

A Study on the Impact of Social Media on K-pop Fans' Behavior and Emotions: A Case Study of Chinese Fans

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Abstract:

This research paper examines the impact of social media on K-pop fan behavior and emotions, using Chinese fans as a case study. The article begins with a review of related literature on fan behavior, the role of social media in shaping K-pop, and the impact of fan groups and emotions. It is found that social media provides a platform for fans to communicate, share and participate, which enhances their sense of identity and collective action. However, it may also lead to negative emotions, such as anxiety and stress. The study pays special attention to the issue of fan group dynamics and long-term psychological effects in the social media environment, and concludes that this area needs to be further explored. Overall, this study provides valuable perspectives and insights for understanding K-pop fan culture in the social media era

Keywords: K-pop, social media, fan behavior, fan emotions, fan group dynamics

1. Introduction

As a result of the social networks' appearance the global celebrities receive more attention from the international public and give people entertainment. Enthusiastic groups of people with a passion for a

particular person, group, band or field are found in large numbers in communities all over the world. Prior research suggests that the development of the communities was due to the environment that the social media platforms offered to people to coordinate and disseminate information (Taylor et al., 2024). It

enhances the feeling of ownership, which helps in community building and more people get to join in. These communities may show a lot of difference in terms of behavior and emotional appeal through the social media groups in K-pop.

K-pop is the abbreviation for Korean Pop music and it incorporates elements of pop, R&B and hip-hop. One of the main features that distinguish K-pop from other genres of world music is the focus on groups, which can be from 3 to 12 people, and most often are boys' and girls' groups. It is interesting to note that the success of these groups transcends the borders of many nations and this can be attributed to the enhancement of social media. The given social media platforms have different roles, and people tend to select with which platform they will engage. In the global context, Twitter, Instagram, and TikTok are the primary channels of communication with the fan communities, for example, listening to music and engaging with artists. Weibo also has another feature known as “超话” (Super Topic) that is a social community that is used to post contents, sell merchandise of the idol or to support the idols.

The convenience of social media has provided a platform for these communities to communicate among fans. One such platform is RED (Little Red Book), which according to our survey, is the most frequently used by the community. In the context of K-pop fandom,

Instagram is identified as a critical collective app that provides domestic as well as international information which fans need to access their favorite icons. Likewise, the fans can be attracted by the short videos of TikTok because it provides the content that the fans can quickly consume. These platforms are very essential in providing fans a platform to communicate, share materials as well as engage in group activities which in return increases the fans' feeling of identification.

In this paper, the author aims at finding out whether the communications that happen in different K-pop fan communities on social media platforms leads to increased anxiety or stress among the fans. Surveys are employed in our research to identify the range of individual emotions elicited by these communities, which is vital in studying them in the context of social media. Also, this paper examines the social power dynamics of K-pop fans within their social circles. In other words, through analyzing such dynamics we want to find out what leads to the emergence of negative emotions such as depression and anxiety in relation to community interactions.

2. Literature Review

2.1 Fan Behavior

Fan behavior has long fascinated scholars. Recently, during the COVID pandemic, Yuxuan Ding (2021) researched Chinese Blinks (fans of BLACKPINK). The study investigated fans' active participation in online and offline activities to support their idols, noting how “star-chasing” helped fans release daily pressure. Scholars considered idol-related resources and group communication on social media platforms as forms of fan behavior. Factors such as a way of finding psychological comfort, friendship and learning languages from idols made fans engaged. However, Ding admitted some limitation since the participants might not have included male fans.

Fan behavior could also be negative. The different ways in which fan behavior could be negative include: To find out the factors that led to competitive performativity, Tinaliga (2018) explored the competitive performativity of K-pop fans, specifically “toxic competitive performativity.” The conflicts were varying in terms of both intensity and themes; fan loyalty and sense of achievement motivated the active engagement in the competition. On the other hand, the conclusion implied that competition improved the K-pop fandom policies and contributed to the social activism and the construction of idols' image.

Furthermore, Rebecca Chiyoko King-O'Riain (2021) examined the emotional aspect of fans, in particular, the use of the live streaming platform and its impact on the fan behaviour. Other reasons for such enthusiastic emotions of the fans toward K-pop were genuine interactions with the idols. The study said that digital intimacy kept K-pop fans and idols connected, with ‘liveness’ as the core of interaction. This gave a reinforced perspective of the fans as being real and sincere in their engagement hence encouraging them to perform online as well as offline activities and practice fan activism.

2.2 Role of Social media in Shaping K-pop

Jung (2024) focused on fan activism and othering within K-pop fandoms, discussing how activism could both empower fans and create exclusion. This dual nature challenged authority while reinforcing group dynamics. Jung suggested further research into the long-term effects on individual fans' identity and mental health.

