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JOURNAL OF PSYCHOSOCIAL RESEARCH ON CYBERSPACE
CYBERPSYCHOLOGY

Degen, J. L., Pistoll, D., Brandmaier, A. M., & Bröning, S. (2025). Where you lead, I will follow: Developing a new measure for studying parasocial involvement with influencers. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace, 19*(3), Article 2. https://doi.org/10.5817/CP2025-3-2

Where You Lead, I Will Follow: Developing a New Measure for Studying Parasocial Involvement With Influencers

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Abstract

Parasocial involvement with influencers (PII) on social media has rapidly increased in recent years. Currently, little is known about the impact of this development, as psychometrically evaluated measurement instruments capturing nuances of PII are lacking. Building on theory and qualitative findings, we developed the 39-item Parasocial Influencer Involvement Scale (PIInS), which shows good internal consistency. It comprises seven subscales empirically substantiated by factor analysis and captures different dimensions of parasocial influencer involvement, such as gratification, self-soothing, identification and loyalty, comparison, self-expansion, social influence, and emotional bonding. A first validation study in a convenience sample of n = 484 individuals participating in an online survey provided preliminary evidence for construct validity. Confirmatory factor analysis (CFA) in a second study with n = 443 participants largely confirmed the structure of the scale found in Study 1. The PIInS was negatively associated with attachment security, relational identity centrality, and self-expansion. Also, parasocial involvement with influencers was positively linked with social identity centrality and empathy in parasocial processing. A multiple regression analysis revealed that attachment anxiety, empathy during parasocial interactions, social identity centrality, and the absence of relational identity centrality had the strongest predictive value for parasocial influencer involvement. These findings point toward potential psychological mechanisms and related risks of parasocial involvement with influencers and emphasize the need for prevention and further research.

Keywords: parasocial involvement; parasociality; social media; influencer–follower relationships; parasocial attachment

Editorial Record

First submission received:
June 15, 2024

Revision received:
February 20, 2025

Accepted for publication:
April 18, 2025

Editor in charge:
Lenka Dedkova

Please note: Article updated on August 4, 2025. A citation error was corrected in this article. The previously listed reference to Liebing, Trepte, & Schwalbe (2022), doi: 10.1007/978-3-031-11287-4_14, has been replaced by the thematically appropriate source: Trepte, Reinecke, & Schäwel (2021). The in-text citation and reference list were updated accordingly.

Introduction

Following influencers on social media has become a habit for many, yet little is known about the psychological meaning of being a follower. Many individuals engage with influencer content daily (Coyne et al, 2019; Kleeberg-Niepage & Degen, 2022). Often, they invest a significant amount of time, attention, and money in engaging on social media. Content shared by influencers on channels such as Instagram or TikTok is designed to appear as personal communication, and its consumption is embedded in their followers' everyday lives. Hence, consuming influencer content can be described as a 'parasocial interaction' or, if it occurs regularly, as a 'parasocial relationship'.

Parasocial interactions are mediated forms of social interactions between a media user and a media figure (Horton & Wohl, 1956). The terminology builds on former research on and conceptualization of fandom toward celebrities (TV, media or sport figures). The rise of social media has revolutionized classical fandom, substantially elevating the frequency, characteristics, mechanisms, and meaning of parasocial interactions. The number of individuals following media figures or internet-celebrities as 'influencers' on social media has sharply increased, especially in emerging adults, and percentages of social media usage have increased from 12% in 2005 to 90% as early as in 2015 (Perrin, 2015). Multiple attempts have been made to explain why emerging adults are strongly drawn toward social media (Boulianne & Theocharis, 2020). Among these explanations are phenomena such as the 'fear of missing out' (FoMo; Elhai et al., 2021; Przybylski et al., 2013) and addiction-like behavior (Al-Samarraie et al., 2022). However, it is probable (and indicated by qualitative insights) that the pseudo-relational quality of follower-influencer relationships (Dibble et al., 2016) distinguishes media use from social media consumption, and that the relational component might play a significant role (Degen, 2023, in press).

At the same time, studies have noted that emerging adults increasingly avoid relational bonding, physical intimacy, and commitment (Seiffge-Krenke, 2022). With numbers of loneliness on the rise (Ernst et al., 2022; Shrum et al., 2023), one could speculate whether parasocial influencer involvement might play a role in such developments (Rosaen & Dibble, 2016). However, little is known about the nature, function, and impact of parasocial involvement with influencers on social media. Most likely, these processes bring new aspects to the study of parasociality. It is here that this study seeks to contribute. Our main research objectives are (1) to develop a psychometrically evaluated comprehensive measurement instrument for parasocial influencer involvement (PII) and (2) to identify mechanisms, facets and potential vulnerabilities of PII in social media followers.

Parasocial Involvement With Influencers on Social Media: Mechanisms and Vulnerabilities

As former media research shows, *parasocial interactions* indeed display features of face-to-face relations (e.g., Schramm & Hartmann, 2008). Similar to social relationships in the physical realm, *parasocial relationships* tend to become stronger with increasing involvement, often culminating in feelings of friendship or romance (Tukachinsky, 2010) and even increasing life satisfaction (Adam & Sizemore, 2013). Influencers on platforms such as Instagram and TikTok provide new, seemingly private content for their followers on an often daily and at least regular basis. Because of this 'unprecedented interactivity' (Yuan & Lou, 2020), it can be argued that the relationship with the influencer carries a strong subjective appearance of privacy. It also comes with the possibility of reaction to content, e.g., by likes, clicks, purchases and messaging, thus suggesting reciprocity. This illusion of intimacy is frequently intensified by financial marketing power, which effectively blurs the boundary between reality and fiction and increases perceived interconnectivity (Abidin, 2015; Degen, in press; Degen & Simpson, 2022).

Parasocial involvement refers to the intensity with which individuals consume influencer content on social media and their involvement with the influencer's account, expressed in activities such as liking, sharing, and commenting on content (Abidin, 2015). The term *parasocial involvement*, subsumes parasocial interactions as well as parasocial relationships. While the term *engagement* is usually conceptualized as limited to the experience as it is occurring; *involvement* can be conceptualized as extending beyond the mere occurrence, also dealing with the viewed content imaginarily in retrospect and/or anticipation of being online again (e.g., Slater et al., 2018). In line with this definition, we use the term "involvement" rather than "engagement" for the research at hand.

Influencer characteristics such as perceived attractiveness, fairness, and authenticity (Yuan & Lou, 2020) are connected with PII. Stein et al. (2022) showed that the mental activation of both parasocial and actual relationships significantly improved participants' moods. This may make PII particularly attractive to persons who struggle to

co-regulate their moods with an intimate partner (Bröning & Wartberg, 2024). Attachment theory (Bowlby, 1979; Bretherton, 1987; Main et al., 1985) posits that early relationship experiences with significant caregivers influence behaviors and skills of relating in adult life (De Wolff & Van Ijzendoorn, 1997; Verhage et al., 2016). Individuals with a secure attachment orientation generally feel safe in close relationships, while attachment insecurity can lead to avoidance of intimacy or anxiety about belonging, rejection, and abandonment. According to compensatory internet use theory (Kardefelt-Winther, 2014), psychological needs for attachment may be compensated or satisfied through the use of social media, especially by persons with insecure attachment styles (Zhang et al., 2022). This may be particularly true for persons with attachment anxiety, who are emphatic and oriented toward relationships but find it hard to feel safe in them.

