

# Vulnerable Narcissism Influenced by Early Life Emotional Abuse and Neglect Increases Social Media Use: The Mediating Role of Alienation and Rumination

Qianru Cao <sup>1,\*</sup>

<sup>1</sup> Fudan university

\*Corresponding author. Email: 20210730139@fudan.edu.cn

## ABSTRACT

Vulnerable narcissism is influenced by early life emotional abuse and neglect. College students with vulnerable narcissism may potentially encounter difficulties in interpersonal interaction in reality. Alienation and rumination can both be induced by vulnerable narcissism. College students with vulnerable narcissistic tendencies may use social media as an alternative and spend a lot of time on social media. A sample of 435 Chinese college students from 17 to 28 years old ( $M=21.13$ ,  $SD=2.18$ ) responded to anonymous questionnaires. The findings revealed that vulnerable narcissism caused by early life emotional abuse and neglect leads to greater use of social media among college students, and alienation and rumination mediate the effect of vulnerable narcissism on social media use. Our study could help provide researchers with evidence of vulnerable narcissism affect the risk of social media addiction.

**Keywords:** *Vulnerable narcissism, emotional abuse & neglect, social media use, alienation, rumination*

## 1. INTRODUCTION

Over the past decade, the use of social media has become increasingly popular in many countries all around the world [1].

However, concerns have also been raised regarding that excessive and compulsive social media use could bring about potential negative impact on individuals' physical, psychological and behavioral aspects [2-3]. Therefore, in order to improve prevention and treatment, it is imperative to identify underlying risk factors and mechanisms of social media use in college students.

Given that satisfying interpersonal and emotional needs is the main motivation for college students to use social media, it is reasonable to consider the factors that affect social media use from a relationship perspective [10].

From the perspective of individual traits, previous studies have found that narcissistic personality can significantly predict higher frequency of social media use, and the higher the level of narcissism, the longer the time spent on social media [5-6]. Nevertheless, the definitions of narcissism used in these studies are general and do not distinguish between types of narcissism.

Narcissism is usually related to self-aggrandizing and need for attention. However, according to Murray's [7] concept, narcissist may also experience feeling of devaluation and hypersensitivity [8]. The research field have advanced distinct types of narcissism: grandiose narcissism, versus vulnerable narcissism. Individuals identified with vulnerable narcissism show a proneness to be overly sensitive to interpersonal and have negative emotions, and are more likely to appear defensive with more maladaptive traits [9-12]. At the same time, they employ avoidant coping responses towards others. This set of negative traits can lead to social disconnection [13].

Abuse and neglect on emotion has been recognized as childhood psychological maltreatment [14]. According to Horney [15], the formation of narcissism originates in the early days, it is parents' devaluation towards children that brings about narcissism problems. Kohut believes that the lack of parental empathy prevents individuals from moving beyond the developmental state of early narcissism. Also, research suggest that inadequate emotional support from caregivers during early life, as one type of adverse early life experience, contribute to narcissistic vulnerability [16]. Furthermore, according to the risky families model, behavioral addictions, such as Internet addiction, can be viewed as a means of compensating for social and emotional developmental

deficits in risky families of youngsters with a history of childhood abuse [17].

Alienation refers to the state or experience of being isolated from the group to which one belongs or from the activities in which one is involved and is a societal barrier that directly reflect an individual's inability to form effective bonds with prosocial institutions such as family, school, or peer groups [18]. A study found that university students' experiences of childhood neglect positively predicted feelings of alienation, and that those with higher levels of alienation were more likely to turn their attention to the online world in the hope of gaining interpersonal compensation through social entertainment on online platforms, for example, which may lead to excessive use of smartphones and social media [19].