Kim (2022) investigated the elements of K-pop success and influence on national image, social conduct and tourism. They spoke of the positive impact on tourism and image in particular countries but also of cultural pressures and expectations. The issues of discussion were concerned with the development and possible future of K-pop and its

effects on its performers and consumers. Luckily, Kim et al. suggested that there is still a lot of research to be done with regard to the micro level concern of fans and K-pop related contents in social media.

2.3 Community

Taylor, Wells, Howell, and Raphael (2024) stated that the concept of social media was to connect people and share message hence creating groups. They claimed that communities enable people to tell the stories and feelings and noted that the collective processes may form community's coping resources. Moreover, it was through social media that the people were empowered through the sense imparted to them in form of ownership and responsibility through participation. But they also spoke about the problem of fakes on the social networks and emphasizing that the confusion should not be created by means of informative and credible information.

In line with this point, Rosário and Dias (2023) posited that the enterprise of K-pop cannot be effectively done without integrating social media marketing strategies. They emphasized on the usage of a higher number of platforms so that there is a variety of coverage and interaction with the fans could be done. However, there is still a lack of information as to the strategic context of these ideas among Korean entertainment organizations. As for the further research, it was suggested to focus on the search for other tendencies in social networks and provide new ideas of how the efficiency of such approaches can be enhanced. To fill these gaps would provide enhanced insight into how KEC could tap social media for greater impact and a more sustainable future.

2.4 Emotional Influence

Emotion was also found to be central to the construction of fan communities, and to the successful performance of fans. Ding and Zhuang (2021) focused on herd mentality in K-pop fan clubs and how the behavior of fans all depended on enthusiasm and leading fans. The fans were in a way glued by social media as they acted like a group and obeyed the group norms in order to be accepted and be seen as active in collective activities. This resulted in activities like idol support, trend chasing, and fan activities.

Another study (Ardhiani, 2017) also pointed out that Indonesian K-pop fans' affection towards K-pop was not simply a form of entertainment consumption. These strong emotions helped them continue their daily life and make people from the international fans of K-pop music feel connected with the group. Furthermore, these emotions enhanced the participants' activism and their attendance

of concerts, purchases, and engagement in social media.

Furthermore, Kurtin (2018) also investigated the part played by social media in the development of Parasocial relationships. In this study I specifically focused on the following points: idols' content generation (mainly discussing the function of YouTube as a social media) and how the said constant stream of content strengthens the fans' affection and the feeling of community. This continued participation not only comforts the idol consumers emotionally, but also deepens their emotional involvement, which in turn results in a close identification with the idol. Kurtin explained how such relationships are useful in the development of a feeling of camaraderie and the augmentation of the perfunctory worth of an idol while also pointing out that the amount of feelings fans have towards their idols rises proportionately with boosts in perfunctory esteem.

Despite these insights, gaps remain in understanding the long-term impact of conformity on individual fan identities and broader fan community dynamics. While existing literature emphasizes the direct impact of conformity behavior, further research is needed to explore its deeper psychological and sociocultural impact on K-pop fans. This under-researched area warrants in-depth exploration.

3. Methodology

3.1 Sample

Social media platforms played a pivotal role in shaping contemporary cultural interactions, with K-pop fandoms illustrating their profound influence. To understand the demographics and behaviors of K-pop fans, our survey was conducted using a convenience sampling method via WeChat and Weibo, two of the most widely used social communication tools in China. WeChat had a powerful friends network, making it possible to reach a diverse and broad audience quickly. Similarly, Weibo, a popular microblogging platform, hosted many communities frequented by K-pop fans. Respondents answered the questionnaire by scanning a QR code on WeChat. A total of 481 surveys were collected, of which 354 were determined to be valid for analysis. This method enabled us to gather a broad range of data directly from respondents about their opinions, behaviors, and experiences.

3.2 Questionnaire preparation and survey method

The main purpose of this paper is to explore the behavioral characteristics and emotional impact of K-pop fan groups in the social media environment. By means of

questionnaire survey, researchers can directly understand the actual experience of K-pop fans in social media interaction, including their emotional changes, behavior patterns and engagement. Compared with mere literature analysis, questionnaire surveys can provide more intuitive and empirical data support and help in-depth analysis of the dynamic changes within the K-pop community.

The questionnaire was designed, distributed, and analyzed utilizing the online survey tool “问卷星” Questionnaire Star (<https://www.wjx.cn/>). Questionnaire Star, an online survey platform, allowed researchers to design, distribute, and analyze surveys efficiently. It provided various question types and customizable templates, enabling comprehensive data collection and insightful analysis.

