

Exploring the Relationship between Social Surrogate Use and Interpersonal Stress

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Abstract. In previous studies, we found a positive association between depressive symptoms and social surrogate use that cannot be accounted for by increased loneliness or rejection sensitivity. We think that there might be a third common factor—interpersonal stress. Those who have recently experienced interpersonal stress may develop depressive symptoms and also engage in social surrogate use as a means of self-enhancement. Our project collected data from 190 people via a questionnaire that comprises four different psychological scales. The data shows that the positive correlation between interpersonal stress and social surrogate use frequency was significant. And the relationship between ERS and social surrogate use satisfaction was also significant. The results revealed that interpersonal stress might cause more social surrogate use, and the motivation behind it may be self-enhancement.

Keywords: Social Surrogate Use; Interpersonal Stress; Depressive Symptoms.

1. Introduction

Past research has proven that isolated and seemingly nonsocial activities such as watching television and reading novels can provide interpersonal experience and a sense of belonging (Gabriel et al. 2016). Gabriel et al. (2016) called these social surrogates, which include three types: social worlds, social reminders, and parasocial relationships. Many researches have shown that interpersonal stress can predict depressive symptoms. Moreover, interpersonal stress such as rejection can lead to self-enhancement defenses (at least in those with high self-esteem) (Sommer, 2001). Excessive Reassurance Seeking (ERS) is a relatively stable tendency where people excessively and persistently seek assurances from others that are close to them regardless of whether such assurance has already been provided (Joiner et al. 1992, 1999). According to the Cognitive-Affective Crossfire Model (Joiner et al. 1993), ERS has self-enhancement function, which is affectively pleasing. In previous studies, we found a positive association between depressive symptoms and social surrogate use. And following studies show that this association cannot be accounted for by increased loneliness, rejection sensitivity, or social network size. We think that one possibility is that interpersonal stress is the third common factor that causes the covariation between depressive symptoms and social surrogate use. Those who have recently experienced interpersonal stress may develop depressive symptoms and also engage in social surrogate use as a means of self-enhancement. To examine whether interpersonal stress is associated with social surrogate use, we employed a comprehensive questionnaire that investigated interpersonal stress, social surrogate use frequency, and social surrogate use satisfaction. To test if self-enhancement is a motivation behind social surrogate use, we also measured ERS behavior. We anticipated that elevated interpersonal stress is associated with more frequent and/or more social surrogate use. In addition, if increased social surrogate use reflects a stronger need for self-enhancement caused by interpersonal stress, then those who achieve greater self-enhancement from social surrogate use should also exhibit more ERS behaviors.

2. Methods

2.1. Participants

The data were collated from the sample service of a Chinese online survey company (www.wjx.cn). Excluding those who did not pass the quality control items, a total of 190 participants (78 males and 112 females, the average age is 32.89, ranging from 19-61) were taken into analysis. The study is formally pre-registered at <https://osf.io/ky65w>.

2.2. Materials and Measures

Interpersonal Stressors Scale (ISS) (Wang et al., 2021) asks people to report the frequency of interpersonal stressors they met in the past half year, which consists of five factors, including interaction difficulty, behaving as expected, social criticism, relationship maintenance, and indebtedness avoidance. It has 27 items, each of them is rated using a 5-point Likert Scale (from 1=never, 5=always). The total score ranges from 27 to 135, with higher scores suggesting more interpersonal stress people met in the past half year. In this study, the alpha coefficient of ISS is 0.84, and the alpha coefficients of the five factors range between 0.64-0.85.

Social Surrogate Use Questionnaire (SSU) (Self-developed, informed by Derrick et al., 2018) measures the use of social surrogates including three different categories: social worlds, reminders of others, and parasocial relationships. Respondents were instructed to report their frequency and satisfaction using social surrogates. Based on a 5-point Likert Scale, 0-4 scores have been used to rate 22 items. The higher the score, the more social surrogate use and self-enhancement motivation. The alpha coefficient of SSU frequency in this study is 0.75 and the alpha coefficient of SSU satisfaction is 0.71.

Depressive Interpersonal Relationships Inventory, excessive reassurance seeking subscale (ERS) (Joiner, 2001) will be used to measure the frequency of excessive reassurance seeking (ERS) behavior. On a scale of 1-7, the total score is 4-28, the higher the score, the more reassurance seeking behavior. In this study, the alpha coefficient of ERS subscale is 0.88.