Rumination refers to individual's repeated thinking about a negative event and its underlying meaning, cause, and consequences [20]. A research found that participants who scored high on a test of implicit narcissism exhibited high levels of expected rumination [21]. There is also study found that narcissistic rivalry, which is negatively related to agreeableness, can lead to interpersonal rumination [22]. In another research which focused on Chinese college students, the positive association between passive social network use and rumination is significant [23]. The study by Kubey et al. found that when individuals fall into negative emotions for a long time, they will have a tendency to ruminate, which will lead to an increase in the frequency of media use [24]. The reason may be that media use provides individuals with a feasible and effective way to relieve anxiety, and people with high rumination level can get more attention from others on social media, thereby reducing painful emotions [25].

Peer socialization theory suggests that youngsters with weak ties to family or school may choose poor peer groups as their socialization environment. Some studies have pointed out that because college students are relatively indifferent in interpersonal relationships in real life and receive less social support, they are more likely to seek sustenance on the Internet [26].

In conclusion, early life emotional abuse and neglect is the factor that led to vulnerable narcissism and alienation, and the interpersonal barriers brought about by vulnerable narcissism may affect alienation and social media use. Also, vulnerable narcissism and rumination share similar patterns of interpersonal responses. College students have more freedom and self-dominance in college than in middle school and elementary school, so it is speculated that traits such as vulnerable narcissism, alienation and rumination are more likely to manifest, and they may spend more time on smartphones and social media. Therefore, we propose the following hypothesis:

Hypothesis 1. (H1): Early life emotional abuse & neglect positively predicts vulnerable narcissism.

Hypothesis 2. (H2) : Vulnerable narcissism mediates the association between Early life emotional abuse & neglect and alienation and rumination.

Hypothesis 3. (H3) : Vulnerable narcissism positively predicts social media use.

Hypothesis 4. (H4) : Alienation and rumination mediates the effect of vulnerable narcissism on social media use.

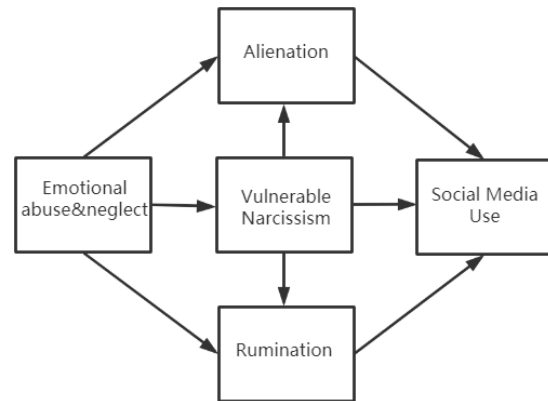


Fig 1 The proposed multiple mediation model

## 2. METHODS

### 2.1 Participants

Random sampling method was used to recruit participants from an online university student forum, 469 volunteering students filled in the questionnaires. After deleting invalid data (submitted the questionnaire too quick or wrongly answered trap questions), 435 questionnaires remained (57.9% undergraduate, 37.3% postgraduate, 4.8% Ph.D.)

Participants aged range from 17 to 28 years old (M=21.13, SD=2.18). The majority, 69.0% (n=300) were female, with 31.0% (n=135) male. More than half of the participating students, 53.8% (n=234) were from single-child family. While 46.4% (n=202) were married or in committed relationship, 34.0% (n=148) were single but had been in a relationship before with 19.5% (n=85) had never been in a romantic relationship before.

### 2.2 Measures

#### 2.2.1 Vulnerable Narcissism

We assessed vulnerable narcissism with Chinese version of the 10-item self-report scale Hypersensitive Narcissism Scale (HSNS) revised by Wang [27]. HSNS items measure self-absorption, deficient empathy, and interpersonal hypersensitivity characteristic of vulnerable narcissism, including example questions including easily become wrapped up in interests and forget the existence of others, feeling temperamentally

different from most people, etc. The content of this scale was in line with the Chinese cultural background. HSNS items were scored on a 5-point scale, ranging from strongly disagree (1) to strongly agree (5), and then summed to give a total score (higher scores indicate a greater degree of vulnerable narcissism). The internal consistency coefficient of the scale was 0.73, the test-retest reliability was 0.71. The Cronbach's  $\alpha$  of this sample is 0.92.