The questionnaire “Help us understand what you like (or not) about social media!” was designed by our group members based on a literature review, the research’s ideas, and the professor’s guidance. In the survey, we focused on 4 major topics: demographic index, social media usage statistics such as social media platforms, hours of use, K-pop (Korean pop) fandom culture and fan behavior, and related emotional aspects. The questionnaire consisted of 35 questions in the form of single-choice and multiple-choice questions, divided into two parts: more than 20 questions specifically for the general public and more than 10 questions only for K-pop fans.

After finishing the design of the questionnaire, 5 participants and 3 teachers conducted a pilot test. Then, our group members and experts found some limitations and reworked the questionnaire to address the problems. These were related to question order, question number, and so on. Finally, we distributed the questionnaire on different social media platforms, such as WeChat and Weibo, and received a total of 482 responses. <https://www.wjx.cn/vm/QLOD9R2.aspx#>.

3.3 Data Analysis





The researchers first used descriptive statistics to categorize the demographic distribution, social media usage patterns, and behavior of K-pop fans. They calculated frequencies, percentages, and means to identify apparent trends. Subsequently, they explored correlations within the data, such as the relationship between the frequency of social media use and levels of depression, to understand how online activity influenced emotions. Comparisons were also integral to their analysis, where they maintained stable dependent variables and observed how different independent variables altered trends. For instance, they examined consistent demographics, such as gender, to assess how being a K-pop fan versus a non-fan affected emotional responses and the propensity to change perspectives.

4 Findings

4.1 General information of respondents

The 481 respondents (174 males, 305 females, and 2 of “other genders”) came from 8 regions of China. 80.04% of the respondents self-identified as heterosexual, while 7.47% identified as homosexual or bisexual. The age distribution of the respondents was mainly between 14 and 45 years old, with the highest number of participants aged 19–25 years old, and 76.92% of the respondents had a high school education or higher (Table 1). The respondents were mainly from East China. All questionnaires were submitted via smartphones. Among all respondents, 31.32% were K-pop fans, 35.27% were casual fans (unofficial fans), and 33.61% were not K-pop fans. Among K-pop fans, the number of those who pursue stars individually (individual fans) and those who pursue stars in groups (group fans) are equally divided.

Table 1: General Information of Respondents

Do you know anything about K-pop? [Multiple choice]		
Options	Subtotal	Ratio
Yes, I'm a fan!	150	 31.12%
Yes, but I'm just a passer-by	170	 35.27%
I've only heard of it	68	 14.11%
No, I don't understand that at all	94	 19.5%

4.2 Social Media Usage Patterns

4.2.1 Comparison of social media preference between K-pop fans and non-Fans

Based on our research, there were distinct differences in social media usage preferences between K-pop fans and non-K-pop fans. Specifically, 51.02% of K-pop fan respondents preferred Instagram, while 41.06% favored Weibo and 34.19% preferred Xiaohongshu (Red Book). These findings suggested that Instagram's content particularly appealed to K-pop fans. Additionally, the popularity of Weibo and Xiaohongshu underscored their significant role as preferred social media platforms among users in recent times.

4.2.2 Investigate platform usage between individual fans and group fans

When analyzing the data on the frequency of using social platforms, it was found that group fans used Weibo (59.45%) and Xiaohongshu (53.15%) more frequently than individual fans. Therefore, we could consider whether to study the reasons for the differences between individual fans' and group fans' choices of these two platforms from the fans themselves or the platform operation mechanism.

4.3 Emotional experiences among K-pop fans

4.3.1 Comparison of emotional responses of K-pop fans and non-Kpop fans

As seen from the data in the table below (Table 2), 96.92% of the participants who chose to become K-pop fans (31.37%) and casual K-pop fans (35.37%) indicated that their emotions were influenced by the group after joining the K-pop fan community on social media. Additionally, 78% of the participants who reported using social media to generate negative emotions such as irritability, frustration, anger, depression, and anxiety for a prolonged period after being influenced by the network were K-pop fans and casual K-pop fans, while only 24.96% were non-K-pop fans. The percentage of K-pop fans experiencing negative emotions was significantly higher compared to non-K-pop fans, highlighting a stark contrast. It was concluded that K-pop fans were more susceptible to social media influence leading to negative emotions. Our research investigated the reasons behind these negative emotions and strategies to mitigate them. The underlying mechanisms and differences between K-pop fans and non-K-pop fans were analyzed in depth.

