

Development and Validation of the Parasocial Relationship in Social Media Survey

Austin T. Boyd*, Jennifer Ann Morrow, and Louis. M. Rocconi

Department of Educational Leadership & Policy Studies, University of Tennessee, Knoxville, TN

*Corresponding Author: austin.boyd@americanreading.com

Social media provides new opportunities for parasocial relationships to be developed and strengthened on demand. While there are a number of existing surveys that have been used to measure parasocial relationships, none have been developed or validated to measure relationships developed through social media. The 22-item Parasocial Relationships in Social Media (PRISM) survey presented in this article has been designed and validated specifically to measure parasocial

relationships individuals develop with celebrities in social media contexts. Exploratory factor analysis reveals the PRISM survey measures four dimensions of parasocial relations: Interest in, Knowledge of, Identification with, and Interaction with a given celebrity.

Keywords: social media, parasocial relationships, survey, validation

In 1956, when Horton and Wohl first published their research on parasocial relationships, there were only two forms of media for audiences to consume: radio and television. At the time, Horton and Wohl (1956) asserted that television was the most effective medium through which a parasocial relationship could be developed. Since then, technology has evolved to allow people easier access to media than ever. With the internet and smart devices (e.g., computers, phones, tablets) people can access media virtually anywhere and at any time. These technological advances not only increased the ease with which people can access media, but also created a new medium for parasocial relationships to be developed: social media. Through social media, content can be uploaded more frequently and accessed on demand allowing for more frequent parasocial interactions, potentially leading to stronger parasocial relationships developing quicker than through traditional media formats. This not only creates an effective means for creating parasocial relationships, but also a unique experience where the relationships are being created with the celebrity themselves as opposed to a character which they

portray. The theoretical framework for this research is based on the stages in the development of a parasocial relationship defined by Giles' (2002) model for PSI research. In this model, Giles outlines the processes involved in forming a parasocial relationship as well as makes clear distinctions between the momentary parasocial interactions and the long-term development of parasocial relationships.

These advancements open new opportunities for parasocial relationships to be researched. However, with this new context comes new questions of how to measure these types of unique relationships. Even with the current number of scales that have been developed to measure parasocial relationships in the past, such as the Parasocial Interaction Scale (Rubin et al., 1985), Audience-Persona Interaction Scale (Auter & Palmgreen, 2000), and Celebrity Persona Parasocial Interaction Scale (Bocarnea & Brown, 2007), there has yet to be one specifically developed to measure these relationships with online celebrities. Moreover, the existing measurement tools do not easily lend themselves to be applied to this context due to their wording and the specificity of some questions. For example, the Audience-Persona Interaction Scale (Auter & Palmgreen, 2000) refers to the celebrity as an actor and references characters which the celebrity portrays, and the Parasocial Interaction Scale (Rubin et al., 1986) scale examines newscasters and refers to their opinions on news stories. This, compounded with the increasing influence and presence of online celebrities, demonstrates the need for a valid and reliable scale to assess the parasocial relationships being developed through social media mediums.

Measuring Parasocial Relationships

Horton and Wohl (1956, p. 215) first defined parasocial relationships as the "seeming[ly] face-to-face relationship between spectator and performer." These one-sided relationships were made by the spectator with the performer's on-stage persona. Initially, the terms relationship and interaction were used interchangeably. It wasn't until the late 1990s and early 2000s that researchers started making the distinction between these two constructs (Giles, 2002; Schramm et al., 2002; Vorderer, 1996). In general, the definition of parasocial relationships has remained true to Horton and Wohl's original definition, a relationship formed by a viewer with a performer that cannot be reciprocated by the performer. These are enduring, cross-situational relationships that extend beyond the

initial act of media consumption (Rihl & Wegener, 2019). Parasocial interactions on the other hand, are the self-contained interactions that a viewer has when watching a performer in the media, which are limited to the duration of the media exposure (Vorderer, 1996). A parasocial relationship is developed and strengthened through repeated parasocial interactions. For example, one would experience a parasocial interaction while watching a video on YouTube posted by Sean “Jacksepticeye” McLoughlin, and through repeated interactions with different videos posted by him, the viewer may over time develop a parasocial relationship with him.

