



Research Article

Social Media Habits but Not Social Interaction Anxiety Predict Parasocial Relationships

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Abstract: With the rise in accessibility of media personae and celebrities through social media sites, parasocial relationships (PSRs) can offer a meaningful alternative for individuals who experience obstacles in forming real-life relationships. Existing research suggests that PSRs are multidimensional. Building on this, we considered how social media and social anxiety factors relate to the dimensions of PSRs. We examine whether social media engagement, social media addiction, and social interaction anxiety predict parasocial-love and parasocial-friendship. Participants ($N = 239$) responded to a questionnaire assessing multiple elements of PSRs, social interaction anxiety, social media engagement, and social media addiction. Results revealed social media addiction to be a significant predictor of parasocial-friendship and emotional aspects of parasocial-love. However, physical aspects of the parasocial-love were predicted by social media engagement. Social interaction anxiety was only associated with aspects of parasocial-love but did not predict this type of PSR. These findings suggest that developing a PSR may be strongly linked to social media use and foster social media addiction, whilst face-to-face social interaction anxiety may be less relevant to PSRs with celebrities. The current results also support the suggestion that PSRs with media personalities are multifaceted.

Keywords: parasocial, social media, social media addiction, social interaction anxiety, celebrity

1. Introduction

Parasocial interaction (PSI) is a concept introduced by Horton and Wohl (1956) to describe one-sided relationships which audiences held with media personae, such as celebrities. Initially, game show hosts were used to outline the different characteristics seen in these interactions, for example, intimacy experienced during viewing time. This type of relationship is interesting and important to examine as it may shed light on audiences' social media behaviours and motivations for social media addiction too. The consideration of interactions during viewing was later expanded to include parasocial relationships (PSRs) — a more long-term response and enduring sense of liking towards media personae (Horton & Strauss, 1957). Giles (2002) highlighted a hierarchy of PSRs: relationships formed with media personae that can directly address their audience are considered 'first-order', whilst fictional characters played by an actor or actress are 'second-order' as the character has a real-life counterpart. Within the current study, PSRs formed with real-life celebrities are examined. These 'first order' (Giles, 2002) relationships, with media personae who may directly address the audience, are of particular interest as aspects of the relationship may not be entirely one-sided.

The current study examines how aspects of social media use and social interaction anxiety may be involved in forming differing aspects of a PSR. We investigate relationships between social interaction anxiety, social media engagement, and social media addiction and the dimensions of PSRs outlined by Tukachinsky (2010) to establish if these factors play a differential role when PSRs are considered from a multidimensional perspective.

1.1 Parasocial relationships: Multifaceted

Media users may respond to PSRs similarly to interpersonal relationships, as people use similar fundamental cognitive processes in mediated and face-to-face communication (Perse & Rubin, 1989). Tukachinsky (2010) suggested that PSRs parallel social relationships as they vary in intensity and quality, ranging from acquaintances to friendships or romantic love. However, obviously, PSRs are focused within a mediated context (Giles, 2002).

Differing cognitive, affective, and behavioural responses associated with PSRs may lead individuals to feel as though they have made a new personal acquaintance (Erickson & Cin, 2018). Tukachinsky (2010) argued that people engage in qualitatively different PSRs, leading to the presentation of distinct facets: *parasocial love (PSL)* and *parasocial friendship (PSF)*. Within these facets, Tukachinsky (2010) describes four further dimensions: *parasocial friendship-communication (PSF-communication)*, *parasocial friendship-support (PSF-support)*, *parasocial love-physical attraction (PSL-physical)*, and *parasocial love-emotional response (PSL-emotional)*. *PSF* may be considered as liking the celebrity, feeling solidarity and trust with them, and desiring communication and self-disclosure with them. *PSF-communication* includes the willingness to share information and interact with the celebrity, whilst *PSF-support* describes any emotional investment and encouragement of success for the other. Romantic love in the parasocial setting, *PSL*, is characterised by the attraction to and idolisation of a celebrity, leading to feelings of being “in love” or having a “crush” (Karniol, 2001; Tukachinsky, 2010). *PSL-physical* highlights the physical attraction that is felt towards the celebrity, whilst *PSL-emotional* describes feelings of love and adoration. It may be argued that *PSL* is essential to the development of contemporary popular culture, as crushes on media personae are involved in the transition of sexuality during adolescence and as a means of defining sexual identity (Erickson & Cin, 2018; Fraser & Brown, 2002; Karniol, 2001). It is generally accepted that this type of romantic attachment is a common occurrence (Miller & Benson, 1999) and research has provided evidence for the existence of celebrity crushes (Erickson & Cin, 2018; Karniol, 2001; Spitzberg & Cupach, 2008). Romantic PSRs are another area where results have been seen to be conflicting, with early research in this area (Cohen, 1997) suggesting both male and female viewers form romantic PSRs but for different reasons. Males form these mediated relationships as a compensatory strategy for fear of abandonment, whilst females form PSRs for friendship or companionship.