The addictive potential of media use in general (e.g., Lapierre & Lewis, 2018) can be distinguished from the more subtle, relational functions of PII, such as the social influence exerted by the influencer, identification with the influencer, or emotional bonding. These nuances may be related to further aspects of individual functioning. For instance, they could be influenced by the degree to which an individual's identity is shaped by the acceptance of a social group (= 'social identity centrality' through the promise of gaining social status through following or consuming influencer-promoted products. They could also be related to the degree to which bidirectional close relationships are important to an individual's identity (= 'relational identity centrality'; Ashmore et al., 2004; Cheek et al., 2002). Persons with a high social but low relational identity centrality could be attracted to parasocial relationships through social validation processes. Similarly, self-expansion may be another psychological benefit of parasocial involvement. This model suggests that people are motivated to expand the self by including others in it, thus broadening their self-concept (Aron & Aron, 1986). When this leads to novel, self-expanding activities, well-being increases (Aron et al., 2000; Mattingly & Lewandowski, 2013).

Existing Measures for Parasocial Interactions, Relationships, and Involvement

Most research on parasociality has focused on television personalities or sportsmen (Auter & Palmgreen, 2009; Brown & Bocarnea, 2007; Claessens & Van den Bulck, 2015; Schramm & Hartmann, 2008). After studying users' cognitive, affective, and behavioral responses during exposition to TV media characters with their Parasocial Interaction Process Scales (PSI), Schramm and Wirth (2010, p. 34) conclude that "a socially spirited, empathetic, and open-minded personality of media users seems to boost and intensify parasocial processes".

Claessens and Van den Bulck (2015) demonstrated the situational nature of parasocial interactions using a 13-item measure for assessing parasocial relationships with the subscales 'emotional connection' and 'analogy to social relationships'. It extends to all celebrities and is not limited to TV personalities or sportsmen. Gleason et al. (2017) also studied parasocial relationships, combining several measures to assess the degree of parasocial involvement (with a revised version of the 20-item Parasocial Interaction Scale originally developed by Rubin et al., 1985 for newscasters) through emotional intensity, dedication, and sharing. Balaban et al. (2022) measured parasocial involvement by assessing product involvement, credibility of the influencer, and parasocial relations.

The Present Study

To the authors' knowledge, no existing measure simultaneously captures the diverse and specific dimensions of PII. In addition, most measures were developed for TV and celebrity formats and sometimes adapted to influencers. Consequently, they lack facets of social media involvement, such as the gratifying nature of social media use or its influence on consumer and lifestyle decisions.

To better understand parasocial influencer involvement and parasocial relationships in the context of social media, we developed a scale for parasocial involvement with influencers (PIInS) based on qualitative insights. We tested the scale in a convenience sample of followers, and explored associations of PII and its subscales with relevant constructs such as attachment security. In a second study, we validated the adapted scale by testing the factor structure identified in *Study 1*.

Methods

Deriving Dimensions of Parasocial Influencer Involvement From Theory

Theorizing on parasocial influencer involvement, several dimensions appear relevant on which individuals may differ according to their degree of involvement:

1. *Experience of gratification* by intense use of social media content via feedback mechanisms that operate through the dopamine reward system (Elhai et al., 2021; Hajok & Seiß, 2018; Kuss & Griffiths, 2017).

2. *Social influence* on followers, including persuasive marketing power (e.g., Javed et al., 2021), depends on approachability and perceived trustworthiness. Even though the follower—in theory—is aware that the parasocial relationship is, in many cases, a business-to-customer relationship (Degen & Simpson, 2022), the affective parasocial bond with the influencer can overshadow the follower's rational logic and actions (Degen, 2023, in press).

3. *Identification with the influencer*, i.e., the unconscious integration of their goals, feelings, and perspectives into an individual's self-concept (Trepte et al., 2021), leads to feelings of loyalty toward influencers and their community and behaviors such as blocking and cancelling 'opposing' influencers.

4. Extent of *idealization and comparison*, depending on the emotional valence created by technology/filter-enhanced images (Cug et al., 2022; Zulli, 2017), ultimately leading to transference to the outside world (including altered body perception; Fardouly & Vartanian, 2016).

5. *Emotional bonding*, as frequent content consumption intensifies feelings of continuity, commitment, and connectedness (e.g., Craig et al., 2014). Viewing influencer content can feel relational, especially if displayed in a (seemingly) private context (Schach & Lommatzsch, 2018).

6. Using influencer content for *self-soothing, i.e.*, as a relational surrogate for co-regulation (Stein et al., 2022).

7. Using influencer content for *self-expansion, as* closely watching influencers may offer an opportunity to explore and expand facets of one's personality and identity (Kneidinger-Müller, 2022). Followers may include facets of the influencer in the self to heighten self-esteem (Madison et al., 2016).

Item Development

Items for the PIInS were derived from qualitative data of one author (Degen, 2023, 2024, in press) from theory and existing research. We attempted to capture the facets mentioned above, either by using items from related measures (e.g., Knop's cell phone involvement), or with novel items. This process resulted in 54 items answered on a five-point Likert scale (1 = *not true at all* up to 5 = *fully applicable*).

Study Design and Procedure

Study 1

The PIInS and four related scales (see below) were administered through an online survey (May–August 2023) in a convenience sample of German-speaking participants. We recruited participants via advertisement on several social media platforms linked to the digitalized questionnaire on the EFS Questback platform. We also promoted the study through university mailing lists and flyers and incentivized it with a small gift raffle. Adult users of at least one of the platforms *Instagram* or *TikTok* were eligible to participate after providing informed consent. All questions were mandatory. Completing the questionnaire took about 40 minutes.

Study 2

The adapted 39-items PIInS was administered again through an online survey (February 2024 and November 2024) in a convenience sample of German-speaking participants. We recruited via advertisement on several social media platforms linked to the digitalized questionnaire on the EFS Questback platform. The study was also distributed through university mailing lists and flyers. Adult users of at least one of the platforms *Instagram* or *TikTok* were

eligible to participate after providing informed consent. All questions were mandatory. Completing the questionnaire took about 15 minutes.

Sample

Study 1

The convenience sample consisted of n = 484, among them a percentage of 95.4 % with German nationality. Due to the nature of the topic and the recruiting strategy, the sample was young, with a mean age of M = 25.05 (SD = 6.99). Depending on definition, we ended up recruiting a sample with 70.2 % emerging adults (age 18–25; Arnett, 2000) while, within a broader definition of this phase (age 18–29; Arnett, 2018), 86.6 % of the participants fitted this description. A large portion of the participants (68.3 %) were university bachelor students. Concerning gender, 80.8 % identified as female and 17.1% as male; 0.6 identified as trans, 0.8 % as non-binary, 0.2 % as genderqueer, and 0.4 % as "other". Concerning sexual orientation, 75.6% identified as heterosexual, 11.7 % as bisexual, 4.6 % as pansexual, 3.7 % as queer, 1.5 % as gay, 1.2 % lesbian, 1.2 % as asexual, and 0.5 % as "other".