### 2.2.2 Early life emotional abuse & neglect

Early life emotional abuse & neglect was assessed with two subscales addressing emotional abuse and emotional neglect of the Childhood abuse & neglect Questionnaire (CTQ) [28]. The two subscales contain 10 self-report items (5 for each subscale), scored ranging from 1(Never) to 5(Always). The alpha coefficient for the emotional abuse and neglect subscale in the current study was 0.80.

### 2.2.3 Alienation

The General alienation Scale (GAS) [26] contains 15 items, mainly measures interpersonal alienation, individuals' sense of uncertainty about the activities they are involved in, as well as a sense of being separated from others. GAS was rated on a 4-point scale from strongly disagree to strongly agree. The Cronbach's  $\alpha$  for GAS of the sample in this research is 0.95 GAS has been proved to demonstrate good reliability and validity with Chinese college students.

### 2.2.4 Rumination

Rumination was assessed using Ruminative Response Scale (RRS) [20], which contained 22 items forming the descriptive of the frequency with which individuals are immersed in feelings of sadness and depression. RRS items were scored on a 4-point scale, ranging from "Almost never" (1) to "Almost always" (4). The alpha coefficient for RRS in the current study was 0.97.

### 2.2.5 Social Media Use

Social media use was assessed using Social Media Use Dependency Scale for College Students (SMUDSC) compiled by Qiu [29], which comprised 11 self-statements (rated on 5-point scale) from three dimensions: compulsivity ("I find myself wasting more and more time on social media"), conflict ("Social media fragmented my time and affected my study efficiency") and social gain ("Friends not liking or commenting on my social media posts can make me feel a little down"). The higher total score indicates more severity of the social media dependency. Internal consistency was high

( $\alpha = .94$ ) in the present study. SMUDSC has been shown to be reliable and valid with Chinese college students.

## 3. RESULTS

### 3.1 Common method bias test

Self-reporting questionnaire results could become subject to common method variance (CMV). Hence, we applied Harman's one factor test to test common method biases. The results of unrotated factor analysis showed that 8 factors were generated and explained 71.24% of the total variation. The first principal factor explained 36.14% of the variance, below the 40% threshold, indicating that common method bias was not likely to be a significant problem in this research.

**Table 1.** Discriptive Statistic and Correlation Analysis

Variables	M	SD	1	2	3	4	5	5a	5b	5c
Emotional abuse&neglect	23.77	7.83	1							
Vulnerable Narcissism	31.90	19.24	0.19**	1						
Alienation	39.02	11.12	0.32**	0.43**	1					
Rumination	55.73	18.37	0.42**	0.40**	0.50**	1				
Social Media Use	34.83	10.59	0.05**	0.52**	0.54**	0.44**	1			
5a Compulsivity	12.80	3.97	0.036**	0.47**	0.47**	0.42**	0.96**	1		
5b Conflict	12.66	4.07	0.088**	0.43**	0.53**	0.44**	0.95**	0.85**	1	
5c Social gain	6.18	2.19	0.078**	0.48**	0.48**	0.40**	0.91**	0.87**	0.78**	1

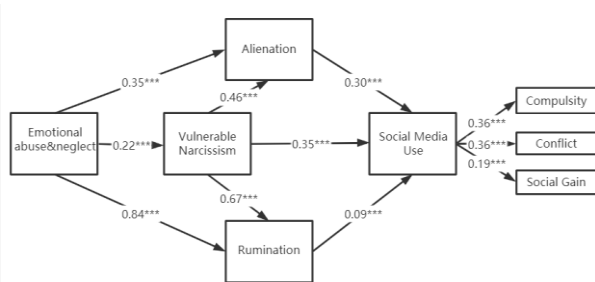
Note. \*  $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$

### 3.2 Descriptive results

Table 1 shows descriptive results including mean, standard deviation, and Pearson correlation matrix for each variable. Correlation analyses shows a positive relationship between early life emotional abuse & neglect and vulnerable narcissism, general alienation as well as rumination. Moreover, vulnerable narcissism, general alienation, rumination, and social media use are significantly and positively correlated with each other.