Research based on PSI scales has also considered mediated relationships from multidimensional perspectives. Tsay and Bodine (2012) identified different personality and media use motivations which aligned with four dimensions of PSI (*guidance, desire for face-to-face interaction, intimacy, and familiarity*). The suggestion that different factors are reflective of the different dimensions of PSI has been further supported by research into specific fictional media (specific characters or genres), as well as dark triad personality traits (Brodie & Ingram, 2021; Ingram & Lockett, 2019).

The aim of the current study is to identify if and how factors of social media engagement, social media addiction, and social interaction anxiety align with the four subscales of Tukachinsky’s (2010) PSR Scale in a non-specific (snowball) sample. Whilst the relationship of these factors to PSRs has been previously addressed (see specific discussions in relevant sections to follow), the relationships between these factors and the differing types of PSRs, as identified by Tukachinsky (2010), have received little attention. Within the current study, we re-examine the contributions that social media engagement, social media addiction, and social interaction anxiety make to the formation and maintenance of PSRs whilst considering PSRs themselves through a multidimensional lens. As no specific evidence on how these factors relate to the subscales has been identified, we present a broad research proposition with respect to this relationship in that we will assess which factors (social media engagement, social media addiction, and social interaction anxiety) will predict the subscales of *PSF-communication*, *PSF-support*, *PSL-physical*, and *PSL-emotional*, with the expectation that the pattern of predictors will differ for the four subscales.

1.2 Social media and PSRs

Early research into PSIs and relationships was carried out by Horton and Wohl (1956) before the introduction of the Internet. Early PSRs were effectively limited by media management who controlled the extent of celebrity exposure through traditional (radio, TV, and film) media outlets (Chung & Cho, 2014). Due to advances in technology, media figures are now more accessible than ever. Social media use has steadily increased since 2002, with young adults being the most prominent user group (Moreno & Whitehill, 2014). The rise in the use of social networking sites (e.g., Facebook, Instagram, and Twitter) means that people can instantly connect with their favourite media personae (Phelps, 2011), and given the pervasive use of social networking sites, this may have a large influence on the strength and format of PSRs. Whilst some may expand the term “social media” to any application with features which allow communication, for the purpose of the current study, we limit social media and social networking platforms to those platforms where users, in this case, celebrities, share content aimed at a high volume of other users.

Prior to the popularity of social media, a glimpse into the private lives of a celebrity tended to strengthen PSRs (Chung & Cho, 2014), and now modern technology allows the general public to establish a stronger link with celebrities than previously possible (Tsay & Bodine, 2012). Participation on social media platforms such as Twitter, Instagram, and online blogs has allowed audiences to interact with their favourite media figures (Ingram & Lockett, 2019), and online engagement encourages people to control their individual experiences (Katz et al., 1974). This level of engagement surpasses the extent initially conceived by the uses and gratifications approach — increased user control and interactivity have given people an easy way to use media for the gratification of their needs. Therefore, the scope of PSIs and PSRs needs to be enlarged to take the influence of social media into account.