A number of different scales have been developed to measure parasocial phenomena. The most popular measures being the Parasocial Interaction Scale (PSI; Rubin et al., 1985) and Audience-Persona Interaction Scale (API; Auter & Palmgreen, 2000). While they are both listed as measuring parasocial interactions, they were both developed prior to the distinction between parasocial relationships and interactions being made, and some have argued that both surveys actually measure parasocial relationships (Dibble et al., 2016; Schramm & Hartmann, 2008) instead of parasocial interactions. The PSI scale is a 20 item measure that can be reduced to a more compact 10 items, while the API scale is a 22 item measure. Both scales use a 5-point Likert scale ranging from “strongly disagree” to “strongly agree”. A notable difference between the two is the dimensionality of the scales. Both the full and compact versions of the PSI scale were found to be unidimensional, while the API scale has a four-factor solution (i.e., Identification with Favorite Character, Interest in Favorite Character, Group Identification/Interaction, and Favorite Character Problem Solving Abilities). As research on parasocial phenomena has progressed, more support has been found showing parasocial relationships are not a unidimensional construct, raising questions about the validity of the PSI scale (Schramm & Hartmann, 2008; Cohen, 2003; Auter & Palmgreen, 2000; Cole & Leets, 1999; Gleich, 1996). Additionally, further concerns about measuring parasocial interactions have been raised by Dibble et al. (2016) who assert that most parasocial interaction scales have not undergone adequate tests of construct validation. These concerns along with the increase in new media contexts and mediums in which parasocial relationships can be developed, such as social media, provide new avenues for research and improvements to be made in how parasocial relationships are measured.

Purpose of Study and Research Objective

The purpose of this study was to create and validate the Parasocial Relationships in Social Media (PRISM) Survey which has been designed to measure the parasocial relationships people develop with online, social media celebrities. The primary research objective guiding the study was to determine whether the new survey is a valid and reliable measure for parasocial relationships. To achieve this objective, we assessed the psychometric integrity of the PRISM survey by examining internal consistency reliability, as well as the content, construct, face, convergent, and discriminant validity of the PRISM survey. The development and validation process in this study follows procedures for scale development based on Boateng et al. (2018), Carpenter (2018), and DeVon et al. (2007) which outline best practices for developing, validating, and reporting scales.

METHODS

Item Development

The primary method used to create the PRISM survey items was an extensive literature review. Parasocial relationship surveys from different contexts provided an underlying structure for the initial draft of survey questions, as well as provided an initial indication of the various constructs in which the items could be grouped. The Audience-Persona Interaction Scale (API; Auter & Palmgreen, 2000), Parasocial Interaction Scale (PSI; Rubin et al., 1985), and Celebrity-Persona Parasocial Interaction Scale (CPPI; Bocarnea & Brown, 2007) were all reviewed and compared to determine question overlap and unique questions to each survey. This resulted in 36 different question stems.

Next, individual questions on each survey were determined to be relevant without modification, with modifications, or irrelevant to the social media context. For example, some questions such as “[the celebrity or persona] reminds me of myself” from the API Scale and “Learning about [celebrity or persona] is important to me” from the CPPI Scale were unmodified. Other questions such as “I have been seeking out information in the media to learn more [celebrity or persona]” from the CPPI Scale survey were slightly modified to update their verb tense or other word choice (e.g., “I seek out information in the media to learn more about [celebrity or persona]”). As suggested by Fink (2003), items were also adjusted to reflect consistent positive wording throughout the scale. In some cases, items were split into multiple items to prevent double barreled questions, as was

the case with the item “I seem to have the same beliefs or attitudes as [celebrity or personal]” from the API Scale. Many questions were removed entirely due to repetitiveness or specificity that made them unrelated to the current survey context (e.g., “When my favorite newscaster shows me how he or she feels about the news, it helps me make up my own mind about the news story.”).

Once an initial draft of items was created, the items were organized based on an assessment of their meanings into four constructs: interest, identification, interaction, and knowledge consisting of 11, 9, 8, and 8 items, respectively. The first three constructs, interest, identification, and interaction were based on the constructs found in the API scale (Auter & Palmgreen, 2000), while the fourth construct, knowledge, was borrowed from Nordlund (1978) who advocated support for an interaction construct.

Content Validity: Expert Review Panel

Once the items had been developed, a four-person expert review panel, consisting of two experts in survey research methodology and two content area experts in social media and parasocial relationships, were asked to review the items individually and provide feedback on the face and content validity of the scale (Grant & Davis, 1997). Additionally, they were asked to provide their feedback on clarity of instructions, clarity of items, items that should be added, deleted or revised, issues with spelling or grammar, response scale of the items, and appropriateness of the flow of the survey, as well as to provide any other comments to help improve the scale.