Table 2: K-pop fans are affected by the group's emotions and emotional types

After joining the Kpop fan community, will your mood be affected by the mood of the community?
[Multiple choice]

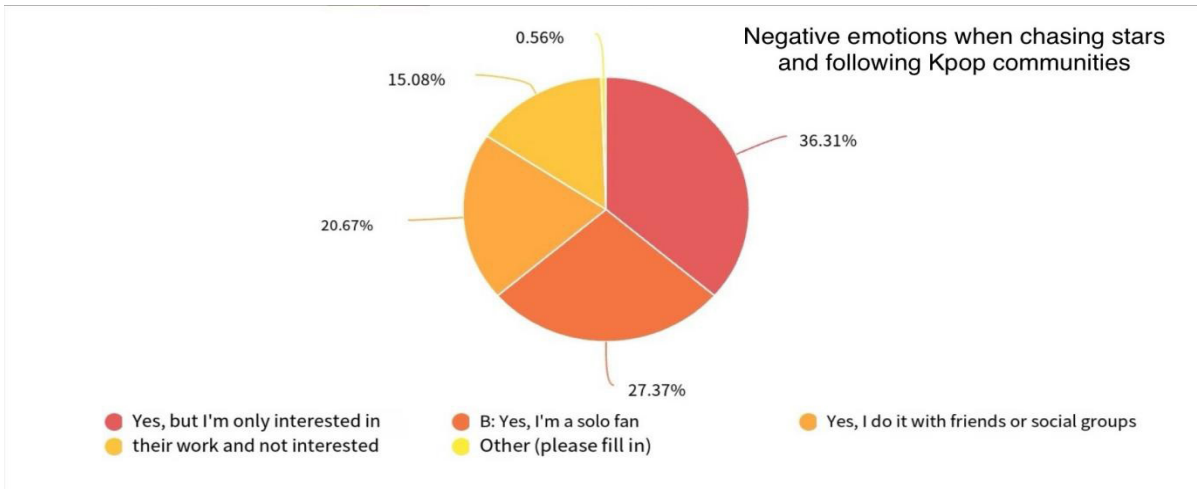
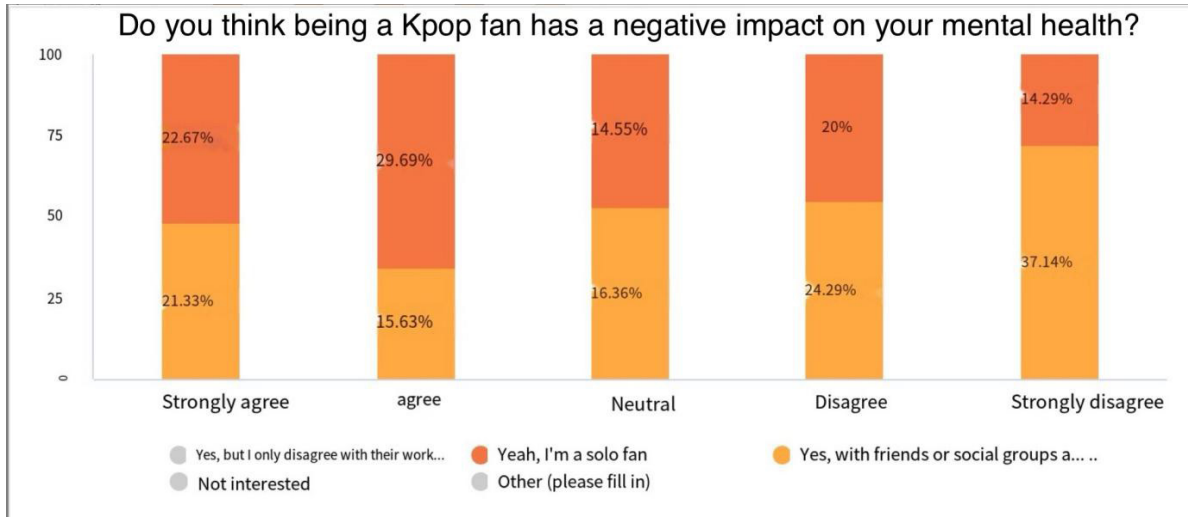
X. Y	is	no	subtotal
Yes, I'm a fan!	117 (78%)	35 (23.33%).	150
Yes, but I'm just a passer-by	104 (61.18%)	70 (41.18%)	170
I've only heard about it	7 (20.59%)	28 (82.35%).	34
No, I don't know anything about that	0 (0.00%)	0 (0.00%)	0

4.3.2 Psychological differences among individual fans and group fans on social media

When analyzing fan and group content on social media, this study examined the differences in psychological experiences between individual fans and group fans. By analyzing the specific data (Table 3), in response to the question "Do you think star-chasing will damage mental health?", the data showed that the vast majority of individual fans chose to "agree" (52.36%). In contrast, the majority of group fans chose to "disagree" (61.43%). This comparison led to the conclusion that individual fans on

social media were more likely to agree with the view that "star-chasing will damage mental health," indicating that individual fans tended to express more negative views and emotions about star-chasing. Further analysis of the data revealed that among participants who followed the K-pop community and experienced negative emotions, 54% were individual fans and 41% were group fans. This finding suggested that being part of a group of fans could alleviate personal negative emotions to some extent. The study could also continue to explore whether factors such as fan duration and fan level significantly impact mental health.