It is typical for social networking site users to link with those they have offline connections, yet many also choose to follow celebrities, media personalities, and people with shared interests with whom they do not have a bidirectional relationship (Stever & Lawson, 2013). That is, the ordinary user is aware of the activities of a celebrity, but the celebrity is not aware of the activities, or likely existence, of the ordinary user. Chung and Cho (2017) argue that social networking sites are extremely effective in fostering PSRs in numerous ways, as users can directly message celebrities. However, celebrities can also respond to their fans, contrasting with the initial definition of PSI as a one-sided interaction. When received, celebrity responses enhance and deepen the PSR for users by enhancing the bond and feeling of intimacy (Chung & Cho, 2017). Social networking site posts are often extremely open and personal, creating a digital intimacy and opportunity for audiences to experience meaningful interactions with their favourite celebrities. For users, the more information that is given, the greater their understanding of the target and the less uncertain they feel about the deepening PSR (Chung & Cho, 2017). Parasocial relationships with celebrities are encouraged by celebrity disclosure of personal details and life stories (Aydin & Ayar, 2017).

A range of research has suggested that feelings of social disconnection may be linked to the development of PSI/PSRs and that link may be mediated by social media use. Individuals who experience chronic ostracism can fulfil their need for belonging by forming and maintaining PSRs (Iannone et al., 2018), and the use of social media can support this behaviour. Just by considering the mediated relationship, individuals can reduce feelings of threat to belonging (Derrick et al., 2009), and impairments on cognitive tasks caused by exclusion are diminished (Knowles, 2007). Research findings have suggested that individuals used Twitter more and followed more parasocial targets if they were in high need of belonging (Iannone et al., 2018). People high in loneliness follow parasocial targets via social networking sites (Baek et al., 2013). Maintaining PSRs on social media may be a useful way for those feeling disconnected to gratify belonging needs (Iannone et al., 2018). There is also a relationship between exposure to celebrities on Twitter and the strength of PSRs among adolescents (Bond, 2016), and greater dependency on PSRs was positively correlated with social media addiction (Baek et al., 2013). This is to be expected as the type of social media use could impact PSRs. It is argued that the interaction between heavy mass media consumption and desiring PSRs, detaches the audience from real relationships leading to social isolation (Hartmann, 2017; Vannucci et al., 2017), and so, greater dependency on PSRs is established. In summary, social media is an excellent platform for promoting PSRs. Thus, the current study focuses on the prediction of variance within PSRs when examining social media engagement and addiction. Based on previous findings, it is anticipated that:

Hypothesis 1: There will be a positive correlation between social media engagement and PSRs with celebrities.

Hypothesis 2: There will be a positive correlation between social media addiction and PSRs with celebrities.

1.3 Social anxiety and PSRs

Socialising and the need to belong are fundamental features of humanity (Baumeister & Leary, 1995). Humans are motivated to seek social relationships. Following the uses and gratifications approach, it is suggested that PSRs with media personae serve as compensation for audiences' unsatisfied social needs. However, the degree to which audiences are attracted to mediated relationships as a replacement for face-to-face relationships is often questioned (Tsao, 1996), and research has shown that engaging parasocially may supplement rather than replace face-to-face interactions (Cohen, 1997; Ingram & Lockett, 2019). Evidence does suggest that those who experience social deficits may use media to meet their belonging needs through the formation of PSRs. Wang et al. (2008) found that mediated PSIs — considered as short-term interactions rather than longer-term relationships — are used to satisfy social needs in place of real-life interactions, whilst Baek et al. (2013) have shown that people may engage in PSIs to alleviate their feelings of loneliness. Alternatively, Rosaen and Dibble (2015) found that the need to belong was the only social compensation variable to correlate with a PSR score when participants focused on a “liked” character, whilst loneliness and social anxiety interacted with attachment avoidance to predict a PSR with a “disliked” character. This study made use of Hartmann et al.'s (2008) PSR scale, which sought to improve upon methodological issues inherent in previous scales and also presented PSR scales for both liked and disliked characters.

Social anxiety is a mental health complaint frequently reported by young adults (Brook & Willoughby, 2015). This experience can be particularly disadvantageous for this age group given the social interactions encountered during transitional periods (Parade et al., 2010). The prevalence of social anxiety may be a contributing factor to PSRs if people are using the media to engage in and seek more frequent PSIs to fulfil their unmet social needs. Previously, it has been demonstrated that social anxiety is positively correlated with PSI (Greenwood, 2008). In line with a suggestion that those high in social anxiety perceive online communication as less threatening than communicating face-to-face (Lee & Stapinski, 2012; Weidman et al., 2012), socially anxious individuals may use the ‘safe place’ provided by the internet to avoid face-to-face interactions (e.g., Prizant-Passal et al., 2016). In a study specific to users of the video streaming platform YouTube, social anxiety was found to predict PSIs (de Bérail et al., 2019), and it was also found to predict YouTube addiction. As our measurement of PSRs is multifaceted, the relationship that social interaction anxiety may have with each subscale may hold with it is unclear. Based on the mixed evidence discussed, suggesting that PSRs may complement or compensate for face-to-face social relationships, and minimal findings from previous research specifically relating to social interaction anxiety, we put forward a non-directional hypothesis:

Hypothesis 3: Social interaction anxiety will correlate with subscales of PSR.

