The Relationship between Bystander's Life Satisfaction and Passively Acceptance of "Public Display of Affection": Self-Esteem as a Mediator—Mainly among College Students

Yanjing Li[1,*,†] Chenye Wang[2,†]

[1] Beijing Normal University-Hongkong Baptist University United International College, Zhuhai, Guangdong, China
[2]Beijing National Day School, Beijing, China
*Corresponding author. Email: n830016021@mail.uic.edu.cn
†Those authors contributed equally.

ABSTRACT

Since social networking become more and more prevalent, it has become part of people's daily life, quietly influencing people. Also, social networking site provides a stable platform for "public display of affection" behavior. Couples are likely to do so. However, they don't realize how it will influence people negatively receive it. In order to discover the relationship between bystander's life satisfaction and passively acceptance of "public display of affection", and the role of self-esteem. 94 participants were recruited, which were mainly college students. The conclusions are as below. (1) The higher the degree of passive acceptance of "Public display of affection", the lower the individual's satisfaction of life and self-esteem. (2) Self-esteem has a mediating effect between the degree of passive acceptance of "Public display of affection" and subjects' satisfaction of life. The higher degree of passive acceptance of "show off love" will cause a decline in individual self-esteem and ultimately reduce one's satisfaction of life.

Keywords: social networking, satisfaction of life, self-esteem, romantic relationship, college students.

1. INTRODUCTION

In the past fifteen years, the use of social media has soared. The results from China Internet Network Information Center (CNNIC) 44th "Statistical Report on the Development of the Internet in China" have shown that the number of the Internet users in China had reached 847 million, and the proportion of those who use mobile phones to access the Internet had reached 99.1% [1]. Social applications are the most widely welcomed by mobile netizens. Those applications enable Chinese netizen to chat with their friends, get immediate update of their friend's status and browse the funny emojis or photo or video just by scrolling the phone. Social networking have changed the way people interact online or offline [2] and relationship, including traditional romantic relationship.

In social media, people will screen, beautify, and perform their daily lives to create visible ideal romantic relationships. This ideal is equated to the true state of intimacy by the public and oneself [3]. Based on self-

verification theory [4], if people have some ideas about themselves, then they will try to prove these ideas to be truth. Therefore, after publicly displaying of affection as their real state, couples may consciously make some efforts to improve the quality of their relationship in order to match the status they show. At the same time, empirical studies have proved that since the Internet is the best medium for public display of affection, the use of social media is conducive to increase couple's relationship satisfaction and happiness [5]. However, "public display of affection" would also cause jealousy of one party of couples [6]. Here it is defined that "public display of affection" is the behavior of posting romantic relationship information online (in WeChat moments or web). Previous studies mainly focused on the influence of "public display of affection" to the initiator of this behavior, but how it impacts individuals who passively receive and what is the underlying mechanism behind are still unclear. Therefore, it is necessary to try to investigate the exact influence of passively acceptance of "public display of affection" on the bystanders. In this study, life

satisfaction was adopted as the indicators to measure the outcome of the influence.

Life satisfaction is one of the aspects of "Subjective Well-being", together with positive emotions and negative emotions [7]. Life satisfaction is the overall cognitive assessment of an individual's life condition for most of the time or for a certain period of time according to the criteria of one's own choice [8]. It is an important parameter to measure the quality of life of people in a certain society.

There are usually two modes of using the social network sites——passively or positively [9] [10]. Surprisingly, different ways of using social networking have different impact on individuals. Positively surfing the internet is beneficial, since it strengthens the association between internet users and the society and reduces the degree of loneliness [11]. Conversely, if someone is negatively exposed to tons of the information, he gets the opposite feelings or even feel lonelier [12]. Higher level of loneliness may decrease the quality of people's lives, and ultimately reduce people's satisfaction of lives. Therefore, it is hypothesized that passive acceptance of "public display of affection" is negatively correlated with people's satisfaction of live. (Hypothesis 1)

Furthermore, many studies have demonstrated the importance of self-esteem. Self-esteem is a person's overall sense of self-worth or personal value, and it also means respect for others. Studies have shown that self-esteem influences how people behave and how people perceive the world. Everyone has different self-esteem. It varies with lots of factors.