Table 3: Comparison of negative psychology between individual fans and group fans



4.3.3 How Does the Length of Time You’ve Been a K-pop Fan Affect Your Mental Well-Being

The paper further analyzed the relationship between the duration of being a K-pop fan and the perception of whether being a K-pop fan adversely affects mental health. The analysis revealed a notable trend: there was a positive correlation between the length of time spent as a K-pop fan and the proportion of individuals agreeing that being a K-pop fan harms mental health. Specifically, 11.61% of fans who had been fans for less than a year agreed with this view, while 25% of those fans who had been fans for 1-2 years agreed, and 31.91% of fans who had been fans for 2-4 years agreed. However, among fans who had been fans for over four years, the proportion agreeing with this view tended to be similar to those who did not. This finding suggests an intriguing area for further study to understand the underlying reasons behind this phenomenon.

4.4 Significant influence of K-pop fan behavior

4.4.1 comparison of devoted fans and casual fans’ behavior

According to our research results, it showed that devoted fans (fans with a long and deep passion and commitment to their idols) behaved significantly differently on social media platforms compared to casual fans (fans who have some interest in a certain idol but are not deeply involved). Based on the survey, 56.67% of devoted fans posted videos and content about idols on social media platforms, whereas only 37% of casual fans engaged in such behavior on social media platforms. This indicated that devoted fans were more willing to invest time and money in promoting their idols’ output and deepening the fan community.

4.4.2 Comparison of different online engagement between K-pop fans and non-K-pop fans

The study found that fans of K-pop were notably more

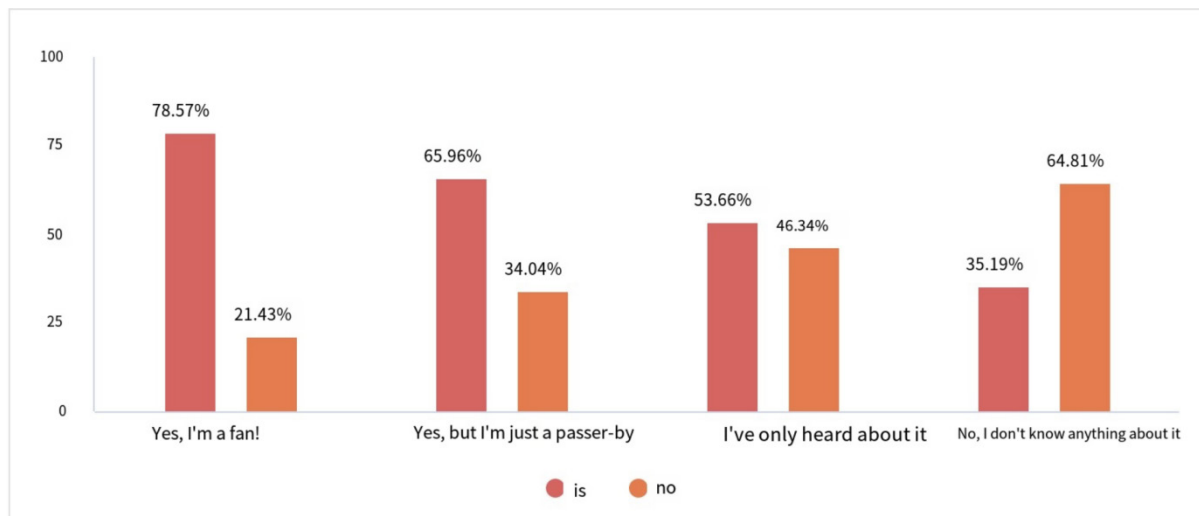
active in online interactions. A significant majority of self-identified fans actively engaged by liking and commenting (65.33%) and sharing content (52.67%), compared to those who had only heard of K-pop, who showed a slightly lower engagement rate of 58.82%. Conversely, casual observers (65.88%) demonstrated the highest percentage of passive browsing without active engagement. Furthermore, regarding the psychological experience of interacting with celebrities or idols, a substantial proportion of fans (72.86%) reported feeling closer compared to other non-K-pop fans, who generally reported lower rates below 50%. These findings suggested that fans' desire to feel closer to their idols motivated their higher willingness to engage actively on social media.

4.4.3 How Do K-pop Fans' Online and Offline Behaviors Compare to Those of Non-K-pop Fans?

Behaviors Compare to Those of Non-K-pop Fans?