The experts suggested new items, revised some items, and gave feedback on clarity of instructions and grammar. Based on the feedback, two items were split into two to avoid potentially double-barreled questions and two free response items were created for participants to expand more on the reasons they follow the celebrity as well as any additional information they would like to share about their relationship with the celebrity.

The PRISM survey was finalized with the experts’ comments and suggestions. The pilot survey consisted of 51 items. The survey began with five items in order to identify the celebrity, when the participant began following the celebrity, how often the participant interacts with the celebrity, what social media platform the participant primarily uses, and what other platforms the participant follows the celebrity on. The earliest year a participant can indicate they started following the celebrity is 1997 as that is the earliest

known date of an online social media platform being active (Boyd & Ellison, 2007).

Following this introduction are 36 items on the parasocial relationship which participants are asked to indicate their level of agreement with the statement using a five-point Likert scale of Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, and Strongly Agree with a sixth Does not Apply option. There are also two open-ended response items for participants to expand more on the reasons they follow the celebrity as well as any additional information they would like to share about their relationship. Finally, the survey concludes with six participant demographic questions (e.g., How old are you?; What is your Race/Ethnicity?).

Construct Validity: Exploratory Factor Analysis

Once finalized, the survey was used to collect data which was then analyzed using an exploratory factor analysis (EFA). EFA is an important step in item development and validation process (Boateng et al., 2018; Carpenter, 2018; DeVon et al., 2007). EFA is important for determining the optimal number of factors and for understanding the latent structure of the set of items. Conducting an EFA is also critical in reducing the number of items by examining items with low factor loadings and communalities or items that cross-load onto multiple factors. Moreover, as recommended by Carpenter (2018, p. 27): “EFA is recommended over CFA for scale development due to the possibility that researchers are incorrect regarding their assumptions about the construct’s dimensionality and to also ensure item quality. A CFA should be conducted on a separate sample to confirm the structure of the proposed scale resulting from an EFA.”

An EFA with principal components extraction and direct oblimin rotation was estimated. This allows us to find a unique solution that extracts the maximum variance from the data while reducing the items down into a smaller number of components (Tabachnick & Fidell, 2018). Principal components extraction was determined to be an appropriate extraction method as the percentage of total variance extracted was greater than 50% (Pett et al., 2003). Direct oblimin rotation was used because we theorized that the factors would be related, and as an oblique rotation, the rotation assumes the factors to be correlated with each other (Pett et al., 2003). The EFA allowed us to uncover the survey’s underlying factor structure and determine whether the items comprised a coherent set of factors that measure aspects of parasocial relationships. Cronbach’s alpha

values for the factors were used to assess the internal consistency reliability for each factor. Higher values ($>.80$) indicate that the items within the construct yield the same results, however scores between $.70$ and $.80$ have been accepted in psychological science before (Cortina, 1993).

Sampling and Recruitment of Participants. The population of interest for the survey validation was anyone over the age of 18 who followed an online celebrity/content creator on some form of social media (e.g., Facebook, TikTok, YouTube). Due to the broad population of interest, there was no central location in which the participants were selected to participate. This allowed data collection on an international scale using QuestionPro, which included 44 different countries. The use of an online survey also allowed participants to respond whenever was most convenient to them without a proctor, with no cost to the researchers or participants. However, the use of an online survey limited participant recruitment to convenience and snowball sampling. The survey was posted on several social media platforms including Reddit, OnlyFans, Facebook, and LinkedIn. Additionally, professors that teach communication or social media at four U.S. universities were contacted via email, asking if they would be willing to send the survey out to their students. Those who agreed, were requested to forward the recruitment materials with a link to the online survey to their students via email.

Data Cleaning. Data cleaning was conducted using the Twelve steps of quantitative data cleaning (Morrow, 2017). Any participants that listed they were under 18, not following a celebrity, or did not provide informed consent were immediately screened out by the survey platform. Only participants who had complete responses for the 38 main survey items were retained for the analysis, resulting in a sample size of 602. Additionally, any participants who listed multiple different celebrities, celebrities who do not primarily use social media for their interactions (i.e., actors and musicians), or fake names for the celebrity they follow were removed. The celebrities listed were also recoded to provide uniformity by correcting spelling mistakes, abbreviations, and pseudonyms or stage names.