2. Method

2.1 Participants and procedure

A power analysis was conducted using G*Power version 3.1.9.6 (Faul et al., 2009). The results indicated that the required sample size to achieve 95% power for detecting a medium effect at $\alpha = .05$, was $N = 153$. An opportunity sample was recruited using survey links posted on social networking sites (Facebook, Instagram, and Twitter), and an online research survey exchange website: www.surveytandem.com. This sample was supplemented by participants who took part using Amazon Mechanical Turk and received a payment of \$ 0.05. A total of 270 survey responses were received, and 31 responses were removed from analysis due to incompleteness, double submission, and the choice of a fictional character or deceased favourite celebrity. This left 239 participants (68 male, 169 female, 1 genderfluid, and 1 non-binary), ranging in age from 18 to 68 ($M = 31.46$, $SD = 10.83$), who completed the online questionnaire using *QuestionPro*. As a combination of snowball sampling and paid participation was used in data collection, the participant pool represented a wide range of nationalities. Respondents were British and Irish (28.5%), other European countries (7.5%), American (49.4%), Indian (7.5%), Canadian (1.7%), South American countries (1.3%), Dual British Nationality (0.8%), and Undisclosed (3.3%). Participant ethnicities included: White (68.6%), Asian (12.6%), Mixed (3.3%), Black (5.9%), Hispanic (4.2%), Native American (0.4%), Pacific Islander (0.4%), and Undisclosed (4.6%). The survey was completed as follows: participants answered demographic questions on age, gender, nationality, and ethnicity and then chose their favourite celebrity before answering the PSR questions. Specific details of demographic questions can be

found at <https://doi.org/10.17605/OSF.IO/YQGVU>. We did not place any constraints on how participants conceptualised “celebrity”, allowing them to self-determine this status. In each survey question (see details of Measures below), participants were told to substitute the name of their chosen celebrity for “X”. Participants then answered questions assessing their levels of social interaction anxiety, the frequency of their social media use, and their relationship with social media. The survey took the participants roughly 10 minutes to complete.

2.2 Design and measures

A correlational design was used to assess the relationships that social media engagement, social media addiction, and social interaction anxiety hold with the level of PSRs on 4 subscales: *PSF-communication*, *PSF-support*, *PSL-physical*, and *PSL-emotional*.

2.2.1 Parasocial relationships

To examine PSRs, Tukachinsky’s (2010) Multiple-Parasocial Relationship Scale was used. The first of two *PSF* subscales, *PSF-communication*, measures the disclosure and advice-seeking elements of a friendship using items such as, “*Sometimes, I wish I knew what X would do in my situation.*” The second *PSF* subscale, *PSF-support*, focused on important aspects of companionship such as trust, sharing, and mutual help, e.g., “*If I knew X, he/she would be able to count on me in times of need.*” Similarly, *PSL* was separated into two factors: *PSL-physical*, where the participant rated the attractiveness of the celebrity, e.g., “*X fits my ideal standards of physical beauty/handsomeness,*” and *PSL-emotional*, where the participant expresses admiration and/or mood changes associated with the celebrity, e.g., “*For me, X could be the perfect romantic partner.*” All items used Likert scale responses, reporting agreement ranging from 1 “strongly disagree” to 5 “strongly agree”. The Cronbach’s alpha of the subscales of PSR were .84 (*PSF-communication*, 6 items), .91 (*PSF-support*, 7 items), .90 (*PSL-physical*, 4 items), and .90 (*PSL-emotional*, 7 items).