Asked about their social media use, 97 % of participants in the sample used Instagram as their social media platform, and 37 % used TikTok as well. Only 3 % exclusively used TikTok. Of all participants, only 4 % had met all of the people they were following on social media. About half (48.4 %) had not met in person any, or only a few people they were following. Only 4.6 % of the participants stated that they never felt like they were using social media too much daily. Asked about the nature of their activities on social media, 81.2 % looked at stories, 81.4 % scrolled their feed, 74.0 % "liked" postings, 44.0 % reacted to stories via reaction button, 27.3 % wrote direct messages, 24.8 % clicked on (external) links, 22.9 % participated in surveys, 19.6 % reacted to stories via text, 15.7 % commented on postings, and 8.5 % followed recommended accounts. When comparing "Instagram users only" (n = 234) to participants using both Instagram and TikTok (n = 161), we find that people using only Instagram tend to be older (t_{397} = 5.277, p < .001, M_{age_Insta} = 26.87, M_{age_TikTok} = 23.06) and significantly less parasocially involved (t_{397} = −2.043, p = .038, Cohen's d = 0.33) than participants using Instagram as well as TikTok (we refrained from conducting comparisons with participants using only TikTok because of their small number).

Study 2

A total of n = 443 participants from a convenience sample completed the questionnaire, among them a percentage of 94.9 % with German nationality. The sample was, again, young, with a mean age of M = 21.14 (SD = 2.92). We recruited a sample with 93.7 % emerging adults (age 18–25; Arnett, 2000) or, within a broader definition of this phase (age 18–29; Arnett, 2018), 98.0 %, respectively. Most participants (98.2 %) were university bachelor students. Regarding gender, 82.8 % identified as female, 16 % as male, 0.5 % as trans, 0.2 % as non-binary, 0.5 % as genderqueer. Regarding their social media use, 84.9 % of participants in the sample used Instagram as their social media platform, of which 47.0 % used TikTok as well. Only1.8 % exclusively used TikTok. When comparing "Instagram users only" (n = 168) to participants using both, Instagram and TikTok (n = 208), we find that people using only Instagram again tend to be older (t_{375} =2.992, p = .003, M_{age_Insta} = 21.45, M_{age_TikTok} = 20.60). In this sample however, we do not find significantly different scores on the PIInS (t_{375} = 0.318, p = .750).

Study Materials

To explore associations with relevant psychosocial constructs, we employed the following measures (*Study 1*):

Attachment: ECR-RD—Experiences in Close Relationships-Revised

We used the German version of a well-tested and widely used 36-item self-report questionnaire (Brennan et al., 1998) to assess dimensional aspects of attachment orientations in close relationships (Ehrenthal et al., 2008). Low scores on both subscales indicate attachment security, while high values reflect high attachment insecurity. Cronbach's Alpha and McDonald's Omega for both attachment-related avoidance (α = .929, ω = .932) as well as attachment-related anxiety (α = .932, ω = .930) was very high.

Self-Expansion: SEPS—Self-Expansion Preference Scale

The motivation for self-expansion was measured through a 24-item scale (Hughes et al., 2020), measuring increase in self-concept or self-conservation Cronbach's Alpha as well as McDonald's Omega was high for both the self-expander scale (α = .899, ω = .891) and the self-conserver scale (α = .819, ω = .804).

Social and Relational Identity Centrality: AIQ-IV

Aspects of Identity Questionnaire-IV measures four facets of identity centrality (Cheek et al., 2002), of which two were included in the present study (relational and social identity, 10 vs. 7 items). Participants rated each item on a 5-point rating scale, ranging from 1 (*not important to my sense of who I am*) to 5 (*extremely important to my sense of who I am*). In the current study, Cronbach's Alpha as well as McDonald's Omega was high for both the relational identity scale (α = .880, ω = .877) and the social identity scale (α = .864, ω = .866).

Empathy and Antipathy During Parasocial Processing: PSI Process Scales

Two subscales from the affective parasocial interaction section (Empathy and Antipathy; 8 items each, Schramm & Hartmann, 2019,) were included in the current study. Participants rated each item on a five-point rating scale ranging from 1 (*not at all true*) to 5 (*completely true*), replacing the word "personae" with "influencers" for each item. Higher values on the subscales indicated higher empathy or antipathy. Both subscales showed acceptable Cronbach's Alpha and McDonald's Omega scores (Antipathy: α = .662, ω = .665; Empathy: α = .650, ω = .640).

In Study 2, we employed the adapted 39-item PIInS in addition to socio-demographic variables as well as variables concerning social media use.

Analysis

Study 1: We checked internal consistency for each of the seven subscales and computed multiple exploratory factor analyses separately. One factor analysis included all items, and one excluded those items that resulted in poor internal consistency scores for the original scales. Factor analysis with the excluded items version, for which we used principal components extraction and varimax rotation to interpret the factor loadings, yielded more comprehensible results. Next, we ran a confirmatory factor analysis on the scale which led to modifications in the structure of the scale. To investigate and possibly identify interaction effects with sex and/or age, we then computed Pearson correlations and ANOVAs for pre-analyzing the newly formed subscales with some of the socio-demographic data of the sample. Next, we computed Pearson correlations and conducted two multiple regression analyses with associated constructs for the subscales as well as the total score to draw conclusions for convergent validity of the measure.

Study 2: For the second sample, we computed confirmatory factor analyses (CFA) using a structural equation modeling approach to test the seven-factor structure of the adapted 39-item PIInS. Fit indices were then employed to assess the fit of the seven-factor model for the empirical data of the second sample and model modification indices to explore potential weaknesses and improvements of the factor structure.

All analyses of data in *Study 1* were exploratory, analyses of data in *Study 2* were confirmatory with an exploratory follow-up. We used IBM SPSS Statistics 27 for all data analyses in *Study 1* and the lavaan package (Rosseel, 2012) in the statistical computing environment R (R Core Team, 2022).

Results

Parasocial Influencer Involvement Scale (PIInS): Study 1

Internal consistency was measured with Cronbach's Alpha as well as McDonald's Omega for all subscales of the measure. The PIInS scale was optimized for homogeneity: Some items that did not have satisfactory discriminatory power were removed from the initial version of the PIInS due to poor internal consistency values for the overall scale. The remaining items showed a satisfactory internal consistency with Cronbach's α ranging from .728 to .833,

and McDonald's Omega (ω) ranging from .723 to .829 for the final version of the measure on the respective subscales (see Table 1). The internal consistency for the total score was high with α = .930 and ω = .923.

Table 1. *Factor Loadings and Internal Consistency for the PIInS Items and Subscales (Study 1).*

Item (new)	Original Subscale	1	2	3	4	5	6	7
		S-S α = .714	SMER α = .733 ω = .734	I-IL α = .762 ω= .722	I-SEV α = .734 ω = .723	I-EB α = .834 ω = .829	I-RMC α = .752 ω = .748	I-SI α = .797 ω = .773
2 (18)	1	.519						
3 (19)	1	.531						
4 (31)	1							.545
6 (1)	2		.448					
8 (2)	2		.430					
11 (3)	2		.585					
12 (4)	2		.637					
13 (5)	2		.530					
14 (12)	3				.368			
15 (13)	3				.539			
17 (6)	3			.494				
18 (7)	3			.610				
19 (8)	3			.474				
20 (9)	4			.629				
21 (10)	4			.580				
22 (14)	4				.594			
23 (15)	4				.603			
24 11)	4			.611				
25 (16)	4				.509			
26 (17)	4				.582			
28 (32)	4							.601
29 (33)	4							.604
30 (34)	4							.562
31 (35)	4							.623
33 (36)	5							.594
37 (37)	5							.491
38 (38)	5							.368
39 (39)	5							.480
41 (20)	6					.622		
42 (21)	6					.648		
44 (22)	6					.607		
45 (23)	6					.644		
46 (24)	6					.656		
47 (25)	6						.478	
48 (26)	6						.623	
49 (27)	7						.459	
50 (28)	7						.590	
51 (29)	7						.464	
53 (30)	7						.459	

Note. Numbers of items on the left refer to the old 53-item PIInS version, while the numbers in brackets refer to the new 39-items PIInS; S-S = Self-soothing; SMER = Social Media as Enrichment and Reward; I-IL = Influencer—Identification and Loyalty; I-SEV = Influencer—Self-expansion and Validation; I-EB = Influencer—Emotional Bond; I-RMC = Influencer—Role Model and Comparison; I-SI = Influencer—Social Influence; ω = McDonald's Omega; α = Cronbach's Alpha standardized.