Self-esteem is closely related to mental health as well. For example, Zhong et al. [13] found self-esteem mediates the relationship between being bullied and depressive symptoms; improves relationship satisfaction [14] and increases satisfaction of life [15], etc. Arslan [16] further explored the mediating effect of self–esteem and resilience in the association between social exclusion and life satisfaction among adolescents. Researchers concluded that resilience and self-esteem play a mediating role in the relationship between social exclusion and life satisfaction in adolescents. Self-esteem is like a protection system, guarding our psychological health and happiness. Based on the previous studies, it is hypothesized that self-esteem still plays a mediating effect between negative acceptance of "public display of affection" and life satisfaction. (Hypothesis 2)

In this study, we aimed to investigate the influence of passively acceptance of "public display of affection" on the bystanders, and whether self-esteem mediates the relationship between them.

2. METHOD

2.1. Participants

Convenient sampling was employed to conduct a questionnaire survey. Subjects who did not finish the test, missed some key information in the main test administration process were eliminated. After filtering useless data, 94 valid questionnaires were obtained. Among them, 33 were males, accounting for 35.1%, and 61 were females, accounting for 64.9%. College students were account for 91.49% and others were 8.51%. The average age of the subjects was 21.32 years. The relationship status of the subjects was also measured in this study. Among them, 33 individuals were single but had been in a relationship before, accounting for 35.11%. 29 individuals who were in a relationship but not married yet, accounting for 30.85%. 24 individuals were single from birth, accounting for 25.53%. The rest of 8 are married individuals, accounting for 8.51%. Gender and relationship status are the control variables.

2.2. Instruments

2.2.1. Passive acceptance of "Public display of affection" Scale

The questionnaire was adapted from the Chinese version of the passive social networking site usage questionnaire (Passive SNS Use (PSNSU) [9]. The questionnaire contained five questions (for example, "I often comment or give a like to the post that show how sweet my friend and his or her partner). 5-point Likert scale was used. Participants' answers to questions ranged from 1 (strongly disagree) to 5 (strongly agree). The higher the score was, the higher the degree of passive acceptance of "Public display of affection". The Cronbach's α coefficient of this questionnaire was 0.65.

2.2.2. Satisfaction with Life Scale

In this study, the " Satisfaction with Life Scale" compiled by Diener et al. [8] to measure life satisfaction was employed, with a total of 5 questions (for example, "my life is close to my ideal in most aspects"), using 7-point Likert scale from 1 (strongly disagree) to 7 (strongly agree). The Cronbach's α coefficient of Satisfaction with Life Scale was 0.81.

2.2.3. Self-esteem Scale

The self-esteem scale adopted the self-esteem scale [17]. 10 questions (eg, "I have a positive attitude towards myself"), using 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The higher the score was, the higher the degree of self-esteem. In this study, the Cronbach's α coefficient of the self-esteem scale was 0.84.

3. RESULT

3.1. Descriptive Statistics and Correlation Analysis

There was no significant difference between males and females in terms of self-esteem (p>0.05), as well as of the satisfaction with life (p>0.05). However, there was significant difference between people with different relationship status in degree of self-esteem (F=113.461, df=3, p < 0.01). Data showed that the mean self-esteem score of married people (mean = 40.13 , sd =1.89) was higher than those in relationship but not married(mean = 34.2 , sd =3.59), then higher than people who are single but had relational experience before(mean = 21.18 , sd =6.42) and finally higher than those who are single from birth(mean = 20.83 , sd =2.90). The scores of satisfactions of life were significantly different between different relational status (F=60.249, df=3, p<0.05) as well. The comparison outcome was the same as the self-esteem. In this study, gender and relational status were as control variables to exclude their influence on the following analyses. In the subsequent analysis, through the correlation analysis of the degree of passive acceptance of "Public display of affection" and satisfaction of life, self-esteem respectively, the results showed that the degree of passive acceptance of "Public display of affection" was significantly negatively correlated with satisfaction of life (r =-.483, p < 0.05) and self-esteem (r =-.413, p < 0.05), which conformed to the basic premise of the mediating analysis.