2.2.2 Social interaction anxiety

Mattick and Clarke’s (1998) Social Interaction Anxiety Scale (SIAS) was used to assess fear of general social interaction. The questionnaire includes 20 self-assessment statements rated on a 5-point Likert scale, where 1 indicates “not at all characteristic or true of me” and 5 indicates “extremely characteristic or true of me”. Items include “*I am nervous mixing with people I don’t know well*” and “*I have difficulty making eye contact with others.*” Scores range from 20 to 100, with higher scores indicating more distress when meeting and talking with other people. The social interaction anxiety scale used in the current study was found to be highly reliable (20 items; $\alpha = .95$).

2.2.3 Social media engagement

The frequency of weekly social media use alongside key daily activities was measured using the Social Media Engagement Questionnaire (SMEQ; Przybylski et al., 2013). Example questions include: “*How often did you use social media in the 15 minutes after you woke up?*” and “*How often did you use social media when eating lunch?*” Respondents were asked to indicate how often they use social media on a 7-point scale, ranging from 0 “no days” to 7 “every day”. The SMEQ had 5 items and $\alpha = .90$.

2.2.4 Social media addiction

The short 9-item Social Media Disorder Scale, by van den Eijnden et al. (2016), was used to assess user addiction to social media over the past year ($\alpha = .79$). The survey questions are based on the DSM-5 (Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition) criteria for Internet Gaming Disorder and relate to different areas of addiction. Participants answered yes/no to items, e.g., “*... have you often felt bad when you could not use social media?*” and “*... tried to spend less time on social media but failed?*” Van den Eijnden et al. (2016) suggest a total score of five or more meets the criteria for the diagnosis of a disordered social media user.

3. Results

Data for this study are openly available at <https://doi.org/10.17605/OSF.IO/YQGVU>. The means and standard deviations for each of the PSR subscales, and social interaction anxiety, social media engagement, and social media addiction measures are reported in Table 1, as are correlations between all scales. All scales were normally distributed. All the PSR subscales were intercorrelated. There was support for both hypothesis 1 and 2 as social media engagement and social media addiction were both significantly correlated with all four of the PSR subscales. There was partial support for hypothesis 3 as social interaction anxiety was significantly correlated with both *PSL* subscales, but not *PSF* subscales. Effect size for the correlations was determined using Cohen's (1988) standards for Pearson's correlation coefficient effect size (i.e., small, $r = .1$; medium, $r = .3$; large, $r = .5$).

Table 1. Means and standard deviation and correlations for each measure

	1	2	3	4	5	6	7
Mean	3.30	3.45	3.76	2.49	52.99	17.09	2.09
Standard Deviation	.88	.90	.98	1.06	17.77	10.95	2.22
1. PSF-communication		.59***	.29***	.47**	.05	.17**	.26***
2. PSF-support			.34***	.62***	.03	.17**	.23***
3. PSL-physical				.46***	.11*	.16**	.11*
4. PSL-emotional					.13*	.21**	.40***
5. SIA						.13*	.38***
6. SME							.41***
7. SMA							

Note: PSF = Parasocial Friendship, PSL = Parasocial Love, SIA = Social Interaction Anxiety, SME = Social Media Engagement, SMA = Social Media Addiction, * $p < .05$, ** $p < .01$, *** $p < .001$

Multiple linear regression analyses were conducted for each of the four subscales of PSR to assess the ability of social interaction anxiety, social media engagement, and social media addiction to predict levels of PSRs. Assumptions of linearity, collinearity, and normality of residuals were met. Control variables: age, gender, the gender of celebrity, and whether the gender-matched between the participant and celebrity were entered in Block 1. As only one participant was gender-fluid and one non-binary, gender was not included for these participants as variability was insufficient. Gender was therefore treated as a binary variable. For subscales of parasocial communication, social media engagement and social media addiction were entered in Block 2. Social interaction anxiety, social media engagement and addiction were entered in Block 2 for subscales of *PSL*.

3.1 Parasocial friendship: Communication

Block 1 explained 4.1% of the variance in *PSF-communication*. After the entry of social media engagement and social media addiction, the total variance explained by the final model was 11.9%, $F(6, 236) = 5.120$, $p < .001$, as seen in Table 2. In the final model, only celebrity gender and social media addiction were statistically significant predictors of the *PSF-communication* subscale.