Table 2. *Variance Explained by PIInS Factors (Study 1).*

Component	Total	% of variance	Accumulated % of variance
3 (I-SI)	10.820	27.744	27.744
5 (I-EB)	2.559	6.561	34.305
2 (I-IL)	2.156	5.528	39.833
7 (I-RMC)	1.544	3.960	43.792
1 (SMER)	1.323	3.391	47.183
6 (I-SEV)	1.295	3.322	50.505
4 (S-S)	1.192	3.056	53.561

Note. KMO statistic = .916; Bartlett's test of Sphericity (χ^2 = 7354.717, p < .001).

Indicators showed that the data were suitable for factor analyses (i.e., Bartlett's test of Sphericity; χ^2 = 7354.717, p < .001). An exploratory factor analysis (EFA) was conducted to construct a parasocial influencer involvement scale on the basis of resulting factor loadings (Churchill, 1979). Principal components extraction and varimax rotation were used to interpret the factor loadings (Haws et al., 2010). Items with factor loadings below .30 were removed. This process reduced the 54 items into a 39-item measure. There were nine eigenvalues larger than 1 (> 2.64, the first component being the total score with 27.74 %). However, in the solution with eight factors, one of the components loaded only on a single item. A seven-factor solution was therefore preferred. Among the remaining items, the lowest factor loading was calculated to be .368, whereas the highest was .656. The seven-factor solution accounted for 53.56 % of the overall variance, as seen in Table 2. The rotated factor loadings larger than .30, as well as the approximate boundary for significance level .01 (Stevens, 2001), are presented in Table 1.

The items comprising these new factors are presented in Table 1. Except for the second factor, the observed structure for the PIInS is somewhat different from our original theorizing (as will be discussed later on), but still captures the dimensions proposed in section 3.1. Subscales were labeled in an inductive process taking current theory into account, and attempting to match the latent commonalities for each subscale. The first factor (items 2 and 3) comprises the subscale *self-soothing (S-S)*; example item: *Influencer content can soothe me.* The second factor consists of five items (items 6, 8, 11, 12 and 13) and comprises the subscale *social media as enrichment and reward (SMER)*; example item: *Social media use is interesting and inspiring*. The third factor consists of six items (items 17, 18, 19, 20, 21 and 24) and comprises the subscale *influencer identification and loyalty (I-IL)*; example item: *It says something about me whom I choose to follow*. The fourth factor comprises six items (items 14, 15, 22, 23, 25 and 26) and the fourth subscale was termed *influencer self-expansion and validation (SEV);* example item: *I buy or would like to buy products that my influencers recommend*. The fifth factor comprises five items (items 41, 42, 44, 45 and 46) and forms the subscale *influencer emotional bond (I-EB)*; example item: *When my influencers are sad or in crisis, it makes me sad, too*. The sixth factor comprises 6 items (items 47, 48, 49, 50, 51 and 53) and makes up the subscale *influencer—role model and comparison (I-RMC)*; example item: *I envy the job/life and opportunities of an influencer*. Lastly, the seventh factor, comprising nine items (items 4, 28, 29, 30, 31, 33, 37, 38 and 39) forms the subscale *influencer—social influence (I-SI)*; example item: *In some situations, I wonder what the influencer would do*. Explained variance varied between the subscales. The dimension of *Identification and Loyalty* accounted for approx. 28%, followed by *Emotional Bonding* (6%) and *Reward* (5%). The other factors each explained 3-4% of the overall variance (see Table 1). Indicators showed that the data was suitable for factor analyses (*KMO* = .822; Bartlett's test of Sphericity; χ^2 = 2593.772, p < .001).

Confirmation of Factor Structure (Study 2)

We evaluated the factor structure of the PIInS-39 with a confirmatory factor analysis, which was implemented as a structural equation model using lavaan (Rosseel, 2012) and the R programming language (R Core Team, 2022). We fitted the model using weighted least-squares estimation for robustness. To adjudge model fit, standardized root mean squared residuals (SRMR), root mean squared error of approximation (RMSEA), and comparative fit index (CFI) were computed. There are different heuristic decision rules for adjudging model fit in CFA models. Here, we use the rules by Hu and Bentler (1999). For acceptable model fit, SRMR ≤ .08, RMSEA ≤ .08, CFI ≥ .90. For excellent model fit, the threshold was set at SRMR ≤ .5, RMSEA ≤ .5, CFI ≥ .95. The initial model fit of the PIINS-39 on the second data set yielded no satisfactory fit: CFI = .840, RMSEA = .098, SRMR = .107. Explained variance in the items ranged from 19.0% to 83.7%. The lowest variance explained was in Items 8, 13, and 39 (all below 22%), which thus seem to be somewhat problematic in this sample. Visual inspection of the residual matrix showed strongest

absolute residual correlations of Item #11 with Items #3 and #13, as well as Item #29 with #8 and #11 and #8 with #3. Model modification indices were computed to explore possible improvements of the factor model. Among the top ten suggested model modifications were four additional cross-loadings of item #8 (factors: I-RMC, SMER, S-S, SEV) and three additional cross-loadings of item #13 (factors: I-IL, I-RMC, I-SI) as well as an additional residual correlation of item #13 and item #11. Thus, we decided to remove items #8 and items #13 because the suggested cross-loading hints at very little specificity of the items and because of their poor explained variance values. In a second model modification step, several cross-loadings for item #39 were proposed, so—consistent with the first model modification—we also removed this item instead of adding multiple cross-loadings. The resulting model had largely acceptable fit according to RMSEA = .074, CFI= .909, and SRMR = .088. Because extensive model modifications have a danger of overfitting at the cost of generalization, we decided to not take any further model modification steps. To further explore the dimensionality of parasocial influencer involvement with the second dataset, an additional exploratory factor analysis was run allowing for an additional factor. This analysis corroborated the hypothesized factor and loading structures of all seven original factors with the following deviations: I-IL did not load on item #8 but on item #13 and item 39 (these are again the three items we excluded via model modification before). The eighth factor, which we now allowed for loaded on items #6 and #8, which can also be interpreted as merely a residual correlation instead of necessarily constituting an additional factor. In conclusion, we have reason to believe that despite initially unsatisfactory fit values, overall, the factor structure is acceptable, whereas items #8, #13, #39 are potentially problematic.

Next, a multi-group CFA was conducted to assess measurement invariance. We specified a configural model with unconstrained factor loadings and intercepts across groups, a model with weak invariance with equality constraints on the factor loadings across groups, and a model with strong invariance with equality constraints on both factor loadings and intercepts across groups. To determine whether invariance holds, we compared CFIs between successive levels of invariance. In accordance with the heuristic proposed by Cheung and Rensvold (2002), we concluded that measurement invariance sufficiently holds when the loss of fit in CFI was smaller than .01 when introducing additional constraints. First, measurement invariance according to gender was tested. The configural model had overall model fit slightly better than the baseline model including all items (CFI = .857, RMSEA = .093, SRMR = .110). The change in CFI from the configural to the weak model was smaller than .1. The change in CFI from the weak to the strong model was smaller than 0.1. We conclude that measurement invariance holds across gender. Second, measurement invariance according to TikTok use was tested. The configural model again had overall model fit slightly better than the baseline model including all items (CFI = .866, RMSEA = .090, SRMR = .108). The change in CFI from the configural to the weak model was smaller than .1. The change in CFI from the weak to the strong model was smaller than .1. We conclude that measurement invariance holds across TikTok users and non-TikTok users.