Table 1. Passively acceptance of "Public display affection" & Self-esteem Correlations

		Passively acceptance of "Public display of affection"	self-esteem
Passively acceptance of "Public display of affection"	Pearson Correlation	1	-.413**
	Sig. (2-tailed)		.000
	N	94	94
self-esteem	Pearson Correlation	-.413**	1
	Sig. (2-tailed)	.000	
	N	94	94

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

Table 2. Passively acceptance of "Public display of affection" & SWLS Correlations

		Passively acceptance of "Public display of affection"	SWLS
Passively acceptance of "Public display of affection"	Pearson Correlation	1	-.483**
	Sig. (2-tailed)		.000
	N	94	94
SWLS	Pearson Correlation	-.483**	1
	Sig. (2-tailed)	.000	
	N	94	94

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

3.2. Analysis of mediating effect

Based on the hypothesis mentioned above, Hayes' SPSS macro program PROCESS was used to test whether self-esteem plays a mediating role between the passive acceptance of "Public display of affection" and satisfaction of life. The results showed that self-esteem did have a mediating effect between the degree of passive acceptance of "Public display of affection" and life satisfaction significantly. Self-esteem was account for 40.07% of the total effect. As the graph showed below, the value of mediating effect is -0.40. 95% confidence interval is [-0.60, -0.23]. Passively acceptance of "public display of affection" affects individuals life satisfaction by affecting their self-esteem first. And then self-esteem, influence ultimately influence satisfaction of life. Passively acceptance of "public display of affection" did not directly influence individuals life satisfaction, but through influence self-esteem and indirectly influence individuals life satisfaction.

Table 3. Mediating effect of Self-esteem

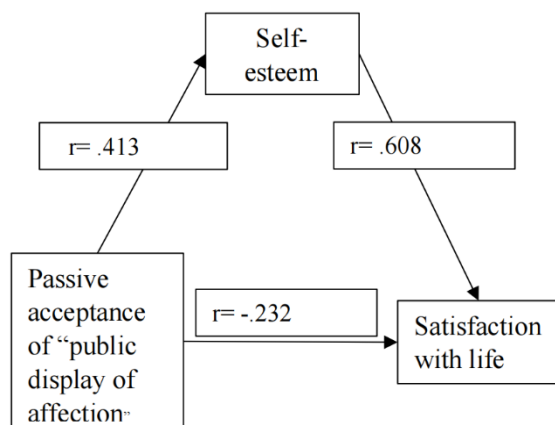| Indirect Effect of X on Y			
Effect	Boot SE	BootLLCI	**Boot ULCI**
-.4007	.0971	-.6014	**-.2254**
Normal theory tests for indirect effect			
Effect	se	Z	**p**
-.4007	.0995	-4.0280	**.0001**

Figure 1 Mediating model of passive acceptance of "public display of affection", satisfaction with life and self-esteem.

4. DISCUSSION

The present study examined the mediating effect of self-esteem on the relationship between passively acceptance "public display of affection" and individual's satisfaction of life. Previous studies often focused on the influence of the behavior of "Public display of affection" on the active initiator, but few studies paid attention to the feelings or mental health problems of people who passively accept these "public display of affection" information. In this study, we tried to expand research area of the previous studies on the impact of passive social media using on individuals' mental health, allowing individuals to have a more comprehensive understanding of the subjective usage of social media would have an adverse effect on the satisfaction of life of bystanders. Information related to romantic relationship, is a kind of prevalent information on social networking. People, especially college students, are highly exposed to this kind of information, most of them have never thought about the impact of this information on their mental health. However, it really plays a decisive role in their mental health. This study explored the underlying mechanism of passively acceptance online "Public display of affection" on the satisfaction of life of bystanders (mainly college students) and clarified the role of self-esteem in this model.

