion level in the game, the mental state loneliness represents is considered. Loneliness is defined as an enduring condition of emotional distress that arises when a person feels estranged from others and/or lacks appropriate social partners for desired activities, particularly activities that provide a sense of social integration and opportunities for emotional intimacy [47]. It indicates not necessarily being alone or the absence of social relationships. It may occur when experiencing relationships fail to compensate for an expected or desired level of significance or quality [48]. Unlike social interaction occurs in reality, what occurs in AoV is much intense and usually accompanied with excitement as a group of players have to be highly cooperative with each other against the other group of players in thrilling scenarios. When the intensity and concentration level of social interaction appear like the description above, there is little room for those involved to feel disconnected or unsatisfied. Therefore, those who feel lonely in their real lives may find the social integration and emotional intimacy more satisfying in the game and therefore actively entering a state of loss tract of reality when playing the game.

Unlike loneliness, social anxiety represents one's incapability in terms of social interaction. It implies a minor deficiency in terms of one's psychological need, while more deficiency in one's inner strength when involving in social interaction. People with social anxiety experience persistent fear and discomfort in social situations, making it more difficult to establish positive relationships. However, previous studies have found that internet-based media provided opportunities for less stressful interactions and was therefore perceived as a more comfortable medium for interaction by individuals with elevated social anxiety [49]. It is in line with the positive correlation between one's social anxiety and its immersion in the mobile game revealed in this research. Additionally, the revealed positive correlation may enrich the acknowledge of entertainment, as the mobile game is regarded as a special form of entertainment that enables two-way interaction. Players with social anxiety may regard AoV as their experimental field for establishing social relationships that are regarded as uncomfortable or hard to conduct in reality. The behind-screen interaction in AoV provides players with a sense of safety, and the mechanism of Aov simulates reality in

terms of involved parties and rules. Therefore, the game may allow players to actively immerse in the simulation to explore possible possibilities beyond their limits in the real world. In this way, the game may allow players to train their social strategies that fall in the realistic-significant domain, which may prepare them better for the real world they live in. It agrees with Steen's study that indicates the functional and adaptational features of entertainment as it provides people opportunities to access spaces of possible actions to conduct new strategies [50].

H2 is denied according to the results of the research. Loneliness may be the main trait that explains the immersion level, followed by the need to belong, and the last social anxiety, contradicting with H2 that predicts social anxiety as a prominent one. In previous studies, college students' strong desire for social interaction conflicted with the lack of confidence in communication, increasing social anxiety [2]. However, through years of operation, relying on the vast user base on social platforms such as WeChat and QQ, AoV has formed its own social community and provided various interactive methods. Players may have confidence in communication already, so they are truly dependent on the game. The platform provided by AoV decreases their level of loneliness and makes them feel that they belong to a particular group, which they cannot find another platform as a substitute. Players can build intimate relationships virtually by giving "likes" to each other, forming teams, and searching nearby players, which all effectively promoting social interaction. Also, real-time voice communication is possible for teammates during the game, improving the awareness of collaboration among players. Individuals share their unique insights of different characters in the game, publish game instruction videos, or leave messages to online friends, starting the communication proactively. However, they might not be able to take the initiative role in social contacts in real life. A group of people gather together with consistent interests, and their social needs of interpersonal interaction in real life are met, making the relationships bound by AoV more obvious.

Moreover, an interesting phenomenon is that with growing age, college students appear more immersed in the game. It may be explained by the pressure of facing graduation and employment [17]. After graduation, college students may not be supported financially by their parents anymore, which means it is all on their own to find a job and take care of themselves. Also, the competition is fierce to find a good job, so it is normal for them to consider the game as an escape from the real-life pressure. Thus, older college students are more likely to have higher immersion levels.

The finding of the research that there is a positive correlation between one's immersion level in this virtual mobile game and its psychological characteristics due to

its real-life experience may also provide enlightenment for the influential factors deciding one's immersion level and the possible game setting for one to be immersed in compensating for its psychological and interpersonal deficiency in real life, as AoV builds a unique reality-and-virtuality-mixed environment for immersion. Immersion is characterized by focused attention accompanied by reduced awareness of one's surroundings during the reception of media [37] and is generally subdivided as narrative immersion and sensory immersion [51, 52]. One distinctiveness of AoV is that although its constructed visual-related sensory is much different from that of the real-world as its visual game environment is completely fictionally built, its constructed audio-related sensory shares great similarity with the real-world scenario as the main constituting part of the players' audio source is other players' unedited and authentic voice. Also, although the task setting in AoV possesses few commonalities with the narrative schema in real life (as the primary game mode of AoV is team-based fights to destroy 'Krystal'), the players involved in the task are real people, and the rules setting simulates the rules in the real world. Therefore, the narrative schema in terms of interpersonal interaction and causality in the game largely reflects real life. In that, the complicated setting of AoV provides it with the possibility to enable immersion that is possible to address players' social needs.

7. CONCLUSION

The purpose of this research is to investigate the possible function of the mobile game AoV in addressing players' social needs by taking into account the social compensation features of the players and their immersion in the game. The research emphasizes that players' social compensation deficiency (i.e., loneliness, need to belong, and social anxiety) contributes to their immersion level when playing AoV, and loneliness serves as the prominent factor. The current research also draws attention to the social functionality of entertainment with this social-interaction-featured mobile game as representation. Results contribute to literature about social compensation acknowledge and gameplaying experience. Obvious limitations exist in the current research: the samples involved are not large in quantity and wide in diversity due to our incapability of conducting large-scale research. The research cannot provide a proven explanation for how immersing in the game compensating players' social needs due to the impossibility of revealing internal causality in this quantitative research.

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