### 3.3 Structural equation modelling test

Using Amos 21, we conducted a path analysis and tested the mediation roles of general alienation and rumination between vulnerable narcissism and social media use, and between early life emotional abuse & neglect and social media use, as well as the mediation role of vulnerable narcissism between early life emotional abuse & neglect and social media use. The postulated multiple mediation model (see Fig. 2) proved to be an adequate good fit to the data,  $\chi^2 / df = 3.49$ , CFI = 0.99, GFI = 0.97, TLI = 0.98, RMSEA = 0.08. Path analysis results (Fig. 2) showed that early life emotional abuse & neglect positively predicted vulnerable narcissism, general alienation and rumination ( $\beta = 0.19$ ,  $p < .001$ ,  $\beta = 0.25$ ,  $p < .001$ ,  $\beta = 0.36$ ,  $p < .001$ , respectively). Also, vulnerable narcissism positively predicted general alienation, rumination and social media use ( $\beta = 0.38$ ,  $p < .001$ ,  $\beta = 0.34$ ,  $p < .001$ ,  $\beta = 0.30$ ,  $p < .001$ , respectively). In addition, general alienation as well as rumination positively predicted social media use ( $\beta = 0.31$ ,  $p < .001$ ,  $\beta = 0.16$ ,  $p < .001$ , respectively). In this model, age and gender were not statistically significantly high ( $\alpha = .94$ ) in the present study. SMUDSC has been shown to be reliable and valid with Chinese college students.



**Fig 2** Path analysis depicting direct and indirect effects of early life emotional abuse & neglect and vulnerable narcissism on social media use. Standardized coefficients are presented. Note. \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$

### 4. DISCUSSION

In the present study we constructed a multiple mediator model to investigate the role of vulnerable narcissism in contributing to college students social media use and generalization as well as rumination from a history of early life emotional abuse & neglect. As expected, the results indicate that the hypothetical model makes sense.

Consistent with psychoanalytic theory [30] and former research [9-12], this study found that emotional abuse & neglect from caregivers in college students during their early life could positively predict college students' vulnerable narcissism. This is aligned with the hypothesis of this study that experiences of caregivers'

emotional neglect may cause individuals to develop distorted representations of self and others through repetitive social learning and defensive processes, leading individuals to develop a skewed view of themselves and others. Individuals identified with vulnerable narcissism may presume that others may be hostilely motivated and that one must both protect oneself from social danger and exaggerate one's right to survive in the hostile world. As a result, they may turn away from potentially supportive others and fail to have higher quality social relationships, resulting in a lack of buffering from negative emotions [31].

As stated by previous theories and studies, individuals with vulnerable narcissism are socially passive, avoidant, and tend to isolate themselves from others [31-32]. It can be speculated that the personality traits of vulnerable narcissism make individuals self-isolating and difficult to establish positive interpersonal interactions, resulting in a sense of alienation, which is in line with the result of this study that vulnerable narcissism significantly mediates early emotional abuse & neglect and alienation.

In addition, the results of this study demonstrate the mediating role of vulnerable narcissism in early life emotional abuse & neglect and rumination. As previous research have argued, rumination can be viewed as a undesired responding mode [20]. Combined with the findings of this study, it can be inferred that the self-concern feature of vulnerable narcissism may lead to the generation of rumination.

This study also evidences the positive predictive effect of vulnerable narcissism on social media use, as well as the mediating role of alienation and rumination, respectively, in this process. Individuals with vulnerable narcissism still have a need for affiliation, so after experiencing social exclusion they may resort to spending a lot of time on social media as substitution. Some studies have pointed out that social media can be used as a socialization resource for adolescents, providing individuals with a high sense of alienation a sense of belonging. College students with weak interpersonal relationships in real life are more likely to seek sustenance on the Internet [33]. According to the social compensation model used by social media, individuals with social problems tend to compensate for social difficulties deficits through the Internet [34]. Social media may be an ideal social arena for those who appreciate and are drawn to engage in self-enhancing activities, as they enable individuals to enhance their self-awareness and potentially provide a wealth of immediate feedback from other individuals [23]. Individuals with rumination tendency can get more attention from social media to alleviate negative emotions, and social media may provide them with a feasible way to regulate their emotions, which is consistent with the results demonstrated in this study. That is, when vulnerable

narcissists who lack high-quality interpersonal support get caught up in negative emotions, they develop a tendency to ruminate, which in turn leads to increased social media use [24-25].