Based on the data analysis, it appeared that K-pop fans tended to showcase aspects of themselves that they might not typically exhibit in their daily lives. The survey results indicated that 78.57% of fans (55 respondents) agreed that they engaged in such behaviors within their fan communities or on social media. In contrast, among non-K-pop fans who had only heard about it or knew little about the fan culture, 53.66% agreed with this statement, while 35.19% of those completely unaware also acknowledged this trend. This suggested a noticeable trend where both fans and non-fans recognized a propensity for individuals to display behaviors within K-pop fandom contexts that differed from their usual conduct in other settings.

Table 4: Comparison of online and offline behavior between K-pop fans and non-K-pop Fans



4.4.4 Spending Behavior in K-pop Culture

The study data found that there was a difference in the amount of money spent on K-pop (e.g., buying albums, going to concerts, etc.) between individual K-pop fans and group fans. Among K-pop fans who spent more than 500 RMB on K-pop, group fans (16.84%) spent more than individual fans (45.49%). Therefore, the deeper reasons for the difference in the amount of money spent by individual fans and group fans could be further investigated.

This study collected a large amount of data on K-pop fans' social media usage behavior and emotional expression through an online questionnaire survey, revealing the impact of K-pop culture on specific groups. However, the study also had limitations, including sample size limitations and questionnaire design constraints, which may have affected the generalizability and accuracy of the results. Future research could use focus group interviews combined with qualitative research methods to explore

K-pop fans' behavior and emotional expression in a more in-depth and comprehensive manner.

5. Discussion

5.1 Gender difference in K-pop community

Our survey revealed a significant gender disparity among K-pop fans. Further analysis showed that the majority of females identified as K-pop fans compared to only a small percentage of males, resulting in a notable 5:1 ratio. This highlights a trend where females are more inclined to follow K-pop stars. What factors contribute to this preference among females in star-chasing behaviors?

The main reason is K-pop girl groups actively promote "girl power," which has become a mainstream movement within female communities. This concept refers to an ideology that encompasses various aspects such as indepen-

dence, self-esteem, and entrepreneurship among females across different fields. Many females are drawn to girl groups and support them because these groups increase the awareness of societal issues like gender inequality, encouraging females to strive for gender equality. The female fans actively participate in online and offline activities to support and raise the reputation of those representative girl groups. Females with passion and ambition to improve equal society would form a big community and share their thoughts. The stronger the community becomes, the more confident its fans feel, energizing more people. K-pop effectively utilizes this social phenomenon to promote its culture and attract greater attention, especially from its target female audience.

Besides, the desire for socializing and a sense of belonging within communities also plays a crucial role in the preferences observed among female K-pop fans. Active participation and socializing within K-pop communities satisfy this need and enrich lives by fostering friendships and expanding social networks. Moreover, our survey also showed that many females prefer platforms like Redbook to interact with K-pop, which greatly encourages community belonging and idea-sharing. These interactions provide emotional support, fulfillment, and happiness, serving as a means to alleviate daily stress..

5.2 Social media preference

In our survey (Table 4.2.1), it was found that K-pop fans predominantly prefer using Instagram. According to Cho and Kim (2020), in their case study on Instagram usage among K-pop fans, this preference stems from fans' desire to access extensive information as much as they can about their idols across the internet, rather than only relying on more localized platforms like Weibo in China. Instagram's appeal lies in its ability to aggregate diverse forms of idol content, combining both photos and videos, unlike platforms such as Redbook, which primarily focus on textual updates, and TikTok, which emphasizes short video clips. Moreover, Instagram is frequently utilized by Korean celebrities to engage with their fans through features like comments, responses, and live interactions, offering more direct and interactive communication compared to platforms limited to domestic audiences. This interactive element enhances fans' engagement and sense of connection with their idols. In contrast, non-K-pop fans show a greater preference for WeChat Video Accounts, aligning with WeChat's widespread popularity as the most commonly used platform in China. WeChat Video seamlessly integrates video content with WeChat's messaging functionalities, catering to users who appreciate integrated communication platforms. The

platform's personalized content recommendation algorithms further enhance user experience by tailoring video suggestions based on individual preferences and social interactions within their friend circles.

Additionally, the survey data also highlighted significant differences in social media usage patterns between individual K-pop fans and group fans. Group fans demonstrated higher engagement on platforms like Weibo and Xiaohongshu compared to individual fans. These platforms facilitated community and a sense of belonging through interactive features. Weibo, as a microblogging platform, provided extensive community-building tools, allowing fans to join fan clubs, participate in trending discussions, and create content, thereby enhancing social recognition. Similarly, Xiaohongshu offered a highly interactive experience where fans could share their experiences, connect with like-minded individuals, and find emotional support. These dynamics significantly enriched their overall fan experience, emphasizing the importance of community in their social media interactions.