Participants. Data collection lasted for five weeks, during which participants were able to complete the survey at any time using a computer, phone, or tablet. The average age of the participants was between 23 and 24 years old ($M = 23.75$, $SD = 6.29$) and ranged

from 18 to 60 years old. The majority of participants identified as female (41.9%), followed by male (39.9%), and participants were primarily Caucasian/white (70.8%). Most participants indicated having some college education but no degree (33.2%), followed by having obtained a bachelor's degree (24.8%). A third of participants indicated that they are full time students (33.4%), and a quarter indicated they were employed, working 40 or more hours per week (26.2%).

Respondents listed 245 different online celebrities they were following, and the majority of participants indicated that they interact with the celebrity's content either daily (24.6%) or 3 to 5 days per week (32.2%). The majority of participants indicated that they began following the celebrity in either 2018 (14.6%), 2019 (16.9%), or 2020 (21.6%), with dates ranging from 2005 to 2021. The most common primary platforms they followed the celebrity on were YouTube (72.8%) and Twitch (17.4%), but nearly all (92.5%) also indicated that they are following the celebrity on more than one social media platform.

RESULTS

Before performing the exploratory factor analysis, we checked the factorability of the correlation matrix by determining if the matrix was an identity matrix and examining the proportion of variance among variables that might be common variance with the Bartlett's test of sphericity and Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy, respectively. The Bartlett's test was significant, $\chi^2(231) = 5041.97$, $p < 0.001$, indicating that the correlation matrix was not an identity matrix. The KMO test was 0.91 suggesting marvelous factorability of the item set (Pett, Lackey, & Sullivan, 2003). In addition, item measures of sampling adequacy ranged between .848 and .959, further confirming the factorability of the data. Additionally, fit indices for the model were calculated to determine data-model fit. We utilized the criteria suggested by Field et al. (2012), which states root mean square error be less than .05, fit based off diagonal values be greater than .95, and less than 5% of residual correlations be greater than $|.1|$. We found a root mean square error equal to .028, fit based off diagonal values were equal to .993, and only 3 (1.2%) of the residual correlations greater than $|.1|$. These results provided evidence that the use of factor analysis was appropriate for the dataset.

A preliminary principal components extraction with direct oblimin rotation was used to determine the number of factors to extract; initially, any factor with an eigenvalue

greater than 1.0 was extracted (Kaiser, 1960). The proportion of variance explained by each factor and a visual assessment of the Scree plot (Figure 1) were also used to help determine the number of factors to retain (Cattell, 1966). The decision to retain factors based on the Kaiser and Scree criterion as opposed to forcing the hypothesized four factor solution was to explore other potential factors that may have emerged with the addition of the new items. Direct oblimin rotation was chosen because it is an oblique rotation that allows correlations between factors. The Kaiser and Scree criteria resulted in eight factors with eigenvalues greater than 1.0, however, there were several items with either complex loadings (i.e., loaded highly on more than one factor) or did not load $>.32$ onto any of the factors that needed to be deleted. The factor extraction was repeated and items with low or complex loadings were deleted. This procedure was iterated until simple structure was achieved (i.e., each item loaded highly onto one and only one factor), resulting in 22 items that loaded at least $.52$ on one of four remaining factors, with no complex loadings. See Table 1 for a list of items, factor loadings, and communalities. In order to ensure the factor solution was stable across extraction and rotation methods, we ran another EFA using a Principal Axis Factoring extraction and promax rotation and found the same four factor solution. The final rotated four-factor, 22 item solution of the PRISM survey accounted for 58.8% of the variance in the item set.