Table 2. Hierarchical multiple regression predicting *PSF-communication* with social media variables, controlling for age, gender, celebrity gender, and participant-celebrity gender match

	R^2	ΔR^2	F_{change}	R^2_{change}	95% CI		
					B	LB	UB
<i>Block 1</i>	.04	.02	2.46	.04			
Age					-.13	-.02	.00
Gender					-.08	-.42	.10
Celebrity Gender					.14	-.01	.49
Gender Match					.01	-.26	.26
<i>Block 2</i>	.12	.10	10.26	.08			
Age					-.09	-.02	.00
Gender					-.09	-.42	.08
Celebrity Gender					.15*	.02	.51
Gender Match					.04	-.32	.19
SME					.07	-.01	.02
SMA					.25***	.05	.15

Note: * = $p < .05$, ** = $p < .01$, *** = $p < .001$

3.2 Parasocial friendship: Support

When examining *PSF-support*, 1.8% of the variance was explained by Block 1. After entry of social media engagement and social media addiction, the total variance explained by the model was 7.2%, $F(6, 236) = 2.317$, $p = .008$, as seen in Table 3. In the final model, only social media addiction was a significant predictor of *PSF-support*.

Table 3. Hierarchical multiple regression predicting *PSF-support* with social media variables, controlling for age, gender, celebrity gender, and participant-celebrity gender match

	R^2	ΔR^2	F_{change}	R^2_{change}	95% CI		
					B	LB	UB
<i>Block 1</i>	.02	.00	1.09	.20			
Age					-.09	-.02	.00
Gender					-.02	-.32	.23
Celebrity Gender					.11	-.61	.46
Gender Match					.11	-.08	.46
<i>Block 2</i>	.12	.10	10.26	.08			
Age					-.06	-.02	.00
Gender					-.03	-.32	.21
Celebrity Gender					.12	-.04	.48
Gender Match					.08	-.13	.40
SME					.09	-.00	.02
SMA					.19**	.02	.13

Note: * = $p < .05$, ** = $p < .01$, *** = $p < .001$

3.3 Parasocial love: Physical

The control variables explained 18.4% of the variance in *PSL-physical*. After the entry of social interaction anxiety, social media engagement, and social media addiction, the total variance explained by the model as a whole was 21.3%, $F(7, 236) = 8.857, p < .001$, as seen in Table 4. In the final model, gender of celebrity, participant-gender match, and social media engagement were significant independent predictors of *PSL-physical*.

Table 4. Hierarchical multiple regression predicting *PSL-physical* with social interaction anxiety and social media variables, controlling for age, gender, celebrity gender, and participant-celebrity gender match

	R^2	ΔR^2	F_{change}	R^2_{change}	95% CI		
					B	LB	UB
<i>Block 1</i>	.18	.17	13.12	.18			
Age					.04	-.01	.01
Gender					.11	-.02	.51
Celebrity Gender					.30***	.33	.84
Gender Match					.37***	.45	.98
<i>Block 2</i>	.21	.19	2.76	.03			
Age					.07	-.01	.02
Gender					.10	-.07	.47
Celebrity Gender					.31***	.35	.86
Gender Match					.36***	.43	.97
SIA					.05	-.00	.01
SME					.15*	.00	.02
SMA					.01	-.05	.07

Note: * = $p < .05$, ** = $p < .01$, *** = $p < .001$

3.4 Parasocial love: Emotional

The control variables explained 6.9% of the variance in *PSL-emotional*. After the entry of social interaction anxiety, social media engagement, and social media addiction, the total variance explained by the model as a whole was 21.2%, $F(7, 236) = 8.822, p < .001$. In the final model, as seen in Table 5, participant-gender match and social media addiction were independent significant predictors of *PSL-emotional*.

Table 5. Hierarchical multiple regression predicting *PSL-emotional* with social interaction anxiety and social media variables, controlling for age, gender, celebrity gender, and participant-celebrity gender match

	R^2	ΔR^2	F_{change}	R^2_{change}	B	95% CI	
						LB	UB
<i>Block 1</i>	.07	.05	4.31	.07			
Age					-.05	-.02	.01
Gender					-.08	-.49	.13
Celebrity Gender					.10	-.09	.52
Gender Match					.31***	.34	.97
<i>Block 2</i>	.21	.18	13.87	.14			
Age					-.01	-.01	.01
Gender					-.08	-.48	.11
Celebrity Gender					.12	.03	.53
Gender Match					.25***	.25	.83
SIA					-.02	-.01	.01
SME					.06	-.01	.02
SMA					.26***	.11	.24

