



The Research on the Mechanism of Social Attachment Role in Social Media

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Abstract. The rise of smart phones has greatly facilitated people's daily life, mobile phone dependence has also attracted more and more attention. Social media has become an increasingly popular platform for communication, learning, and collaboration. While social media has undoubtedly changed people's lives for the better, there is growing concern about the negative consequences of excessive social media use. Through the research, it is found that attachment anxiety and loneliness are important factors affecting the use of mobile phone social media.

Keywords: Social Attachment; Social Media; mobile phone

1 Introduction

As a specific phenomenon of mobile phone dependence, the use of social media refers to the behavior of individuals who use mobile phone social media in life, study and work. Attachment anxiety is the ambivalence formed by parent-child interaction in infancy, which is both the desire to establish intimate relationships with others and the fear of abandonment.^[1] The higher the attachment anxiety of individuals, the more inclined they are to show attachment characteristics to mobile phones, seek to get close to mobile phones, and feel pain when separated from mobile phones, and more likely use mobile phone social media. Loneliness is a subjective state, often understood as the difference between the level of interpersonal interaction a person feels satisfied with and the actual level of interpersonal interaction. According to Erikson's stage theory of personality development, college students should establish intimate relationships and overcome loneliness in college. If college students are unable to establish and maintain satisfying relationships in reality, they may seek other ways to overcome loneliness. Studies have shown that the loneliness of college students is closely related to the use of mobile social media, and individuals with a strong sense of loneliness spend more time on sending and receiving short messages per week. Attachment anxiety is significantly related to loneliness. Individuals with attachment anxiety are often dissatisfied with interpersonal communication, and frustration in real communication makes them more likely to experience loneliness. With college students as the subject group, attachment anxiety as the independent variable, use of mobile phone social media as the dependent variable, and loneliness as the intermediary variable.

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2 Literature Review

Attachment is the special emotional bond formed between an infant and his caregiver (usually the mother). Attachment theory is a theory proposed by British psychologist Bowlby based on the psychoanalytic school in 1969.^[2] Attachment theory holds that an internal working pattern is formed between the infant and the caregiver, and this internal working pattern of attachment will affect the establishment of intimate relationships with other objects when the infant grows up. Adult attachment is the attachment relationship formed between the individual and friends and lovers in addition to the early maternal attachment. The formation of adult attachment also needs to go through several developmental stages similar to the formation of maternal attachment. Hazan and Shaver (1987) first put forward the concept of adult attachment.^[3] They believe that, like mother-infant attachment, adults and close friends or partners are also driven by the internal working mode of attachment to form special emotional bonds, and adult attachment will affect their cognition, emotion and behavior. Ainsworth (1989) also attempted to study attachment beyond infancy, i.e. adult attachment.^[4] This study continues to use Hazan and Shaver's definition of adult attachment. The classification of adult attachment is also an area of great concern. Initially, adult attachment followed Ainsworth's classification of maternal and infant attachment. Subsequently, Bartholomew and Horowitz (1991) advocated the division of adult attachment into secure, infatuation, fear, and apathy, with the latter three types defined as insecure attachment.^[5] Some scholars have divided adult attachment into dependency dimension, proximity dimension and anxiety dimension. In Adult Attachment Scale compiled by Collins, these three dimensions are used to measure adult attachment, and it is found that proximity and dependence scales are strongly correlated. Therefore, in the type classification itself, proximity and dependence scales are combined into one. The proximity dependency dimension (Collins, 1996).^[6] Later, Brennan et al. (1998) proposed that these two dimensions could be statistically divided into four attachment types: secure, indifferent, fearful and anxious.^[7]

Attachment relationships are thought to be important predictors of social anxiety. Adult attachment includes not only attachment with parents, but also attachment with intimate members of the opposite sex. Positive and healthy attachment enables individuals to evaluate their strengths and weaknesses positively and objectively, to find their own shining points, and to recognize their own excellence at the same time, but also to see others worth learning, to trust others, and to get along with others harmoniously.^[8] When an individual establishes a disharmonious attachment relationship with others, such as anxiety and fear, the individual regards the object of communication as a threat and is unable to tolerate and understand, resulting in a disharmonious relationship. According to the reinforcement theory, negative communication results will strengthen the individual's inner fear, so that the frequency of the individual's behavior to get close to others will be reduced or even fade. Attachment theory points out that individuals who establish close and trustworthy attachment relationships have positive effects on their future interpersonal communication.^[9] For example, individuals with less fear of communication have positive and positive evaluations of individuals and others, while

individuals with attachment anxiety have negative evaluations of others. It can be seen that the attachment relationship can predict the social anxiety of individuals.

