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Connections between Adolescents' Parasocial Interactions and Recollections of Childhood Imaginative Activities

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Imaginative Activities

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Abstract

Parasocial interactions (PSI; one-sided communication imagined with a media figure) in adolescence and imaginative activities in childhood, such as imaginary companions and role play, have a shared foundation in that both use imagination for social purposes. This commonality in both cognitive processes and social uses begs the question of whether they are related phenomena. We examined PSI's connection to retrospective reports of childhood imaginative activities in the context of the social environment, including relationship functioning (attachment style, social support) and well-being (self-esteem, depressive symptoms), in 151 adolescents (M_{age} = 14.8 years). PSI and reports of childhood imagination were unrelated to each other and differentially related to the social environment, suggesting that each form of social imagination relates to the developmental task it addresses rather than to individual differences in predilection for fantasy or social functioning.

Keywords: parasocial interaction, imagination, relationships, well-being, adolescents

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Imaginative Activities

For many years, scholars in communications and in media psychology have explored

parasocial processes, a phenomenon common among adolescents and young adults and recently

defined by Brown (2015) in part as "developing an imaginary relationship with a mediated

persona both during and after media consumption" (p. 17). This notion of imagining or

simulating social experiences is reminiscent of several imaginative activities (IAs) common in

childhood, such as the creation of imaginary companions, extensive involvement in role play,

and the creation of paracosms (imaginary worlds). All of these behaviors have in common the

cognitive process of imagination applied to a social domain, begging the question of whether

individuals exhibit continuity between engaging in IAs in childhood and parasocial activity later

in development. These behaviors could theoretically be indicative of a predilection for

imaginative thought that, while always social, manifests somewhat differently at different points

in development (Adams-Price & Greene, 1990).

We also considered the hypothesis that social forms of imagination might relate not just

to an imaginative predisposition but to socioemotional factors as well. Childhood IAs and

parasocial interactions (PSI) are forms of fantasy that are closely associated with relationships

and emotions (J. Cohen, 2003; Cole & Leets, 1999; Gleason, 2013; Slade, 1987). As such,

engagement in these phenomena might be driven by aspects of social development, such as

relationship experience (e.g., attachment history, social support) or feelings of psychological

well-being (e.g., self-esteem). We reasoned that if PSI and childhood IAs were systematically

related to aspects of social functioning, such findings would support the hypothesis that social

imagination might play a role within social development. On the other hand, the social

developmental tasks of childhood and adolescence vary, in that young children are figuring out the rules and functions of friendship, whereas adolescents are often focused on identity development and autonomy from parents. These variations in developmental priorities might mean that we might not expect relations between each of these imaginative phenomena and social functioning to be parallel. If PSI and IA did not relate to aspects of social functioning in similar ways, we might find evidence to support the hypothesis that social imagination functions flexibly according to the developmental task with which it is associated.

As part of a larger study of adolescent development, we asked a sample of early adolescents about their engagement in parasocial interactions (PSI) and their memories for childhood IA. Although retrospective reports are subject to the vicissitudes of memory, particularly for early childhood, this approach was a useful first step in examining whether the cognitive imaginative processes underlying these phenomena reflected individual differences in the predilection for fantasy. Such information would contribute, albeit modestly, to our understanding of the role of imagination in development. In addition, by looking at how adolescent PSI and childhood IA related to relationship functioning and well-being, we hoped to illuminate social and personality correlates that might unite or differentiate these phenomena. Moreover, we were motivated to undertake this work to contribute to the growing interest in parasocial processes from a developmental psychological perspective (e.g., Aguiar, Richards, Bond, Brunick, & Calvert, 2018; Gola, Richards, Lauricella, & Calvert, 2013) and our interest in the role of imagination in social functioning (Caughey, 1984; Honeycutt, 2003).

Consideration of our questions in adolescence, as opposed to older subjects, was of interest for two reasons. First, adolescents demonstrate significant attention to and preoccupation with media figures and celebrities (Giles, 2002; Giles & Maltby, 2004; Maltby, Giles, Barber, &

McCutcheon, 2005), and second, PSI in adolescence tends to be intense (J. Cohen, 2003; Klimmt, Hartmann, & Schramm, 2006). We also felt that if correlations did exist between childhood IA and later parasocial involvement, evidence for such a connection might be more easily detected in adolescents than in older participants.

Individual Differences in Fantasy

Our first goal was to investigate whether individual differences in the predilection for fantasy might drive engagement in both childhood IAs and parasocial processes, meaning that adolescents who reported high levels of engagement in PSI would also be those that remembered engaging in IAs in childhood. We hypothesized that these behaviors would be related because childhood IAs and PSI share a form of cognition that involves imagination of a social context other than the real one, including invention of interpersonal relationships. We also noted that the literatures on PSI and IAs suggest that individuals who engage in these activities have some characteristics in common. For example, adults who had imaginary companions as children and adults who engage in intense PSI are both described as particularly prone to fantasy and absorption in fictional material (Gleason, Jarudi, & Cheek, 2003; Kavanaugh, Wiley, & Taylor, 2002; Maltby, Day, McCutcheon, Houran, & Ashe, 2006). In fact, PSI is described as a process that requires transportation or absorption into media such that one feels like a part of it (Brown, 2015). Similar experiences are described in relation to childhood IAs. For example, many children become so absorbed in imaginative play that they experience real emotion (Harris, 2000), and play with imaginary companions can be so intense that the companions are experienced as autonomous presences (Taylor, Carlson, & Shawber, 2007). Likewise, children describe losing themselves in their paracosms, spending hours designing and playing in these imaginary worlds (D. Cohen & MacKeith, 1991).