The outcome of this study was consistent with previous studies. A survey [18] had been done to investigate whether the content, college student couples posted on WeChat Moments, showing off how sweet they are matched real life. It turned out that it was not exactly the same as their real life, and most couples modified the content before released. The couple's life shown in the WeChat Moment was not a reproduction of their real life. In many cases, there was the possibility of misinterpreting the information. Social media is flooded with a lot of impression-managed information. This kind of information is close to ideal state.

Social comparison is a ubiquitous public psychological phenomenon [19]. It is an automatic process for people to think about themselves and others, and it is also an instinctive psychological response when people perceive the state of other people [20]. People compare their imperfect life with other's perfect life shown in the social media, and think others are leading a happier life than they do [21]. In this case, disappointment leads to frustration. "Frustration is a state of insecurity and dissatisfaction arising from unresolved problems or unfulfilled needs" [22]. In other words, this social comparison ultimately results in the decrease of life satisfaction.

College students are in the transition of adolescent and early adulthood. According to the fifth stage of Erik Erikson's theory of psychosocial development, love or romantic relationship is essential for them. Through romantic relationship, they will re-examine his identity and try to find out exactly who he or she is [23]. Therefore, their relation status largely influence their emotional life.

Also, in the life of college students, not only the emotional life, (such as whether they are single or not) but also study, internship, etc. have become the source of comparison between students. In an environment where it is easy to compare with each other, the emergence of social media provides more convenience [24]. From the perspective of social comparison, it is easy for them to compare the satisfaction of their relational life. Social media platforms provide a stable and reliable way for the

"public display of affection" behavior and has also greatly increased the frequency of people's comparisons. Social comparison itself has both positive and negative impact on the comparison person. The emotional effect that people have after comparison is affected by many factors, such as personality, personal situation [25]. In the study, self-esteem could be added as another factor influencing the outcome of the emotional effect.

This study found that self-esteem acted as a mediator between passive acceptance of "Public display of affection" on the life satisfaction of bystanders, mainly college students with self-esteem acting as a mediator. Passive acceptance of "Public display of affection" partly influence the degree of self-esteem and ultimately affect individual's satisfaction of life. Previous studies also showed that, the passive use of social media can cause a decrease in user self-esteem [21]. In the United States, most college student Facebook users are relatively passive in using the information release function of social media. It is because in most cases they only see or observe the status of others on Facebook [26], which is consistent with what is mentioned before. People prefer to watch others' posts than posting their own and people prefer to repost than create their original post. However, in fact, these bystanders are not only passive receivers of information, but also subjectively analyze and compare the information. They will actively respond to it and adjust themselves according to their own feelings and experiences [27]. Although social media such as WeChat provides users with information services, allowing users to always keep up with their friends but also lays a solid foundation for mutual comparison and jealousy [28], which are the response and adjustment people make [27] regard social media as a stressful environment. Being exposed to this stressful environment for a long time, people, especially college students will be more likely to form negative self-evaluations and to have low self-esteem, which ultimately leads to dissatisfaction of life.

This study revealed that self-esteem can be used as a variable to predict individual satisfaction of life. Self-esteem was served as an important mediator between the degree passive acceptance of "Public display of affection" and individual's life satisfaction. This outcome reminded people to rationally view the "Public display of affection" information on social media and to adjust themselves when negative emotions triggered by this.

What worth mentioning is that in this study, we found that relationship status significantly affects individual's life satisfaction and self-esteem, and relationship status corresponds to different degree of life satisfaction and self-esteem. Gary and Dillon [29] have found similar outcome that self-esteem is correlated with gender and mating value. However, another explanation is that this extreme outcome may because of the number of subjects is relatively small. Especially the number of the married

subjects is way too small, and all the married people attended our study have a happy family. Moreover, there is a social phenomenon in the society, especially in college that people are more inclined to fall in love. College students is in the transition between adolescent and adult, so they are vulnerable and susceptible to their environment. Being surrounded by couples, most of the single students usually think of it and are eager to leave this single status. Even though sometimes they want to be in love, it is because of conformity. The impact of such phenomena can be an important factor influencing collage student's self-esteem and satisfaction with life, since they consider being in love is an important factors that lead to their happiness. Secondly, the majority of the subjects in this study are women, and the sampling range is not comprehensive enough. Although the influence of gender is controlled in the data analysis, it may have a certain impact on the universality of the research conclusions.