In contrast, YouTube is frequently used by individual K-pop fans due to its recommendation system, which tailors suggestions based on users' viewing habits to provide a personalized feed that enhances engagement. Moreover, as an official platform associated with entertainment companies, YouTube allows fans to access a diverse range of content from their favorite idols, including behind-the-scenes footage and exclusive interviews.

5.3 Discussing K-pop fans and negative emotion

In a specific analysis of social media groups, K-pop and non-K-pop fans (fans who do not see themselves as chasing any idol). It was found that K-pop fans are more prone to negative emotions than non-K-pop fans. The data from the study showed that K-pop fans have a high level of emotional investment in their idols, not only by investing a lot of time and money but also by having high expectations of their idols. When these expectations are not realized, fans tend to feel disappointed and frustrated (Harmon-Jones et al., 2011). Moreover, K-pop fans usually form a strong psychological attachment to their idols, which makes them particularly sensitive to their idols' behavior and discussions on social media. When they see their idols criticized or embroiled in controversy, they may feel frustrated and anxious, which can lead to negative emotions. Non-K-pop fans, lacking such attachment to their idols, have relatively strong emotional regulation and are less susceptible to negative news. Moreover, K-pop fans are prone to negative emotions such as feelings of inferiority and jealousy due to frequent social comparisons on social media, especially when they see other fans'

interactions, support, and achievements (Festinger, 1954). In addition, specifically analyzing the differences in emotions between K-pop and non-K-pop fans in the fan base, the percentage of K-pop fans experiencing negative emotions was significantly higher than that of non-K-pop fans. This phenomenon is related to the impact that K-pop culture has on the psychology of fans. In K-pop culture, idols tend to be highly idealized and fans have extremely high expectations of their idols. This highly structured idol culture causes fans to have a strong emotional reaction to any negative news or behavior of their idols (Lie, 2012). In contrast, idols in other cultures may not be idealized, and fans' emotional reactions are relatively weak.

Furthermore, the media and entertainment industries in Korea are highly developed and competitive. In this environment, negative news and scandals spread quickly and widely, and fans are more susceptible to the emotional impact of such news (Oh & Lee, 2013). Entertainment industries in other cultures may not have such strong competitive pressures, and the spread and impact of negative news are relatively limited.

The study also found that K-pop individual fans were more inclined to believe that stargazing can harm mental health and showed more negative views and emotions than group fans. K-pop group fans often organize and participate in concerts, autograph sessions, fan meetings, and other events. As a result, group fans possess a collective identity that individual fans do not have, which enables group fans to gain more social support in the fan community, share common interests and emotions through interaction and communication with other fans, and thus reduce personal negative emotions and psychological pressure. In contrast, individual fans are more likely to feel loneliness and pressure due to the lack of such collective support and interaction, thus generating more negative emotions.

The results of the analysis showed that the percentage of people who believed that stargazing was harmful to their mental health increased with the amount of time they had been a K-pop fan. However, in the group that had been fans for longer than four years, the percentage of those who agreed with this view tended to be similar to those who disagreed. Prolonged stargazing experiences may bring with them a gradual accumulation of stress, including time, money, and emotional investment (Russell & Baenninger, 1996). This cumulative stress may hurt fans' mental health, making them more susceptible to negative emotions and psychological problems. This is consistent with the trend that increased time spent as a fan is associated with an increase in the percentage of people who believe that stargazing is detrimental to their mental health. In the early stages of fandom, individuals may feel

a strong sense of support and belonging from the fan community, which can help alleviate negative emotions and stress. However, this sense of support may diminish over time as individuals come to realize the limitations and shortcomings of their idol or fan community. Individuals who have been fans for longer than four years may have experienced a sufficiently long period of cognitive adaptation and reality-checking to reevaluate the relationship between their stargazing behavior and their mental health (Lazarus & Folkman, 1984). This reassessment may have given them a more rational and objective view of their stargazing behavior, leading to a balancing of the percentages of those who agree and disagree that stargazing is harmful to mental health.

5.4 Significant influence of K-pop fan behavior

Baym (2015) pointed out that social media platforms provide K-pop fans with opportunities to interact with idols, and they will also share idol-related content on social media. Data research found that loyal fans are more willing to invest time and money to promote idols' output than ordinary fans, and participate more actively in fan communities, which can help

them find a sense of belonging and self-identity in this K-pop community. Moreover, this sense of identity not only enhances their loyalty to idols, but also motivates them to spend more time and money on idols. The behavior of K-pop fans' emotional investment in idols enables them to obtain corresponding returns as well, such as getting idols' attention and replies, so as to get closer to idols and motivate them to participate more actively in social media.