Note: * = $p < .05$, ** = $p < .01$, *** = $p < .001$

4. Discussion

This study examined the relationship between aspects of PSRs, social interaction anxiety, and social media use with real-life celebrities. We considered PSRs as a multifaceted construct to help decipher past conflicting findings, as it has been previously suggested that PSRs mirror day-to-day social relationships (Tukachinsky, 2010). This allows the suggestion that different factors, such as social interaction anxiety, may influence different media effects depending on the PSR type. Both social media use variables were found to correlate with all subscales of PSRs. However, social interaction anxiety was only a correlate of the *PSL* subscale. With regards to our research proposition, subscales of PSI were predicted to some extent by social media engagement, social media addiction, and social interaction anxiety.

Social media addiction was a significant positive predictor of three out of four parasocial subtypes: *PSF-communication*, *PSF-support*, and *PSL-emotional*. There was also a significant positive relationship between social media engagement and all PSR subscales, and social media engagement was a significant predictor of *PSL-physical*. Social interaction anxiety was positively correlated with both *PSL* subscales but neither *PSF* subscale. The differences between the PSR subtypes found in this study provide support for Tukachinsky's (2010) recommendation that PSRs with media personae should be examined similarly to real-life social relationships as they are multidimensional in nature.

Our findings complement previous research on social media engagement and addiction. Social media engagement was significantly correlated with all PSR subscales, in line with Kim et al. (2015), who indicated there was a positive relationship between social networking site use and PSRs with celebrities. Social media engagement was also a significant predictor of *PSL-physical*, in contrast to Phelps (2011), who found the number of hours a day that consumers spent on social networking sites were not predictive of PSRs. However, social media engagement did not predict any other type of PSR. This difference may relate to the subscale of *PSL-physical* being reliant on physical, that is, visual, attractiveness factors of the celebrity. In order to engage with the physicality of a celebrity, it is essential to see them, and so a relationship between engaging in social media and this subscale is developed.

McEwan (2013) examined the maintenance of relationships via the social networking platform Facebook. The behaviour that led to higher friendship satisfaction, closeness, and liking was related to the factor of *caring* (i.e., activities such as engaging via comments). It is reasonable to suggest a similar pattern could be seen in PSRs. Communication is vital in PSRs, as the more active the users are in communication, the stronger the relationship (Rihl & Wegener, 2017). This explains the positive association in current findings between PSR subscales and social media

engagement. Previous research provides further examples of this, for instance, individuals with a greater experience of PSRs may use Twitter to reinforce the existing bond by responding to a post made by a celebrity or starting a conversation (Lee & Jang, 2013). Pennington et al. (2016) demonstrated that users find many creative ways to engage with a celebrity through Twitter engagement. This included tweeting at/back, retweeting, and favouriting using hashtags. Individuals seek out further engagement through these behaviours as they value public acknowledgement of the parasocial connection they feel with a celebrity.

In line with previous findings that suggested PSRs have a positive relationship with social networking site addiction and that longer TV viewing times are linked to stronger PSIs (Greenwood, 2008), our results show that social media addiction was positively correlated to PSRs for every subscale. It has previously been suggested that individuals that highly rely on PSRs are high in loneliness and might be susceptible to social media addiction to escape from their face-to-face relationships (Baek et al., 2013). Moreover, Baek et al. (2014) support the relationship between social networking site addiction and PSI when examining the influence of attachment styles on activities, motives, and consequences of social networking site use. Dismissive social networking site use was orientated towards PSI despite spending less time on social media than other groups. Dismissive users may prefer one-sided relationships as they are likely to isolate themselves. Engaging in PSI using social networking sites was also related to more addictive use of social networking sites. Baek et al. (2014) also found that a higher level of social networking site addiction was associated with social media use for PSI, yet anxious users were more likely to show lower levels of social networking site use. Thus, social media use for PSI/PSR exacerbates social networking site addiction.