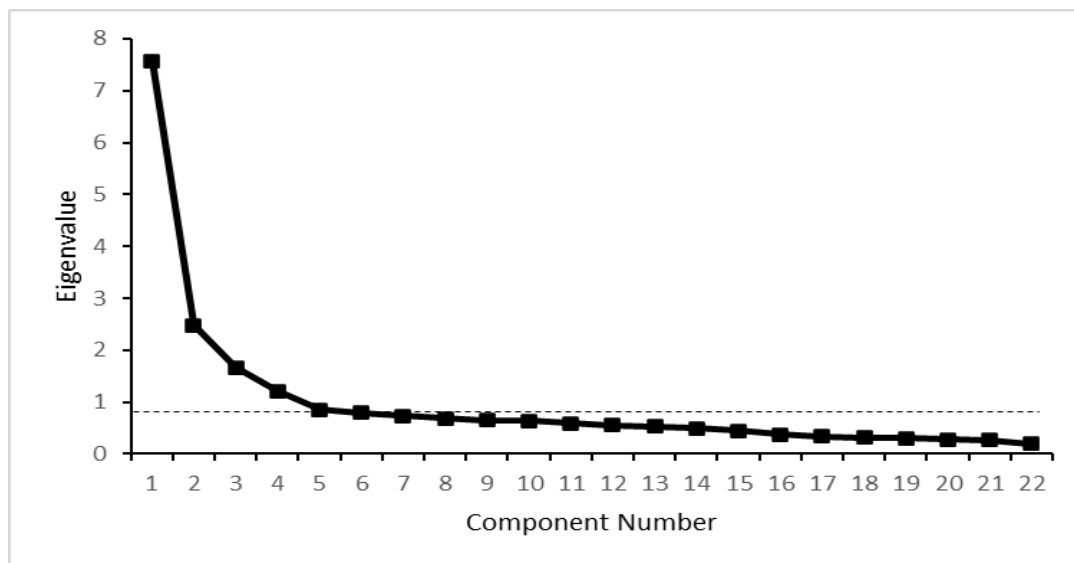


Figure 1. Scree plot. This figure shows the eigenvalues for the final iteration of the EFA, in which a simple structure was achieved. Here only four components had eigenvalues greater than 1.

The first factor, Interest In ($\alpha = .83$), contained seven items and accounted for 34.4% of the variance. Items comprising this factor reflected participants' interest in the indicated social media celebrity and the content that they create. Sample items include "I am interested in [NAME]." and "I look forward to seeing [NAME]'s content."

Table 1

Pattern matrix factor loadings, coefficient alphas, and communalities (h²) for items in PRISM Survey

Item	Factor Loading	<i>h</i> ²
<i>Interest In</i> ($\alpha = .83$)		
I look forward to seeing [NAME]'s content.	.81	.655
I like to see content that [NAME] has made.	.75	.642
I am interested in [NAME].	.72	.493
I care about what happens to [NAME].	.67	.656
I hope [NAME] achieves their goals.	.66	.547
I would follow [NAME] on another account if they create one on the same social media site that I already follow them on.	.62	.471
I like to see content that [NAME] is in that they did not make themselves.	.54	.354
<i>Knowledge Of</i> ($\alpha = .83$)		
When I come across information about [NAME] I will search to learn more about them.	.84	.776
I seek out information to learn more about [NAME].	.84	.753
Learning about [NAME] is important to me.	.71	.693
I am aware of the personal details of [NAME]'s life.	.60	.446
If I saw a story about [NAME], I would read it.	.52	.453
<i>Identification With</i> ($\alpha = .84$)		
I have many of the same beliefs as [NAME].	.86	.686
I have many of the same opinions as [NAME].	.84	.708
I usually agree with [NAME].	.78	.702
I usually make the same choices as [NAME].	.64	.519
I can relate to [NAME]'s attitudes.	.63	.510
I like the way [NAME] handles problems.	.54	.470
<i>Interaction With</i> ($\alpha = .78$)		
[NAME] makes me feel as if I am with a friend.	.80	.726
[NAME] keeps me company when viewing their content.	.77	.617
I can imagine myself as [NAME]'s friend.	.66	.560
[NAME] understands the kinds of content I want to see.	.65	.489

The second factor, Knowledge Of ($\alpha = .83$), contained five items and accounted for 11.3% of the variance. This factor included items that reported participants' desire to

learn more about the social media celebrity. Sample items include “I seek out information to learn more about [NAME].” and “Learning about [NAME] is important to me.”

The third factor, Identification With ($\alpha = .84$) included six items and accounted for 7.6% of the variance. Items represented participants’ perceptions of how similar they were to the social media celebrity which they indicated. Sample items include “I have many of the same opinions as [NAME].” and “I usually make the same choices as [NAME].”

The fourth factor, Interaction With ($\alpha = .78$), included four items and accounted for 5.5% of the variance. These items indicated the participants’ feelings of social and friendship connections with the online celebrity. Representative items are “[NAME] makes me feel as if I am with a friend.” and “[NAME] keeps me company when viewing their content.”