According to data analysis, in terms of fan money investment, group fans spend significantly more on K-pop than individual fans. Social media and online communities provide fans with important communication and interaction platforms. Group fans often have common interests and values. In order to enhance connections and interactions with each other, K-pop group fans often organize and participate in concerts, autograph sessions, fan meetings and other activities. Therefore, group fans have a collective identity that individual fans do not have, and this collective identity will drive them to spend more on related products such as albums and concerts. As a group, the fan members of the group fans will be more united and tend to show group strength and power to gain status and influence in the fan group. Therefore, group fans will buy more albums, participate in more activities, and will be more active and generous in spending money.

The research data also found that both fans and non-fans recognize that when participating in the K-pop fan com-

munity on social media, individuals will show different behaviors from their daily lives. Goffman (1959) mentioned in the book "Presentation of Self in Everyday Life" that people will show different faces on different occasions to adapt to specific social expectations. In the K-pop fan community on social media, in order to gain recognition and support from other fans, individuals tend to create and display an idealized self-image through behaviors that are different from their daily lives. At the same time, the anonymity of social media allows fans to put aside the social pressure in their daily lives when participating in social media interactions and fan activities, freely display their interests and emotions, and share personal information that they are reluctant to disclose (Joinson, 2001), which may not be shown in other social situations.

5.5 Discuss with previous research

The results of this study are in agreement with the existing literature in some aspects, but there are also some new findings. For example, previous research has highlighted the important role of social media in promoting cohesiveness of K-pop fan groups, and this survey confirms this. But at the same time, this study further found that social media interactions may trigger the negative effects of fan anxiety and stress, which is an issue that previous studies have paid less attention to.

In addition, the existing literature mostly focuses on the K-pop industry and cultural impact at the macro level, and pays less attention to the specific changes in fan behavior and mood. By means of questionnaire survey, this study deeply discusses the dynamics of this micro-level, and makes a contribution to supplementing this research gap. Future studies can further combine qualitative and quantitative analysis to more comprehensively understand the multi-faceted impact of social media on K-pop fan groups.

6. Limitation

We used random samples and distributed them on different social media platforms such as Weibo and WeChat, so our data is representative.

However, we also have some limitations. One of the main limitations of this study is the sample size and its distribution. Although the survey collected responses from 481 people, only 354 of them were considered available for analysis. This limitation in sample size may affect the generalizability of the findings. Additionally, the majority of respondents were concentrated in eastern China, which may not fully represent the diverse K-pop fan base in different regions. This regional concentration may lead to a biased understanding of fan behavior and emotional responses, as regional cultural and social factors might

significantly influence the survey result. Another limitation is the uneven gender distribution of respondents, with a significantly higher number of female participants (305) than male participants (174). This gender imbalance may impact study results, particularly in understanding how fan behavior and emotional responses differ between genders. In addition, most of the respondents were between the ages of 14 and 45, with the highest concentration of people between the ages of 19 and 25. This age distribution may not fully reflect the views and behaviors of older or younger K-pop fans.

Future studies should figure out these limitations by increasing sample sizes and ensuring a more balanced distribution across regions, genders, and age groups. Increasing the diversity of the sample allows for a more comprehensive and accurate understanding of K-pop fans' behaviors and emotional responses. In addition, we can use mixed methods, such as individual interviews, to gain a deeper understanding of the nuances of different fan interactions and emotional experiences.

7. Conclusion

The findings clearly indicate that K-pop fans are more susceptible to negative emotions such as anxiety, frustration, and depression due to social media interactions. The data highlights significant contrast in emotional sensitivity between K-pop fans and non-K-pop fans, with the former showing a higher tendency towards negative emotions. Group fans frequently use platforms like Weibo and Xiaohongshu, possibly for collective emotional support, whereas individual fans are more likely to believe that star-chasing harms mental health, indicating greater emotional vulnerability. Additionally, a longer duration of being a K-pop fan correlates with a stronger belief in the negative impact of fandom on mental health.

This study underscores the need to consider the emotional and psychological effects of social media within fan communities. It contributes to theoretical knowledge by filling the gap on how social media influences K-pop fan behavior and offers a new perspective for theory development. From a pragmatic perspective, it offers a concrete demonstration of how social media influences fans' behavior, attitudes and communalities in the K-pop context, thus helping media firms and artist managers to fine-tune their SM approaches. The implications of the findings also concern the sociological relevance of social media for the modulation of group dynamics and mentalities. The future studies should increase the sample size and include a more diverse population as well as examine ways to prevent fans' negative emotional states to enhance the academic progress and interdisciplinarity.

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