Construct Validity and Associations With Other Measures (Study 1)

Sociodemographic analysis of the data revealed that two of the subscales of the PIInS measure were somewhat negatively correlated with age (Self-soothing: r = .154, p < .001; Influencer—Role Model and Comparison: r = .192, p < .001); younger participants seemed to be more involved in the parasocial sphere for reasons of self-soothing and comparison. Further analyses with gender, as well as sexual orientation, did not yield significant correlations, which might partly be due to unevenly distributed group sizes in the sample.

Next, we computed Pearson correlations for the total score of the PIInS (M = 1.99, SD = 0.53) with associated constructs (for a detailed overview, see Appendix). We found that both dimensions of the ECR-RD—BANG (M = 2.99, SD =1.23) and BVER (M = 2.51, SD = 1.11)—correlated significantly with the total PIInS score. Higher attachment insecurity was positively associated with higher parasocial influencer involvement for both attachment-related anxiety (BANG; r = .313, p <.001) and attachment-related avoidance (BVER; r = .193, p < .001). The two subscales of the AIQ-IV showed diverging correlations: For Social Identity Centrality (M = 23.95, SD = 5.03), there was a significant positive association with the total score of the PIInS scale (r = .237, p < .001), while Relational Identity Centrality (M = 43.03, SD = 5.18) correlated negatively with the scale's total score (r = −.082, p = .047); participants indicating that it was not very important to them to build and maintain meaningful relationships in the analog world, were more parasocially involved. The importance for self-expansion (SEPS; M = 4.51, SD = 0.71) was negatively correlated with PII (r = −.160, p < .001). Concerning parasocial processing, only one of the PSI process subscales (Empathy; M = 2.65, SD = 0.57) was positively associated with the total score of the PIInS

(r = .411, p < .001), whereas the Antipathy subscale (M = 2.30, SD = 0.61) did not show a significant association with the scale (r = .012, p = .792).

Finally, we ran a multiple regression with all constructs for the PIInS total score to examine the multivariate relationships among all other constructs and PIInS in a joint analysis. The regression was significant (R^2_{korr} = .297; p <.001). Significant predictors for parasocial influencer involvement (see Table 3) were attachment anxiety (ECR-BANG, p < .001), PSI Empathy (p <.001), Social Identity Centrality (AIQ-Social, p <.001), and (negatively associated) Relational Identity Centrality (AIQ-Relational, p = .009).

Table 3. *Multivariable Analysis: Linear Regression With PIInS Total Score Being the Dependent Variable (Study 1).*

Variable	Unstandardized estimate	Standardized estimate	*p*
ECR-BANG	.114	.259	< .001
ECR-BVER	−.016	−.034	.487
PSI-Empathy	.367	.384	< .001
PSI-Antipathy	−.031	−.035	.385
AIQ-Social	.020	.186	< .001
AIQ-Relational	−.012	−.117	.009
SEPS	−.058	−.076	.057

Note. $R^2_{adjusted}$ = .297; F = 28.791,

Discussion

Parasocial involvement with influencers on social media has rapidly increased in the last years. To date, there has been some explorative theory building regarding mechanisms and meanings of this development, but no empirical testing. Parasocial relationships with influencers share some similarities to parasocial relationships with celebrities or TV figures, as described by earlier research. They also show marked differences in such relationships, for instance, regarding frequency and form of consumption, illusionary intimacy, consumer-marketing orientation, and the (presumed) possibility of reciprocal communication. The nuances of these aspects have been qualitatively explored (e.g., Abidin, 2015), but not empirically tested in a quantitative sample thus far. We developed the Parasocial Influencer Involvement Scale (PIInS) from a theoretical analysis of these nuances and in-depth qualitative data (Degen, 2023, in press). After eliminating 15 original items, the remaining 39 items show good internal consistency. Seven theoretically derived subscales were empirically determined by factor analysis. They capture different dimensions of parasocial influencer involvement. A first validation study using a convenience sample with 484 individuals participating in an online survey provided preliminary evidence for construct validity. A second study with an independent sample confirmed a good fit for the seven-factor structure model of the adapted 39-item PIInS. The PIInS and its subscales were negatively associated with attachment security, relational identity centrality, and self-expansion. Parasocial influencer involvement was positively linked with social identity centrality and empathy in parasocial processing. In a multiple regression analysis, attachment anxiety, empathy in parasocial interactions, social identity centrality, and the absence of relational identity centrality showed the strongest predictive value for parasocial influencer involvement. In the following, we discuss these findings in the light of existing theory and research and conclude future studies of parasocial influencer involvement.

Unpacking the Dimensions of Parasocial Influencer Involvement

Parasocial influencer involvement is a multi-faceted construct with seven dimensions. *(1) Self-soothing:* Influencer content helps users calm down and feel better after a relationship conflict. *(2) Social media as enrichment and reward:* Social media content is perceived as interesting, inspiring, enjoyable, and important. *(3) Identification and loyalty:* Users demonstrate their loyalty toward specific influencers by rejecting people loyal to opposing influencers or unfollowing them. They base life decisions on the model of their influencers and feel that their following specific influencers say something about their lifestyle and taste. *(4) Self-expansion and validation:* Followers feel validated when they own garments or other items owned by their influencers and consult their content for buying decisions, refer to their influencers' opinions to validate their opinions in conversation, and desire validation by influencers. *(5) Role model and comparison:* Followers compare themselves with their influencers, mimicking their lifestyle and looks, feeling competition, envy, or the need to be better, and imagining

what they would have done in certain situations. *(6) Emotional bonding:* Followers experience empathy with their influencers when they are sad or in crisis, worry about their well-being, miss them when they have not posted for a while, and worry about them changing content or abandoning their accounts. *(7) Social influence:* Followers view influencers as part of their social life and treat them that way by thinking or talking about them like friends, or getting annoyed when something changes in their behavior, style and content. They occasionally prefer and prioritize consuming their content to real-life interactions with friends and romantic partners. They connect with other followers building community and monitor and engage in the mood in the follower community. There were differences in the amount of variance explained by the subscales, and we discuss the three factors with the highest impact first. The strong explanatory power of *identification and loyalty* points to the fundamental need of belonging (Baumeister & Leary, 1995; Leary & Kelly, 2009; Maslow, 1954; Ryan & Deci, 2000). Belonging can be defined as a subjective feeling that one is an integral part of their surrounding systems, including family, friends, school, work environments, communities, cultural groups, and physical places (Allen et al., 2021; Hagerty et al., 1992). Influencer communities and identification with influencers may provide opportunities and perceptions of belonging through predictable and agreeable lifestyle, actions, and choices. While this has been discussed in the context of queer role models (Gomillion & Giuliano, 2011; Li, 2021), it may apply to following influencers in general, as the findings indicate. Recent research (Iannone et al., 2018) ties in with this line of argumentation. It showed that individuals demonstrating a high need of belonging while also experiencing chronic ostracism use Twitter more to engage in parasocial relationships, possibly satisfying unmet needs in the physical world.