Patient Health Questionnaire 9 (PHQ-9) (Kroenke, Spitzer, Williams, & Löwe, 2010) is a self-reported test that assesses the degree of depression severity which consists of nine items. Respondents rate each item on a 4-point Likert Scale (from 0=not at all to 3=nearly every day). The total scores of PHQ-9 range from 0 to 27. A score equal to or higher than 5, 10, 15, and 20 indicates mild, moderate, moderately severe, and severe depression respectively. In the present study, the alpha coefficient of the PHQ-9 is 0.79.

3. Results

3.1. Descriptive Statistics

Means, standard deviation, and correlations of the measures are listed in Table 1 and 2.

3.2. Confirmatory Analysis

To test whether elevated interpersonal stress is associated with more frequent and/or more social surrogate use, we used correlation analysis. As shown in Table 2, interpersonal stress and the frequency of social surrogate use are positively correlated ($r=.280$, $p<.001$), and the correlation is significant.

To test whether self-enhancement is a motivation of social surrogate use caused by interpersonal stress, we examined ERS behavior since a strong motivation for self-enhancement often leads to increased ERS. According to Table 2, ERS and social surrogate use satisfaction are positively and significantly correlated ($r=.245$, $p<.001$).

Table 1. Descriptive statistics

	ISS sum	SSU_freq	SSU_satisfaction	ERS_sum	PHQ9_sum
Mean	63.584	18.179	22.689	11.647	6.542
Std. Deviation	10.379	6.378	6.762	5.336	3.876

Table 2. Pearson's correlations

Variable		ISS sum	SSU_freq	SSU_satisfaction	ERS_sum	PHQ9_sum
1. ISS sum	Pearson's r	—				
	p-value	—				
2. SSU_freq	Pearson's r	0.280	—			
	p-value	< .001	—			
3. SSU_satisfaction	Pearson's r	0.048	0.759	—		
	p-value	0.510	< .001	—		
4. ERS_sum	Pearson's r	0.342	0.232	0.245	—	
	p-value	< .001	0.001	< .001	—	
5. PHQ9_sum	Pearson's r	0.663	0.254	0.128	0.344	—
	p-value	< .001	< .001	0.079	< .001	—

Table 3. Pearson's partial correlations

Pearson's Partial Correlations			
Variable		PHQ9_sum	SSU_freq
1. PHQ9_sum	Pearson's r	—	
	p-value	—	
2. SSU_freq	Pearson's r	0.094	—
	p-value	0.196	—

Note. Conditioned on variables: ISS sum.

Noted: ISS= Interpersonal Stressors Scale; SSU= Social Surrogate Use; ERS= Excessive Reassurance Seeking; PHQ9 = Patient Health Questionnaire 9

3.3. Exploratory Analysis

In Table 2, it was shown that depressive symptoms and social surrogate use frequency were significantly correlated ($r=.254$, $p<.001$). In Table 3, after partialing out interpersonal stress, the correlation ($r=.094$, $p=0.196$) was no longer significant.

4. Discussion

In the present study, we found that interpersonal stress and the frequency of social surrogate use are significantly and positively correlated, we think maybe interpersonal stress will cause more social surrogate use, which is consistent with hypothesis 1. Also, we found that ERS behavior and social surrogate use satisfaction are significantly correlated. Because ERS behavior is related to self-enhancement motivation, this indicates that one motivation of social surrogate use may be the self-enhancement need, which successfully tests hypothesis 2. And combining hypothesis 1, this need might be caused by interpersonal stress.

Moreover, the study shows that depressive symptoms and social surrogate use frequency are significantly correlated, but when we conditioned interpersonal stress, these two are not significantly correlated. This indicates that interpersonal stress might be the third common factor that causes the covariation between depressive symptoms and social surrogate use. It is possible that the positive correlation between depression and social surrogate use found in past research is because they are both related to interpersonal stress.

However, the results have limitations. This is a correlational study, so we cannot be sure about the causal relationship. Maybe it is the frequent use of social surrogate use that inhibits people's interpersonal abilities, causing more interpersonal stress. In all, further studies are needed to verify the causal relationship.

5. Conclusion

Former research proved that people spend more time on social surrogates when their depressive symptoms are more severe but cannot be explained by increased loneliness, rejection sensitivity, or social network size. We anticipated that interpersonal stress is a third common factor that infects both social surrogate use and depressive symptoms. Our results indicated that the more interpersonal stress people met in the past half year, the more social surrogate use in their life, proving our first hypothesis. Our second hypothesis suggesting that this increased social surrogate use reflects a stronger need for self-enhancement caused by interpersonal stress was also proven because more ERS behaviors were reported when people were more satisfied by social surrogates. In addition, the data suggest that the relationship between depression and social surrogate use may be due to interpersonal stress.

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