In addition to assessing the construct validity and internal consistency reliability, we also calculated the average variance extracted (AVE) from each factor. The AVE can be used to provide evidence for convergent and discriminant validity by determining the degree to which the factors are related and unrelated to each other. Cheung and Wang (2017) suggest that evidence for convergent validity is evident when the AVE for each factor and the factor loadings of all items greater than .50. The AVE for each factor was .55, .62, .60, and .60, for Interest In, Knowledge Of, Identification With, and Interaction With, respectively. In addition, the factor loadings were all above .50. These results suggest adequate convergent validity for each factor. Discriminant validity is evidenced when the correlations among the factors are less than .70 (Cheung & Wang, 2017). The correlations between the four factors (Table 2) show that while related to each other, each factor is still measuring its own distinct construct. Thus, adequate discriminant validity is also evident within this model.

Table 2
Pearson Correlations Between Constructs

	Interest	Knowledge	Identification	Interaction
Interest	—			
Knowledge	.402	—		
Identification	.530	.311	—	
Interaction	.477	.530	.473	—

We also explored the convergent and discriminant validity of the PRISM factors by correlating scores for each factor with the year a respondent first started following the celebrity and how often the respondent interacted with the celebrity's online content; results are presented in Table 3. Boateng et al. (2018, p. 14) describes discriminant validity as “the extent to which a measure is novel and not simply a reflection of some other construct.” Given the non-statistically significant and weak correlations between the PRISM factors and the year a respondent started following the celebrity, these results provide additional discriminant validity evidence by demonstrating that parasocial relationships, as defined by PRISM, are not directly associated with the length of time an individual has been following the celebrity. Additionally, all four factors had modest, positive correlations with how often a respondent interacts with a celebrity’s online content. These modest and positive correlations provide some convergent validity evidence demonstrating the more frequent engagement with a celebrity’s online content the stronger the parasocial relationship.

Table 3

Pearson correlations between factors and time following celebrity and frequency of interaction with content

	In what year did you first start following [NAME]?	On average, how often do you interact with [NAME]’s posts online? ^a
Interest	-.104*	.172***
Knowledge	-.116**	.157***
Identification	-.072	.119**
Interaction	-.053	.218***

Notes. * $p < .05$, ** $p < .01$, *** $p < .001$ (two-tailed test).

^aResponse options: more than once a day, daily, 3 to 5 days per week, once a week, once every two weeks, once a month, 3-5 times a year, twice a year or less

DISCUSSION

The purpose of this study was to create the PRISM survey, which was designed to measure the parasocial relationships individuals develop with online, social media celebrities, while also beginning to assess its psychometric properties. The EFA not only produced a parsimonious, four factor solution, but also aligned well with constructs already present in the literature. The current factors of Interest in, identification with, and interaction with all mirror constructs found in Auter and Palmgreen (2000)’s

Audience-Persona Interaction Scale, while both interaction with and knowledge of mirror constructs found by Nordlund (1978)'s survey of media interaction.

Within the PRISM scale the Interest In construct is a broad category of items that deals with the level of concern for, perceived attractiveness of, and devotion to the celebrity. Items in this construct address the viewers willingness to follow the celebrity to other media platforms as well as their care for the celebrity's wellbeing and success (Auter & Palmgreen, 2000). Knowledge Of, refers specifically to the viewer's knowledge of the celebrity and is similar to the Knowledge construct found by Nordlund (1978). This includes the viewer's perceived knowledge of the celebrity's life as well as whether or not they seek out more information about the celebrity of interest outside the media they are presented. These items, while similar to some aspects of the Interest in construct, do not deal with attachment to the celebrity, but rather curiosity and fascination with them. The third construct present is Identification With, which is similar to the identify or identification with favorite character factor from Auter and Palmgreen (2000)'s Audience-Persona Interaction Scale. The Identification With construct refers to the perceived similarities between the celebrity and the viewer. This includes aspects such as sharing qualities, opinions, and agreeing with the celebrity. The final construct, Interaction With, contains items addressing social aspects involved with viewing the celebrity in media. This includes physical actions such as actively speaking to the celebrity as well as perceived feelings such as being with a friend. This factor is similar to the group identification factor in the API scale and "participating" in what is happening to the characters from Nordlund's (1978) survey of media interest.

In addition to the quantitative measures for the survey's construct validity and internal consistency reliability, the survey's content and face validity were also assessed prior to data collection through the expert review panel (Grant & Davis, 1997). Content and face validity were further enhanced by using existing parasocial relationship survey items during the item development process. The construct validity for the PRISM survey is also supported by the fact that the final items had similar factor groupings as the original scales that these items originated from prior to conducting the EFA. Pearson's correlations among the factors ranged from .31 to .53 and demonstrate that while related, the four factors are distinct from another, providing evidence of discriminant validity.