Emotional bonding has been described as part of the pseudo-relational quality of parasocial relationships (Abidin, 2015; Degen, 2023, 2024, in press; Dibble et al., 2016), where a sense of intimacy and connectedness can emerge (Bond, 2021; Sokolova & Kefi, 2020) during and after parasocial processing. The latter manifests in different forms, such as rising interest in a persona, intensive thoughts and deliberations, and/or inner dialogue with the persona. Parasocial processing can result in (subjective, illusory) feelings of reciprocity (Schramm & Hartmann, 2008), which were described as 'paracommunication' by Horton and Strauss (1957) and as 'perceived interconnectedness' by Abidin (2015) in the context of Instagram. This may lead to a supplementing or even substituting function of parasocial relationships (Madison et al., 2016; Rosaen & Dibble, 2016), especially in the case of loneliness (Hartmann, 2004).

Enrichment and reward for social media use: Consumers unconsciously expect a neurochemical reward by checking for new influencer content (Burhan & Moradzadeh, 2020). Parasocial bonding may exacerbate this effect and strengthen it over time. Their rewarding character may offer regulative opportunities for *self-soothing* by alleviating tension and nervousness and elevating mood (Tukachinsky et al., 2020; Stein et al., 2022). Newly published content daily represents a habitual, secure point of reference. Influencers can be chosen based on past experiences of positive mood enhancement (Schramm & Wirth, 2006).

Social influence may also be intensified through positive affect. Degen (2023, in press) observed differences in identification and the sense of fiction versus reality toward influencers. Through the inaccuracy of the human mind (Kruglanski, 1989; Kruglanski & Ajzen, 1983). positive feelings toward influencers may foster cognitive processes such as confirmation biases, halo effects, and projections toward influencers. Balaban et al. (2022) reported similar effects on influencers' credibility, leading to increased purchasing intentions. Influencer images and the positive feelings associated with them and their projective character may create idealized notions of the influencers, who are then viewed as *role models and as vantage points for comparison*.

While these reflections on the empirical subscales are rather close to the theorizing (see above), interestingly, the subscale *self-expansion and validation* has a slightly different nuance. We had expected self-expansion, conceptualized as the 'inclusion of other in self' (Aron & Aron, 1986) to be expressed through integration into personal life, yet the self-constructed items aiming in this direction; for example: *I would describe my influencers as trusted friends*; *The values and political attitudes of my influencers are also important to me*; *I integrate my influencer accounts into my social life, e.g., by sharing content (memes) with friends and family*; *I enjoy being active online with friends or romantic partners at the same time;* were excluded due to their lower explanatory power. Instead, items converged that had a high focus on *validation*. Validation may be especially important for users of influencer content because they may mirror the behavior of their role models through self-objectification behavior on social media. This exposure to others' judgment while comparing oneself to the filtered, marketing-enhanced appearance of influencers could increase the need for validation, making self-expansion and uniqueness less desirable.

Correlates of Parasocial Influencer Involvement

Higher levels of PII were associated with higher *attachment insecurity*. Attachment insecurity is associated with lower levels of relationship satisfaction and negative perceptions toward partners' behavior (Bröning & Wartberg, 2022; Mikulincer & Shaver, 2007; Molero et al., 2017), and may obstruct the forging of meaningful connections for emerging adults. Parasocial relationships can provide a surrogate subjective sense of belonging (Knowles, 2013). Attachment anxiety was connected with PII, while relational centrality, i.e., the importance of meaningful real-world connections, was negatively associated with PII. Other studies also found that attachment anxiety was associated with parasocial interaction or relationships (Gleason et al., 2017; MacNeill & DiTommaso, 2022; Rosaen & Dibble, 2016). Silver and Slater (2019) and Cohen (2004) found a connection between both attachment anxiety and avoidance in parasocial relationships. Higher levels of empathy during parasocial processing were associated with higher PII in this study. Among others, Scherer et al. (2022) also found that empathy was positively related to self-identifying as having a parasocial relationship with a celebrity and being committed to it.

Finally, PII increased with the importance of *social validation*. Social validation sought in influencers appears as a two-edged sword. Liebers and Schramm (2019) state that identification with media figures can result in higher assertiveness and self-efficacy, better coping, and better connectedness. However, social comparison theory posits that a predisposition to engage in social comparisons may be an underlying mechanism for vulnerability, leading to dissatisfaction (e.g., Rounsefell et al., 2019). The need for social validation through comparison ties in with the fact that PII was negatively associated with a preference for self-expansion in the study. The self-expansion scale consists of items focusing on broadening personal experience, while enjoying the stability of familiarity and routine is viewed as less expansive. As social risk-taking could threaten social validation, it makes sense that these needs are negatively linked. Therefore, while followers may include their influencers in their self (Aron & Aron, 1986), this lacks components of novelty associated with self-expansion, and is more related to external reassurance.

Implications and Future Research Directions

In postmodern times, many people struggle to feel a sense of belonging (Degen, 2024; Johanssen, 2018; Plesa, 2024). Socially, a significant percentage of the population suffers from social isolation, loneliness, and a lack of connection to others (Anderson & Thayer, 2018) with internet usage being a risk factor (Shrum et al., 2022). While the COVID-19 pandemic has magnified these problems, deeper causes of social disconnection in Western countries have been proposed (Ernst et al., 2022) such as social mobility, shifts in technology, volatile family and community structures, and the pace of modern life (Baumeister & Robson, 2021; O'Doherty et al., 2019; Schraube, 2024). In the study, being a "loyal follower" of an influencer was especially salient, and a high degree of such involvement was associated with psychological vulnerability. The findings provide preliminary evidence that a heavily involved parasocial follower is anxious regarding attachments, reports high levels of empathy when scrolling, craves social validation, and does not find real-life relationships particularly relevant to their identity.

Most of the participants were emerging adults. Emerging adulthood is a prolonged phase of identity and intimacy building (Arnett, 2000, 2015). Some researchers have argued that parasocial involvement, online dating, and prolonged digital dwelling may undermine the formation of meaningful, intimate connections in the physical world (Seiffge-Krenke, 2022). Today's emerging adults appear much less likely to engage in serious, long-lasting dating relationships than earlier generations (James-Kangal & Whitton, 2019). Parasocial relationships may be part of why facing the developmental tasks of forming romantic attachments and strong social connections is increasingly avoided. They seemingly offer advantages compared to offline-world relationships: conflict does not arise, nor is the risk run that human imperfection could replace the medially exaggerated romantic love ideal. Affectionate feelings toward an influencer may be fostered by neural rewards, and become a tool for lightening one's mood. Thus, the factors *emotional bonding, self-soothing* and *enrichment/reward* appear intertwined and boost each other through positive affect. Choosing one's own influencer "bubble" offers the opportunity to build a self-referential, predictable digital "nest" while avoiding difficult topics or opinions that confront own attitudes or require engagement and responsibility.

These developments in relational behavior have potential consequences for later stages of life, the relational self (intra-subjective) and resulting social dynamics (intersubjective in relationships and society). Short-term benefits through digital self-soothing do not improve the causes for negative mood, and may have strong implications for the relational self (Gergen, 2009), with individuals attempting to position themselves in virtual reality, while

comparing themselves with fictional commodified (and optimized) others. Vulnerable individuals may increasingly view themselves only as valuable as one in a great number of others, not worthwhile of a reciprocal and equal interaction. This may finally result in practical life consequences, ranging from increasing plastic-surgery numbers, behavior-oriented at virtual filters (Atiyeh et al., 2021); dissatisfaction with time spent and academic success (Kleeberg-Niepage & Degen, 2022) and health (Sampasa-Kanyinga et al., 2020). In sum, while having short-term validating effects, high PII may be a source of decreased self-esteem in the long run (Hoffner & Bond, 2022; Midgley et al., 2021).