3 Methodology

Attachment anxiety was assessed using the Chinese version of adult attachment scale (AAS) revised by Wu Weili et al. [1]. There are 6 items in the anxiety scale, and Likert 5-point scoring method was adopted (1= "totally inconsistent", 5= "Fully agree") for evaluation. The higher the score, the higher the level of attachment anxiety. In this survey, the Cronbach's α coefficient of this scale was 0.85.

Loneliness was assessed using the short-form UCLA loneliness scale (ULS-8) revised by HAYS et al. [2]. The scale has a total of 8 items, among which the 3rd and 6th items are scored in reverse and evaluated by Likert 4-point scoring method (1= "never", 4= "always"). The higher the total score is, the higher the degree of loneliness will be. In this survey, Cronbach's α coefficient of this scale was 0.81.

The questionnaire on mobile phone social media dependence compiled by Wu Zuhong [3] was used for assessment. The questionnaire consisted of 5 items and was evaluated by Likert 5-point scoring method (1= "totally inconsistent", 5= "completely consistent"). The higher the score, the more attach it is. In this survey, Cronbach's α coefficient of this questionnaire was 0.70.

Statistical analysis Excel 2010 was used for data entry and sorting, and SPSS 23.0 was used for analysis. Measurement data are expressed as $\bar{x}\pm s$, and counting data are expressed as people (%). Independent sample t test and one-way analysis of variance were used to examine the differences in the scores of attachment anxiety, loneliness and use of mobile phone social media among college students of different genders and majors. Pearson correlation was used to analyze the correlation between attachment anxiety, loneliness and use of mobile social media among college students. To analyze whether there is a mediating effect between attachment anxiety, loneliness and use of mobile social media, the bias correction percentile Bootstrap program was used for analysis, and 5 000 samples were collected. $P<0.05$ was considered to be statistically significant. Harman single factor test was used to test the common method deviation [4].

4 Findings

Confirmatory factor analysis was performed on all questions of the anxiety subscale of Adult attachment scale, the ULS-8 loneliness scale and the questionnaire of the mobile phone social media dependence questionnaire of college students. The results show that there are 4 factors with feature roots >1 , and the first factor contributes 30.00% of the variance variation, which is less than 40% of the judgment criteria. Therefore, it can be considered that there is no serious common method bias in this survey.

Scores of attachment anxiety, loneliness and use of mobile phone social media among 347 college students of different genders and majors in Shenzhen Compared the scores of attachment anxiety, loneliness and use of mobile phone social media among

college students of different majors, there was no statistical significance (all $P > 0.05$). There was statistical significance in the scores of loneliness among different genders, and the scores of male students were higher than those of female students ($P < 0.05$). There was no significant difference in the scores of attachment anxiety and use of mobile phone social media among college students of different genders (all $P > 0.05$).

The attachment anxiety, loneliness and use of mobile social media among 359 college students in Shenzhen were investigated by means of random sampling through offline questionnaire distribution and online questionnaire platform. After recovery, 347 invalid questionnaires were deleted, and the effective rate was 96.66%. Among them, 138 were boys (39.77%) and 209 were girls (60.23%). There were 142 medical students (40.92%), 64 liberal arts students (18.44%), 80 science students (23.05%), and 61 engineering students (17.58%), which can be showed as Table 1:

Table 1. Scores of attachment anxiety, loneliness and mobile social media use among students of different genders and majors

Item	number (%)	attachment anxiety	loneliness	Social media use
Male	138 (39.77)	2.73±0.85	2.28±0.51	3.20±0.73
Female	209 (60.23)	2.73±0.80	2.15±0.51	3.20±0.68
t		0.003	2.337	0.088
P		>0.05	<0.05	>0.05
Medical		2.67±0.79	2.15±0.52	3.17±0.72
Liberature		2.72±0.87	2.16±0.51	3.31±0.70
Science		2.80±0.80	2.26±0.50	3.21±0.67
Engineering		2.79±0.87	2.28±0.50	3.13±0.69
F		0.652	0.258	0.515
P		>0.05	>0.05	>0.05

The scores of attachment anxiety, loneliness and use of mobile social media were (2.73±0.82), (2.20±0.70) and (3.20±0.49), respectively. There was significant difference in the scores of loneliness among different genders ($P < 0.05$). There was a positive correlation between attachment anxiety, loneliness and use of mobile phone social media ($r=0.526, 0.244, 0.285, P < 0.01$ for all). Attachment anxiety can positively predict loneliness, feelings and use of mobile social media ($\beta=0.328, 0.185, t=11.518, 3.562$, all $P < 0.01$), and loneliness can positively predict use of mobile social media ($\beta=0.184, t=2.209, P < 0.05$). Loneliness played a partial mediating role between attachment anxiety and use of mobile social media, and the mediating effect value was 0.061, accounting for 24.80% of the total effect