Moreover, non-existent correlations between the factors and the year a respondent started following the celebrity provides evidence that the PRISM factors are not simply a reflection of the length of time a respondent has followed the celebrity. While the modest, positive correlations between the frequency with which a respondent engages with the celebrity's online content and the PRISM factors demonstrates some evidence of convergent validity, these results also indicate that while more frequent interaction with the celebrity's online content is associated with greater parasocial relationships, frequent engagement is not the sole determinate of a parasocial relationship and these relationships may foster even with lower levels of engagement. Unfortunately, convergent validity using an existing parasocial relationship survey (e.g., API, CPPI) was not assessed as many items from these existing surveys were used when creating the current survey, making it redundant to include those questions within the questionnaire a second time.

The development of the PRISM survey allows researchers to measure parasocial relationships more effectively in the ever-expanding online social media landscape. Future researchers could use PRISM to measure parasocial relationships developed across social media platforms to determine which platforms are most effective at fostering relationships, in terms of strength, speed, and longevity. Future research could also assess the types of individuals that develop parasocial relationships as well as what aspects of parasocial relationships are most influential among different identity groups and through which social media platforms are these groups most inclined to develop parasocial relationships. Research should also be dedicated to examining the validity of the PRISM survey in other languages, as parasocial relationships are not unique to one group or culture. While the present study did collect data on an international scale, it was limited in that the survey was only offered in one language (i.e., English). As was the case for the PSI scale, translating the PRISM scale into other languages to be validated and used internationally would help further the research on parasocial relationships across the world.

The development of the PRISM survey opens a new realm in which parasocial relationship research can be conducted. With the increasing prevalence of social media platforms and the ease of access to them, the opportunities for people to develop parasocial

relationships are greater than ever. With this survey, researchers can begin to explore the relationships developed through these mediums without sacrificing validity by using improper or non-validated measures.

References

- Auter, P. J., & Palmgreen, P. (2000). Development and validation of a parasocial interaction measure: The audience-persona interaction scale. *Communication Research Reports, 17*(1), 79–89. doi: 10.1080/08824090009388753
- Boateng, G. O, Neilands, T. B., Frongillo, E. A., Melgar-Quinonez, H. R., & Young, S. L. (2018). Best practices for developing and validating scales for health, social, and behavioral research: A primer. *Frontiers in Public Health, 6*, 1-18. <https://doi.org/10.3389/fpubh.2018.00149>
- Bocarnea, M., & Brown, W. (2007). Celebrity-Persona Parasocial Interaction Scale. *Handbook of Research on Electronic Surveys and Measurements*, 309–312. doi: 10.4018/9781591407928.ch039
- Boyd, D. M., & Ellison, N. B. (2007). Social Network Sites: Definition, History, and Scholarship. *Journal of Computer-Mediated Communication, 13*(1), 210–230. doi: 10.1111/j.1083-6101.2007.00393.x
- Carpenter, S. (2018). Ten steps in scale development and reporting: A guide for researchers. *Communication Methods and Measures, 12*(1), <https://doi.org/10.1080/19312458.2017.1396583>
- Cattell, R. B. (1966). The Scree test for the number of factors. *Multivariate Behavioral Research, 1*, 245–276. https://doi.org/10.1207/s15327906mbr0102_10
- Cheung, G.W., & Wang, C. (2017). Current approaches for assessing convergent and discriminant validity with SEM: Issues and solutions. [Abstract]. *Academy of Management, 1*. <https://doi.org/10.5465/AMBPP.2017.12706abstract>
- Cohen, J. (2003). Parasocial breakups: Measuring individual differences in responses to the dissolution of Parasocial relationships. *Mass Communication and Society, 6*(2), 191–202. https://doi.org/10.1207/s15327825mcs0602_5
- Cole, T., & Leets, L. (1999). Attachment styles and intimate television viewing: Insecurely forming relationships in a parasocial way. *Journal of Social and Personal Relationships, 16*(4), 495–511. <https://doi.org/10.1177/0265407599164005>
- Cortina, J. M. (1993). What is coefficient alpha? An examination of theory and applications. *Journal of Applied Psychology, 78*(1), 98–104. <https://doi.org/10.1037/0021-9010.78.1.98>
- DeVon, H. A., Block, M. E., Moyle-Wright, P., Ernst, D. M., Hayden, S., Lazzara, D., Savoy, S., & Kostas-Polston, E. (2007). A psychometric toolbox for testing validity and reliability. *Journal of Nursing Scholarship, 39*(2), 155-164.