Adding to this, substituting actual with parasocial relationships in emerging adulthood may lead to increased difficulties in building or maintaining relationships through a lack of social and communicative skills and habitual learning. Phenomena like 'ghosting' a romantic partner after relationship termination (Le Febvre et al., 2019) suggest that confrontation is becoming increasingly difficult on a personal level. PII can create interference and lead to frustrating relational experiences in real life and increased loneliness. On a societal level, censorship of different opinions may obstruct critical thinking and promote polarization and negative stereotypes (e.g., between genders; Tandoc et al., 2022). The resulting increase in attachment insecurity may impair individual and joint coping with stress (Bröning & Wartberg, 2022, 2024).

Future research should explore long-term causes, causalities, and consequences of degrees of parasocial influencer involvement and its facets. Studying the fluctuation of their parasocial involvement over time could shed light on high- and low-risk groups about psychological vulnerability. This information is valuable for providing targeted preventive measures for some users while not ignoring the positive aspects of parasocial content for other users. Preventive measures should focus on reinstating the value and promise of face-to-face interaction—to 'be seen' remains a basic human source of belonging, validation, and comfort.

Limitations and Strengths

Our research adds to the unfolding knowledge regarding parasocial interactions: it captures facets of the subjective meaning of PII. However, the results are preliminary and of exploratory nature. Given the number of strong correlations, the study may have been overpowered. The structure of the measure needs to be replicated and validated by further analyses regarding the dimensions of the scale and the level of scale. As the current study explores the data of a convenience sample, different samples in future research need to be employed that more closely target sub-populations, such as minors or emerging adults. A large body of research regarding parasocial relationships is based on convenience college samples, as is our study. As such, one future objective is to employ the PIInS to different socio-demographic milieus to gather a broader understanding of potential differences regarding parasocial influencer involvement. This will result in a more nuanced picture of the link between the phase of emerging adulthood and the meaning and intensity of parasocial influencer involvement in young persons' lives. The main platform used (Instagram versus TikTok) may also influence the nature of parasocial relationships because TikTok is less characterized by defined "core influencers," and other content is more aggressively suggested by the algorithm. Depending on the sample, this may lead to different results on the PIInS scale.

The cross-sectional nature of the studies makes it impossible to verify causality regarding the impact of parasocial influencer involvement. Future research should employ longitudinal designs to shed more light on this. Also, we used self-reports and did not employ observational measures, experimental designs, or other ways of assessing implicit and subconscious aspects of attachment orientations. This might be problematic because attachment orientations bias perception and self-judgment. Especially avoidant orientations tend to answer on a rather general positive level. Actual levels of technology use were not captured and cannot be adequately measured by self-report. Future research should include other measures, such as the Adult Attachment Interview, or experimental measures to validate phenomena such as attachment insecurity or aspects of the new PIInS, such as self-soothing.

Although we chose a comprehensive approach and a broad array of scales to measure external validity, we may have failed to capture some facets of meaning. For instance, the self-expansion scales focus on self-actualization in novelty-seeking and risk-taking and less on 'inclusion into self'.

Conclusion

Research on PII is relevant, as following influencers on social media has become habitual for many individuals. Thus far, marketing psychology has dominated the field. The striking inequality between an influencer and the individual follower mandates a critical reflection of social media consumption on a personal and societal level. While qualitative data suggested that PII bears great significance for followers and may be linked to psychological vulnerability, this research was the first to demonstrate these associations with quantitative data. The PIInS contributes to adapting perspectives on parasocial relationships from former conceptualizations of fandom to social media, where they are contemporarily dominantly located.

Further studies using PIInS with different and more representative populations are needed to replicate and extend these findings. PII. Mental health practitioners should explore the extent and meaning of vulnerable young persons' parasocial relationships. These may be motivated by different needs, such as self-soothing, reward, identity-building, validation, orientation, emotional bonding, and social connection. Depending on the motivation at hand,short-term rewards may be outweighed by developmental risks for real-life relating. Policy-makers are called upon to invest in early education and prevention to increase awareness of consumption-shaped influencer behavior in youth, teachers, and caregivers.

Conflict of Interest

The authors have no conflicts of interest to declare.

Use of AI Services

The authors declare they have not used any AI services to generate or edit any part of the manuscript or data.

Authors' Contribution

Johanna L. Degen: conceptualization, data curation, investigation, resources, supervision, writing—original draft, writing—review and editing. **Diana Pistoll:** data curation, formal analysis, investigation, methodology, writing—original draft. **Andreas M. Brandmaier:** methodology, formal analysis, writing—review and editing. **Sonja Bröning:** conceptualization, data curation, formal analysis, investigation, supervision, validation, writing—original draft, writing—review and editing.

Acknowledgement

We want to thank our participants and bachelor/master thesis students for their valuable support.

Data Availability

The R code for the confirmatory factor analysis is available for download at https://osf.io/h5zf2/.

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Appendix

Table A1. *Means (SD) of PIInS for Items (Study 1).*

Item	*M*	*SD*
Item 2	2.00	1.12
Item 3	2.67	1.19
Item 4	1.62	0.92
Item 6	3.32	0.90
Item 8	3.04	1.13
Item 11	3.57	0.88
Item 12	2.85	0.98
Item 13	1.91	0.95
Item 14	1.90	1.11
Item 15	1.89	1.06
Item 17	3.07	1.29
Item 18	1.38	0.81
Item 19	3.16	1.23
Item 20	1.51	0.93
Item 21	1.66	1.04
Item 22	1.33	0.75
Item 23	2.27	1.30
Item 24	1.42	0.74
Item 25	1.81	1.08
Item 26	2.05	1.08
Item 28	1.29	0.68
Item 29	1.33	0.78
Item 30	1.73	1.08
Item 31	1.29	0.70
Item 33	1.42	0.86
Item 37	2.13	1.18
Item 38	1.53	0.90
Item 39	1.24	0.66
Item 41	1.48	0.87
Item 42	1.79	1.11
Item 44	1.64	0.99
Item 45	1.74	1.13
Item 46	1.43	0.83
Item 47	1.29	0.73
Item 48	1.74	1.17
Item 49	2.05	1.15
Item 50	2.36	1.23
Item 51	2.80	1.30
Item 53	2.36	1.29

Table A2. *Correlations Between PIInS Subscales and Total Score With Other Relevant Constructs for Parasocial Involvement (Study 1).*