## 5. CONCLUSION

This study constructs a structural equation model to explore the relationship between individuals' vulnerable narcissism, early emotional abuse & neglect, alienation, rumination and social media use, and every hypothesis are verified. Early life emotional abuse & neglect positively predicts alienation and rumination, as vulnerable narcissism mediates both effects. Furthermore, social media use could be affected by vulnerable narcissism, while alienation and rumination play mediating role in this process respectively.

## REFERENCES

- [1] Kuss, D. J., & Griffiths, M. D. (2011). Online social networking and addiction: A literature review of empirical research. *International Journal of Environmental and Public Health*, 8, 3528–3552
- [2] Chen Ying, Zhang Ye, Zhang Shanshan & Wang Kai. (2022). The effect of miss-out anxiety on negative social adjustment of college students: the chain mediating effect of rumination thinking and problematic social media use. *Chinese Journal of Health Psychology* (04), 581- 586.
- [3] Andreassen, C. S. (2015). Online social network site addiction: a comprehensive review. *Current Addiction Reports*, 2(2), 175-184.
- [4] Lu Juan & Kang Kai. (2013). An Analysis of Chinese and American College Students' Social Network Motivation—Based on the Theory of Use and Satisfaction. *Modern Communication (Journal of Communication University of China)* (03), 158-160.
- [5] Moon, J. H., Lee, E. , Lee, J. A. , Choi, T. R. , & Sung, Y. . (2016). The role of narcissism in self-promotion on instagram. *Personality & Individual Differences*, 101, 22-25.
- [6] BlAchnio, A., Przepiorka, A., & Rudnicka, P. . (2016). Narcissism and self-esteem as predictors of dimensions of facebook use. *Personality & Individual Differences*, 90, 296-301.
- [7] Murray, H. A. (1938). *Explorations in personality*. New York: Oxford University Press.
- [8] Hendin, H. M., & Cheek, J. M. (1997). Assessing hypersensitive narcissism: A re-examination of Murray's Narcism Scale. *Journal of Research in Personality*, 31, 588–599.
- [9] Miller, J. D., & Maples, J. (2011). Trait personality models of narcissistic personality disorder, grandiose narcissism, and vulnerable narcissism. In W. K. Campbell, & J. D. Miller (Eds.). *The handbook of narcissism and narcissistic personality disorder: Theoretical approaches, empirical findings and treatments* (pp. 71-89). Hoboken, NJ: John Wiley & Sons.
- [10] Miles, G. J., Smyrniotis, K. X., Jackson, M., & Francis, A. J. P. (2019). Reward-punishment sensitivity bias predicts narcissism subtypes: Implications for the etiology of narcissistic personalities. *Personality and Individual Differences*, 141, 143-151.
- [11] Barry, C. T., Kauten, R. L., & Wallace, M. T. . (2014). The implications of adolescent narcissism for interpersonal relationships.
- [12] Fan, C. Y., Chu, X. W., Zhang, M., & Zhou, Z. K. (2016). Are narcissists more likely to be involved in cyberbullying? Examining the mediating role of self-esteem. *Journal of Interpersonal Violence*, 34(15), 3127-3150.
- [13] Kealy, D., Hewitt, P. L., Cox, D. W., & O Laverdière. (2021). Narcissistic vulnerability and the need for belonging: moderated mediation from perceived parental responsiveness to depressive symptoms. *Current Psychology*, 1-7.
- [14] Baker, A., & Maiorino, E. (2010). Assessments of emotional abuse and neglect with the ctq: issues and estimates. *Children & Youth Services Review*, 32(5), 740-748.
- [15] Horney K. *Neurosis and Human Growth: The Struggle toward Self – Realization*. New York: W. W. Norton, 1950
- [16] Kealy, D., Laverdière, O., Cox, D. W., & Hewitt, P. L. (2020b). Childhood emotional neglect and depressive and anxiety symptoms among mental health outpatients: The mediating roles of narcissistic vulnerability and shame. *Journal of Mental Health*, 1–9.
- [17] Repetti, R. L., Robles, T. F., & Reynolds, B. (2011). Allostatic processes in the family. *Development and Psychopathology*, 23, 921–938.
- [18] Xu Fuzhen & Zhang Wenxin. (2011). The relationship between adolescent alienation and pathological Internet use: A test of the moderating effect of family functioning and peer acceptance. *Acta Psychologica Sinica* (04), 410-419.
- [19] Huang Changying, Fang Xiaopin, Duan Haimeng, Li Shaowu & Zhao Xiaojun. (2019). The relationship between feeling of neglect and