There are several potential confounding variables in this study. All the data is collected by online platforms in which multiple interference factors exist, such as time, location, and personal condition. These interference variables may also have impacts on individuals' perception of life satisfaction. What's more, it is difficult to make sure that every single questionnaire obtained meet the requirement of validity and reliability.

5. CONCLUSION

In this study, we mainly investigated the relationship between passive acceptance of "Public display of affection" and individual's satisfaction of life, with self-esteem acting as a mediator. Random sample (94 participants) was employed and mediator model analysis was adopted to analysis the data. The results were as below.

(1) The higher the degree of passive acceptance of "Public display of affection", the lower the individual's satisfaction of life and self-esteem.

(2) Self-esteem has a mediating effect between the degree of passive acceptance of "Public display of affection" and subjects' satisfaction of life. The higher degree of passive acceptance of "show off love" will cause a decline in individual self-esteem and ultimately reduce one's satisfaction of life.

REFERENCES

[1] China Internet Network Information Center. (2021). "China Internet Development Report 2021". Available at: Cyberspace Administration of China: http://www.cac.gov.cn/2021-09/26/c_1634248509015615.htm

[2] Subrahmanyam, K. & Greenfield, P. M. (2008). Communicating online: Adolescent relationships

and the media. The Future of Children, 18 (1), 1-27. DOI: 10.1353/foc.0.0006

[3] ZhangY.W. (2014). Image Communication and Intimacy: A Study on the Ceremony of Showing Love on Social Networks. Doctoral dissertation of Fudan University

[4] Swann, W. B., Jr. (2012). Self-verification theory. In P. A. M. Van Lange, A. W. Kruglanski, & E. T. Higgins (Eds.), Handbook of theories of social psychology (pp. 23–42). Sage Publications Ltd. DOI:https://doi.org/10.4135/9781446249222.n27

[5] UtzS., & BeukeboomJ.C. (2011). The role of social network sites in romantic relationships: Effects on jealousy and relationship happiness. Journal of Computer-Mediated Communication, 16(4), 511-527. DOI: https://doi.org/10.1111/j.10836101.2011.01552.x

[6] Muise, A., Christofides, E. & Desmarais, S. (2014). "Creeping" or just information seeking? Gender differences in partner monitoring in response to jealousy on Facebook. Personal Relationships, 21 (1), 35-50. DOI: https://doi.org/10.1111/pere.12014

[7] Guo, J. J., Niu, L., Xie, X.C., Wang, P. C., & Lei, L. (2020). The Association between "Show of Love" and Subjective Well-being of Spectators: The Mediating Role of Self-esteem and the Moderating Role of Attachment. Psychological Development and Education, 36(3), 359-366. DOI:10.16187/j.cnki.issn1001-4918.2020.03.13

[8] D.Diener，E., A.Emmons，R., J.Larsen，R., & Griffin，S. (1984). The satisfaction with life scale. Journal of Personality Assessment, pp. 71-75.

[9] Chen，W., Y.Fan，C., X.Liu，Q., K.Zhou，Z., & C.Xie，X. (2016). Passive social network site use and subjective well-being: A moderated mediation model. Computers in Human Behavior, pp. 507-514. DOI: https://doi.org/10.1016/j.chb.2016.04.038

[10] Verduyn, P., Lee, DS, Park, J., Shablack, H., Orvell, A., Bayer, J., et al. (2015). Passive Facebook usage undermines affective well-being: Experimental and longitudinal evidence. Journal of Experimental Psychology: General, 144 (2), 480-488. DOI:10.1037/xge0000057

[11] Deters, F. G., & Mehl, M. R. (2013). Does posting Facebook status updates increase or decrease loneliness? An online social networking experiment. Social Psychological and Personality Science, 4 (5), 579-586. DOI: 10.1177/1948550612469233

[12] Burke, M., Marlow, C., & Lento, T. (2010, April). Social network activity and social well-being. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems(pp.1909 -1912). ACM.