In this survey, the scores of attachment anxiety, loneliness and use of mobile phone social media among college students of different majors were compared, and the difference was not statistically significant. According to the research results of literature, attachment is mainly affected by parents, children themselves and the family system. What's more, the difference in expertise tends to affect the cognitive aspect. Through

the literature investigation in related fields, it is found that the main influence of use of mobile phone social media is personal psychological factors, which have little relationship with professional. The comparison of loneliness scores of college students of different genders showed a statistically significant difference, which was consistent with the research results in literature [5]. Boys' loneliness score is higher than girls', which may be influenced by gender roles. Men are often thought to be tough and not easy to talk about. Women, on the other hand, tend to be seen as weak, talkative and in need of care. Therefore, when faced with difficulties, girls may feel more social support, while boys feel less social support, and boys may feel more lonely than girls.

The results of this survey show that attachment anxiety and loneliness of college students are positively correlated, which is consistent with the research results in literature [6]. The anxiety subscale of Adult Attachment scale measures an individual's anxiety about interpersonal relationships, including fear of being abandoned and fear of not being loved]. The development of adult relationships is related to an internal working model of attachment. The internal working model of attachment refers to the internal mental representation of self and others formed by an individual under the premise of the interaction between infants and parents [7]. This internal working model will affect the information processing of an individual, and then affect the subsequent processing of social experience, and encourage an individual to adapt to the social environment in a certain way. The internal working model also encourages individuals with attachment anxiety to regulate their attachment behaviors by adopting over-activation emotion regulation strategies. In the state of over-activation of attachment anxiety, individuals will be highly emotional and have negative thinking processes [8]. Therefore, when individuals with high attachment anxiety incorporate their interactions with others into their interactions with parents, it makes it difficult for them to establish satisfying interpersonal relationships and makes it easier for them to experience loneliness. Attachment anxiety was positively correlated with use of mobile social media. Individuals with attachment anxiety tend to think that the attachment object is untrustworthy and the attachment object's reaction is unpredictable due to the negative interaction pattern formed with their parents when they were young. According to attachment theory, when attachment security is threatened, individuals may adopt compensation strategies, giving up attachment goals and becoming attached to non-human goals [9]. With its powerful interactivity and controllability, mobile phones are easier to become compensatory attachment objects. The stronger the attachment anxiety, the more likely the individual is to overuse the phone, which is with daily work, study and other behaviors.

The higher the level of attachment anxiety, the more inclined individuals are to use mobile social media in, which indicates that mobile social media has indeed become a compensatory attachment object. Loneliness was positively associated with use of mobile social media. If individuals cannot overcome loneliness through real interpersonal communication, they are likely to turn their attention to mobile social media. Studies have shown that the main motivation for college students to use mobile phones is interpersonal communication. Especially in recent years, a variety of social software has emerged in an endless stream, providing a safe and interesting social mode, which

greatly satisfies the psychological needs of lonely individuals for companionship, belonging and other emotional support. According to the use-satisfaction theory, individuals can satisfy their own needs to a certain extent by using mobile social media, which will further strengthen the use of mobile social media. Therefore, lonely individuals are more likely to be addicted to using mobile social media, thus causing attachment between using mobile social media and other behaviors such as life and study. Based on interpersonal relationship, this survey analyzes the psychological mechanism of using mobile social media.

It can be predicted that loneliness plays a partial mediating role between attachment anxiety and use of mobile phone social media of college students. Attachment anxiety affects an individual's sense of self-efficacy in real interpersonal communication, and individuals are more likely to feel lonely. In online social communication, individuals can control the social presence and affinity density, while interacting with others is invisible, and the number of interactive objects and interaction time can also be controlled. Online social communication may reduce individual self-awareness and social anxiety, and enhance the formation of online friendships. Individuals can achieve the purpose of resolving loneliness through online social communication. However, mobile social media is only a temporary way to alleviate loneliness and does not fundamentally change the social situation of individuals with attachment anxiety. In addition, use of mobile social media is not conducive to college students' life and study, so it is necessary to guide college students to use mobile social media well.

5 Conclusion

Attachment anxiety of college students can directly affect the use of mobile phone social media, and it can also indirectly affect the use of mobile phone social media through loneliness. Loneliness plays a partial mediating role between attachment anxiety and use of mobile phone social media. Therefore, the psychological intervention work in colleges and universities can provide targeted guidance on the improvement of the parental rearing mode of attachment anxious college students, improve the attachment anxiety of college students, regulate the interpersonal communication of college students to reduce their loneliness, and then change the irrational use of mobile phone social media behavior of college students. At the same time, school mental health workers should also pay more attention to the ways of solving loneliness of college students, so that healthy and reasonable ways of solving loneliness can replace excessive dependence on mobile phones and social media. Parents and schools should pay attention to the attachment anxiety and loneliness of college students and guide them to use mobile phones well.

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