- psychological alienation of college students: The role of rumination and friendship quality. (eds.) The 22nd National Psychology Academic Conference Abstract Collection (pp.203-204)
- [20] Nolen- Hoeksema S. Sex differences in unipolar depression; evidence and theory. *Psychological Bulletin*, 1987, 101 (2): 259-282
- [21] Atlas, G.D., Them, M.A. Narcissism and Sensitivity to Criticism: A Preliminary Investigation. *Curr Psychol* 27, 62 (2008).
- [22] Back M D, Küfner A C, Dufner M, et al. Narcissistic admiration and rivalry: Disentangling the bright and dark sides of narcissism. *Journal of Personality & Social Psychology*, 2013 (6)
- [23] Li Song, Chen Xu, Ran Guangming & Zhang Qi. (2022). Passive social networking site use and social anxiety: The role of rumination and self-construction. *Psychological Development and Education* (05), 2-10. doi: 10.16187/j.cnki.issn1001-4918.2022.05.13.
- [24] Kubey, R. W., & Csikszentmihalyi, M. (2014). Television as escape: subjective experience before an evening of heavy viewing. *Communication Reports*, 3(2), 92-100.
- [25] Yang, C. C., Carter, M. D. K., Webb, J. J., & Holden, S. M. . Developmentally salient psychosocial characteristics, rumination, and compulsive social media use during the transition to college. *Addiction Research and Theory*.
- [26] Jessor, R., & Jessor, S. (1977). *Problem behavior and psychosocial development*. New York: Academic Press.
- [27] Wang Xiaoyan. The effect of narcissistic personality on self-esteem and subjective well-being of college students. (Doctoral dissertation, Shaanxi Normal University)
- [28] Bernstein, D., & Fink, P. (1998). *The Childhood Trauma Questionnaire: A retrospective selfreport. Manual*. San Antonio: Harcourt Brace & Co.
- [29] Qiu Shourui. Research on the influence of social media use on loneliness among college students. (Doctoral dissertation, Dalian University of Technology).
- [30] Pincus, A. L., Ansell, E. B., Pimentel, C. A., Cain, N. M., Wright, A. G. C., & Levy, K. N. (2009). Initial construction and validation of the pathological narcissism inventory. *Psychological Assessment*, 21(3), 365–379.
- [31] Hansen-Brown, A. A., & Freis, S. D. (2019). Assuming the worst: Hostile attribution bias in vulnerable narcissists. *Self and Identity*. Advance online publication.
- [32] Dickinson, K. A., & Pincus, A. L. (2003). Interpersonal analysis of grandiose and vulnerable narcissism. *Journal of Personality Disorders*, 17(3), 188–207.
- [33] Li Chao. (2018). Research on the relationship between mobile phone dependence, alienation and psychological resilience of college students (Master's thesis, Southwest University).
- [34] Andreassen, C. S., Pallesen, S., & MD Griffiths. (2017). The relationship between addictive use of social media, narcissism, and self-esteem: findings from a large national survey. *Addictive Behaviors*, 64, 287-293.