- Dibble, J. L., Hartmann, T., & Rosaen, S. F. (2016). Parasocial interaction and parasocial relationship: Conceptual clarification and a critical assessment of measures. *Human Communication Research, 42*(1), 21–44. <https://doi.org/10.1111/hcre.12063>
- Field, A., Miles, J., & Field, Z. (2012). *Discovering statistics using R*. Sage Publications.
- Fink, A. (2003). How to ask survey questions (2nd ed.). SAGE Publications, Inc. <https://dx.doi.org/10.4135/9781412984393>
- Giles, D. C. (2002). Parasocial Interaction: A review of the literature and a model for future research. *Media Psychology, 4*(3), 279–305. https://doi.org/10.1207/s1532785xmep0403_04
- Gleich, U. (1996). Sind Fernsehpersonen Die „Freunde“ Des Zuschauers? Ein vergleich zwischen parasozialen und Realen Sozialen Beziehungen. Fernsehen Als „Beziehungskiste“, 113–144. https://doi.org/10.1007/978-3-322-83274-0_12
- Grant, J. S., & Davis, L. L. (1997). Selection and use of content experts for instrument development. *Research in Nursing & Health, 20*(3), 269–274. [https://doi.org/10.1002/\(sici\)1098-240x\(199706\)20:3<269::aid-nur9>3.0.co;2-g](https://doi.org/10.1002/(sici)1098-240x(199706)20:3<269::aid-nur9>3.0.co;2-g)
- Horton, D., & Wohl, R. R. (1956). Mass communication and para-social interaction. *Psychiatry, 19*(3), 215–229. doi: 10.1080/00332747.1956.11023049
- Kaiser, H. F. (1960). The application of electronic computers to factor analysis. *Educational and Psychological Measurement, 20*, 141–151. <https://doi.org/10.1177/001316446002000116>
- Morrow, J. A. (2017). Twelve steps of quantitative data cleaning: Strategies for dealing with dirty evaluation data. Full-day workshop presented at the annual meeting of the American Evaluation Association, Washington, DC.
- Nordlund, J. E. (1978). Media Interaction. *Communication Research, 5*(2), 150–175. doi: 10.1177/009365027800500202
- Pett, M. A., Lackey, N. R., & Sullivan, J. J. (2003). Making Sense of Factor Analysis: The Use of Factor Analysis for Instrument Development in Health Care Research. SAGE Publications Inc.
- Rihl, A., & Wegener, C. (2019). YouTube celebrities and parasocial interaction: Using feedback channels in mediatized relationships. *Convergence: The International Journal of Research into New Media Technologies, 25*(3), 554–566. <https://doi.org/10.1177/1354856517736976>
- Rubin, A. M., Perse, E. M., & Powell, R. A. (1985). Loneliness, parasocial interaction, and local television news viewing. *Human Communication Research, 12*(2), 155–180. doi: 10.1111/j.1468-2958.1985.tb00071.x
- Schramm, H., & Hartmann, T. (2008). The psi-process scales. A new measure to assess the intensity and breadth of parasocial processes. *Communications, 33*(4). <https://doi.org/10.1515/comm.2008.025>
- Schramm, H., Hartmann, T., & Klimmt, C. (2002). Desiderata und perspektiven der Forschung über Parasoziale Interaktionen und beziehungen zu medienfiguren. *Publizistik, 47*(4), 436–459. <https://doi.org/10.1007/s11616-002-0110-1>
- Tabachnick, B. G., & Fidell, L. S. (2018). *Using multivariate statistics*. Pearson.
- Vorderer, P. (1996). Fernsehen als Beziehungskiste. Parasoziale Beziehungen und Interaktionen mit TV-Personen [TV as relationship machine: Parasocial relationships and interactions with TV characters]. Fernsehen Als „Beziehungskiste“, 153–171. https://doi.org/10.1007/978-3-322-83274-0_14

Funding and Acknowledgements

The authors declare no funding sources or conflicts of interest.

Online Connections

Austin T. Boyd: <https://www.linkedin.com/in/austintboyd/>