Following the uses and gratifications perspective of PSRs, it is proposed that viewers are drawn to PSRs to compensate for absent or problematic real-life social relationships. Social interaction anxiety correlated with both scales of *PSL*. One explanation for this relationship may be through the perceived safety of a non-reciprocated relationship compared to a mutual relationship. Interacting through the media is a non-threatening way for those with social anxiety to achieve their social needs (Greenwood, 2008). Social anxiety is linked with neuroticism, and individuals high in neuroticism are sensitive to rejection (Seidman, 2013). However, rejection is not experienced in a PSR as it is a one-sided relationship. Socially anxious individuals can leave their concerns about potentially unrequited love behind when they access their favourite celebrity through a range of media. It may feel safe for these individuals to have feelings of attraction at a distance (Greenwood, 2008). Social anxiety has been shown to be a mediator of the relationship between attachment and PSRs with disliked television characters (Rosaen & Dibble, 2015). When individuals with highly avoidant attachment were feeling lonely or socially anxious, they were also more likely to engage in negative PSRs. The current study highlights specifically the positive associations between social interaction anxiety and *PSL*, but not *PSF*.

This study addresses a gap in research where PSIs and PSRs have been consistently considered friendship-based (Liebers & Schramm, 2017). As the psychological mechanisms involved in face-to-face and mediated relationships are similar, the differences between *PSL* and friendship may occur in similar ways to social relationships. Hence, it is not surprising that the factors that predicted *PSF-communication*, *PSF-support*, and *PSL-emotional* were different from the factors that predicted *PSL-physical*. Furthermore, both subscales of *PSL* were predicted by the match (or more accurately mismatch) between the participant and celebrity gender. Greenwood and Long (2011) found that there was greater imagined intimacy with different gendered media figures for participants who were single but not for participants who were in relationships. One key implication of our findings is that moving forward, research on PSI may wish to differentiate more clearly between *PSL* and *PSF*, if not differentiating on the basis of emotional/physical. Our results demonstrate how these dimensions are variably related to factors of social anxiety and engagement, and it is important moving forward to consider how other factors linked to PSRs may differ when such relationships are considered multidimensional.

These results support the suggestion that PSRs are multidimensional constructs, and whilst outside the scope of this article, the present data (freely available) may be used to consider this possibility from a methodological perspective. Universal predictors of engaging in PSRs may not be identifiable (Ingram & Luckett, 2019). Different types of PSRs may be underpinned by different theoretical processes (Tukachinsky, 2010). In particular, aspects of physical love, likely linked strongly to attraction, should potentially be considered separately from other aspects of PSRs. Furthermore, we have not considered negative PSRs, that is, situations where characters or media personalities may be disliked but still frequently engaged with by the user, leading to a very different type of PSR (Hartmann et al., 2008; Jennings & Alper, 2016). This negative PSR may be allowed or encouraged to thrive through engagement with social media, and this is an

important and interesting avenue for study.

Our study is limited in that the current sample size does not support the completion of mediated analysis whereby we could assess the relationship of social anxiety to the four subscales of PSR via social media addiction and social media engagement. Future research may wish to obtain a larger sample size to address this problem. It is also possible that additional variables, not under examination, (e.g., attachment, self-esteem, negative affect) moderate the effect of social interaction anxiety in relation to *PSL*, while these variables play a lesser role in the establishment of *PSF*. The study is limited in that our sample is under-representative of the population of different countries. If future research were to gather representative samples from a range of countries, a country-wise comparison could be undertaken. Further, as our snowball sample is drawn from a wide variety of nationalities, we note that different countries make different uses of media. When specifically examining the relationship between media and social media use and PSRs, it may be important to target a more specific sample.

5. Conclusion

The current study examines aspects of communication and media use to provide further evidence on why people form romantic and non-romantic parasocial attachments. In assessing the relationship between dimensions of PSRs and social interaction anxiety, social media engagement, and social media addiction, we have outlined how social media behaviour and social anxiety may affect mediated relationships with real celebrities. The key implication of our findings is that future research on PSI and PSRs should aim to differentiate more clearly between *PSL* and *PSF*. Our results provide support for Tukachinsky's (2010) suggestion that PSRs should be treated as multifaceted. Different types of PSRs are influenced by different media effects. Treating PSRs as multifaceted will allow depth of research into these predictions, as well as the consideration that subtypes of PSRs may be predicted by a variety of factors that differ depending on the personae in question.

Conflict of interest

Authors have no conflict of interest to disclose.

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