[13] Zhong, M., Huang, X., Huebner, E.S., & Tian, L. (2021). Association between bullying victimization and depressive symptoms in children: The mediating role of self-esteem. Journal of Affective Disorders, 294, 322-328. DOI: https://doi.org/10.1016/j.jad.2021.07.016

[14] Murray, S. L., Holmes, J. G., & Griffin, D. W. (2000). Self-esteem and the quest for felt security: How perceived regard regulates attachment processes. Journal of Personality and Social Psychology, 78 (3), 478-498. DOI: 10.1037//0022-3514.78.3.478

[15]Diener, E., & Diener, M. (2009). Cross-cultural correlates of life satisfaction and self-esteem. In Culture and Well-being (pp. 71-91). Springer, Dordrecht.

[16] Arslan, G. (2019). Mediating role of the self–esteem and resilience in the association between social exclusion and life satisfaction among adolescents. Personality and Individual Differences, 151. DOI: https://doi.org/10.1016/j.paid.2019.109514

[17] Rosenberg, M. (1965). Society and the adolescent self-image. Princeton, pp. 1780-1790.

[18] TianYufen. (2019). "Show off Love": A Study on the Love Presentation Behavior of College Student Couples in WeChat Moments. Available at CNki: https://ssl.uic.edu.cn/kcms/detail/,DanaInfo=kns.cnki.net,SSL+detail.aspx?dbcode=CMFD&dbname=CMFD202001&filename=1019219066.nh&uniplatform=NZKPT&v=BVaI5EDsq9S%25mmd2BPF1vr17CdRI0GZ2%25mmd2Bv%25mmd2FdSAohHedqfFV0Ayem0eanSqmrQCi7x35Qw

[19] FestingerL. (1954). A theory of social comparison process. Human Relation, pp. 117-140.

[20] CorcoranK, CrusiusJ, & MussweilerT. (2011). Social Comparison: motives, standards, and mechanisms. In Theory of Social Psychology, pp. 119-139.

[21] A.Vogel，E., P.Rose，J., R.Roberts，L., & Eckles，K. (2014). Social comparison, social media, and self-esteem. Psychology of Popular Media Culture, pp. 206-222.

[22] Merriam-Webster. (1828). Definiation of "Frustration". Available at: Merriam-Webster: https://www.merriam-webster.com/dictionary/frustration

[23] Zeng Lingjuan, Wei Danxi. (2019). Research on the Current Status of Adolescents' Romantic Relationship and Its Influencing Factors. Journal of Mudanjiang Normal University (Philosophy and Social Sciences Edition).

[24] LeeS.Y. (2014). How do people compare themselves with others on social network sites? The case of Facebook. Computer Human Behavior, pp. 253-260.

[25] BuunkB.P. & Brenninkmeyer.V.B.. Social comparison processes among depressed individuals: evidence for the evolutionary perspective on involuntary subordinate strategies? Subordion and Defeat: An Evolutionary Approach to Mood Disorders and Therapy, 11. Edited by Sloman L, Gilber P, Erbaum web., 164.

[26] Pempek A. Tiffany, Yermolayeva A. Yevdokiya, & Sandra L. Calvert. (2009). College students' social networking experiences on Facebook. Journal of Applied Developmental Psychology, 30 (4), 227-238. DOI: https://doi .org/10.1016/j.appdev.2008.12.010

[27] Kross, E.,Verduynp., Demiralp, E., Park, J., Lee, D. S., Lina., & Ybarra, O (2013). Facebook use predicts declines in subjective well-being in young adults. PLoS ONE.

[28] Krasnova.H., Wenninger.H., Widjaja.T., & Buxmann.P. (2013). Envy on Facebook: a hidden threat to users' life satisfaction? 11th International Conference on Wirtschaftsinformatik (WI).

[29] Bras, G.L. & M.H.Dillon (2021). Digging deeper into the relationship between self-esteem and mate value. Personality and Individual Differences, 185. DOI: https://doi.org/10.1016/j.paid.2021.111219