Construct	S-S	SMER	I-IL	I-SEV	I-EB	I-RMC	I-SI	Total
AIQ - Social	*r* = .132	*r* = .152	*r* = .133	*r* = .255	*r* = .110	*r* = .296	*r* = .151	*r* = .237
	p = .004	*p* = .001	*p* = .003	*p* < .001	*p* = .015	*p* < .001	*p* = .001	*p* < .001
AIQ - Relational	*r* = .038	*r* = −.039	*r* = −.108	*r* = −.032	*r* = −.117	*r* = −.062	*r* = −.167	*r* = −.082
	p = .403	*p* = .393	*p* = .017	*p* = .485	*p* = .010	*p* = .174	*p* < .001	*p* = .047
ECR-BANG	*r* = .268	*r* = .135	*r* = .214	*r* = .217	*r* = .201	*r* = .288	*r* = .276	*r* = .313
	p < .001	*p* = .003	*p* < .001	*p* < .001	*p* <.001	*p* < .001	*p* < .001	*p* < .001
ECR-BVER	*r* = .128	*r* = .033	*r* = .150	*r* = .118	*r* = .205	*r* = .142	*r* = .242	*r* = .193
	p = .005	*p* = .475	*p* = .001	*p* = .010	*p* < .001	*p* = .002	*p* < .001	*p* < .001
SEPS	*r* = −.092	*r* = −.144	*r* = −.076	*r* = −.052	*r* = −.179	*r* = −.124	*r* = −.177	*r* = −.160
	p = .044	*p* = .001	*p* = .097	*p* = .252	*p* < .001	*p* = .006	*p* < .001	*p* < .001
PSI-Empathy	*r* = .286	*r* = .227	*r* = .308	*r* = .337	*r* = .484	*r* = .159	*r* = .322	*r* = .411
	p < .001	*p* < .001	*p* < .001	*p* < .001	*p* < .001	*p* < .001	*p* < .001	*p* < .001
PSI-Antipathy	*r* = −.072	*r* = −.114	*r* = −.032	*r* = .030	*r* = −.002	*r* = .189	*r* = .100	*r* = .012
	p = .113	*p* = .012	*p* = .479	*p* = .509	*p* = .969	*p* < .001	*p* = .028	*p* = .792

Note. AIQ-Social = Social Identity Centrality, AIQ-Relational = Relational Identity Centrality, , ECR-BANG = Experiences in Close Relationships—Attachment-related anxiety, ECR-BVER = Experiences in Close Relationships—Attachment-related avoidance, SEPS = Self-Expansion Preference Scale, PSI-Empathy = Parasocial Interaction Scale-Empathy, PSI-Antipathy = Parasocial Interaction Scale-Antipathy.

Table A3. *Means (SD), Min and Max for PIInS Scale and Associated Constructs (Study 1).*

Scale	*M*	*SD*	*Min*	*Max*
PIInS S-S	2.33	1.02	1.00	5.00
PIInS SMER	2.94	0.67	1.00	5.00
PIInS I-IL	2.03	0.69	1.00	4.83
PIInS I-SEV	1.88	0.67	1.00	4.83
PIInS I-EB	1.61	0.76	1.00	4.40
PIInS I-RMC	2.10	0.77	1.00	4.67
PIInS I-SI	1.51	0.53	1.00	4.67
PIInS Total Score	2.06	0.54	1.00	4.49
ECR-BANG	2,99	1.23	1.00	6.50
ECR-BVER	2.51	1.11	1.00	5.94
PSI-Empathy	2.65	0.57	1.00	4.38
PSI-Antipathy	2.30	0.61	1.00	4.88
AIQ-Social	23.95	5.03	8.00	35.00
AIQ-Relational	43.03	5.18	20.00	50.00
SEPS	4.51	0.71	2.08	6.54

Note. PIInS S-S = Self-soothing, PIInS SMER = Social Media as Enrichment and Reward, PIInS I-IL = Influencer – Identification and Loyalty, PIInS I-SEV = Influencer—Self-expansion and Validation, PIInS I-EB = Influencer—Emotional Bond, PIInS I-RMC = Influencer—Role Model and Comparison, PIInS I-SI = Influencer—Social Influence, PIInS Total Score = Parasocial Influencer Involvement Scale Total Score, AIQ-Social = Social Identity Centrality, AIQ-Relational = Relational Identity Centrality, ECR-BANG = Experiences in Close Relationships—Attachment-related anxiety, ECR-BVER = Experiences in Close Relationships—Attachment-related avoidance, SEPS = Self-Expansion Preference Scale, PSI-Empathy = Parasocial Interaction Scale-Empathy, PSI-Antipathy = Parasocial Interaction Scale-Antipathy.

Table A4. *Variance Explained by PIInS Factors (Study 2).*

Component	Total	% of variance	Accumulated % of variance
3	8.752	22.440	22.440
5	4.855	12.450	34.890
2	2.217	5.823	40.713
7	2.015	5.168	45.881
1	1.343	3.444	49.325
6	1.289	3.305	52.630
4	1.218	3.123	55.753

Note. KMO statistic = .853; Bartlett's test of Sphericity (χ^2 = 3801.260, p < .001).

PIInS List of Items

How much do you agree with the following statements (on a five-point Likert scale from 1 = *not true at all* up to 5 = *fully applicable*)?

1. I enjoy my time on social media. (SMER)
2. Social media use is an important and integral part of my life. (SMER)
3. Social media use is interesting and inspiring. (SMER)
4. Social media use is an enrichment to my life. (SMER)
5. Social media time is more fun for me than many offline activities. (SMER)
6. I think whom I choose to follow says something about me/lifestyle and taste. (I-IL)
7. I reject people who are loyal to counter-groups of my influencers. (I-IL)
8. It says something about me whom I choose to follow. (I-IL)
9. When my influencers get into drama or conflict, I feel solidarity or even take action (e.g., by un-following other influencers). (I-IL)
10. I buy products or like posts specifically to support my influencers. (I-IL)
11. I base life decisions on role models from social media. (I-IL)
12. I feel good about having items (sportswear, decorations) in my household that I usually admire/observe on influencers. (I-SEV)
13. I refer to influencers and their experiences when I am having conversations about life or objects. (I-SEV)
14. I feel moved to share content from my life with influencers (e.g., send a DM when I own a product like them, or experience something funny or touching). (I-SEV)
15. I would be extremely happy if my influencers responded to or shared my content. (I-SEV)
16. When making decisions about products/lifestyle/behavior, I specifically seek out accounts as "life experts". (I-SEV)
17. I buy or would like to buy products that my influencers recommend. (I-SEV)
18. Influencer content helps me to feel better after relationship conflicts. (S-S)
19. Influencer content can soothe me. (S-S)
20. It makes me sad too, when my influencers are sad or in crisis. (I-EB)
21. I miss an influencer when they don't post anything for an unusually long time. (I-EB)
22. I sometimes worry about influencers who are doing poorly right now. (I-EB)
23. I would be sad if an influencer blocked me. (I-EB)
24. I worry about an influencer abandoning the account or changing content. (I-EB)

25. Sometimes I feel competition with my influencers. (I-RMC)
26. Sometimes I want to be better than an influencer. (I-RMC)
27. While watching an influencer, I kept thinking whether I myself would have done the thing better or worse than them. (I-RMC)
28. Every now and then I reflect on whether a particular influencer is similar or dissimilar to myself. (I-RMC)
29. I have had thoughts like “one day, I would like to do that just like this influencer” or “I definitely don’t want to do that like this influencer”. (I-RMC)
30. I envy the job/life and opportunities of an Influencer. (I-RMC)
31. I get annoyed when something changes in the behavior/mood/layout of my influencers. (I-SI)
32. I wonder in some situations what the Influencer would do now. (I-SI)
33. I write comments on posts to communicate with other followers/to communicate with the influencer. (I-SI)
34. It is important to me what the mood is like in the follower group. (I-SI)
35. My influencers’ opinions on events and decisions in my life would be important to me. (I-SI)
36. I find myself thinking or talking about influencers like friends. (I-SI)
37. Sometimes I prefer social media to being around real people. (I-SI)
38. Sometimes, conflicts with friends or romantic partners arise because I use social media in their presence. (I-SI)
39. Sometimes, my romantic partner or close friends is/are jealous about my influencers or my cell phone use. (I-SI)

About Authors

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