Imagination and Social Development

Our second goal was to investigate the relations between PSI and reports of childhood IAs, including the creation of imaginary companions/worlds and extensive involvement in role play. We did so in the context of social development, considering two theoretical possibilities. First, PSI and childhood IAs might share ontological roots in social development (Adams-Price & Greene, 1990). This claim is suggested by the fact that the functions of PSI and childhood IAs overlap in the literature in the domains of relationship functioning and well-being. For example, both PSI and imaginary companions have been postulated to facilitate coping (Derrick, Gabriel, & Tippin, 2008; Hoff, 2005; Shavel-Jessop & Segal, 2005) and provide close, reciprocal friendships (Gleason, 2002; Gleason & Hohmann, 2006; Isolatus, 1995). IAs and PSI are also both related to sociability (Cole & Leets, 1999; Gleason et al., 2003; Kavanaugh et al., 2002; Maltby et al., 2006; Singer & Singer, 1990). Given these consistencies, we postulated that those adolescents who addressed issues in these arenas through PSI might also have done so through the use of fantasy earlier in childhood. If so, we would expect to find similar patterns of relations between each of these phenomena and our measures of adolescent social development.

Second, we considered whether, despite commonalities in their social functions and imaginative basis, adolescent PSI and childhood IAs might *not* relate to measures of social development in the same way. Even though early childhood IAs and adolescent PSI have both been described as ways that individuals process social information (Giles, 2002; McQuail, Blumler, & Brown, 1972; Taylor, 1999), the reasons for doing so through fantasy at different points in development might be functionally connected to specific developmental tasks. For instance, IAs in early childhood have been implicated in the development of theory of mind (Taylor & Carlson, 1997)—a decidedly different social task from the adolescent issues of

identity formation and autonomy development discussed in relation to PSI (Giles & Maltby, 2004). These social tasks are sufficiently distinct that we would not necessarily hypothesize that the same individuals would turn to fantasy as a strategy for social processing in both instances.

The aspects of social development that we investigated to test these ideas were suggested by the literature on PSI as described below. They included measures of relationship functioning and well-being that are relatively stable over the course of development (e.g., self-esteem, attachment; Trzesniewski, Donnellan, & Robins, 2003; Waters, Merrick, Treboux, Crowell, & Albersheim, 2000).

Relationship functioning. Both childhood IAs and PSI have been discussed in the literature as phenomena designed to compensate for missing or otherwise unsatisfactory relationships; however, empirical support for this idea has been minimal (J. Cohen, 2009; Giles, 2002; Gleason, 2004; Taylor, 1999; Tsao, 1996). Instead, involvement in PSI has been related to an anxious attachment style in close relationships with romantic partners among adults (J. Cohen, 2004; Cole & Leets, 1999). Media users with anxious attachment are most likely to seek intimacy (Cole & Leets, 1999) and to imagine closeness (Greenwood, Pietromonaco, & Long, 2008) with celebrities and are more likely than individuals with other attachment styles to make attempts to contact media figures (Roberts, 2007). In contrast, while little research has examined the relation between childhood IAs and attachment, higher levels of such symbolic play appear related to secure rather than insecure attachment (Slade, 1987).

Another aspect of relationship functioning suggested by the literature as relevant to these phenomena is social support. Adolescents with low levels of support might use PSI to augment or create an internalized feeling of support. Modest corroboration for this idea comes from the association between PSI and the need to belong (Greenwood & Long, 2009, 2011), defined as

the drive to establish and maintain connections with others (Baumeister & Leary, 1995).

Moreover, social support has been negatively related to use of media to compensate for social

deficits (Finn & Gorr, 1988), but the relation between social support and PSI per se remained to

be tested directly. Conversely, childhood IAs are most frequently associated with contexts in

which children feel social support and security (Perse & Rubin, 1989).

 Well-being. Adult PSI has been connected with measures of well-being, such as

depression and low self-esteem—problems that are especially prevalent in adolescent girls

(Petersen, Sarigiani, & Kennedy, 1991). In the context of depression, PSI might afford a forum

for regulation of negative emotions, given that people often turn to television when they are

feeling lonely and that thinking about a favorite program temporarily buffers against negative

mood (Derrick, Gabriel, & Hugenberg, 2009). Similarly, negative affect has been related to PSI

in college students (Greenwood, 2008), suggesting a positive link between PSI and depression as

has been found in adults (Maltby, McCutcheon, Ashe, & Houran, 2001). Childhood IAs, on the

other hand, are typically connected to positive emotionality and affect rather than depression

(Singer & Singer, 1990).

 PSI and childhood IAs might also relate to self-esteem. While findings relating self-

esteem and PSI are equivocal (Derrick et al., 2008; North, Sheridan, Maltby, & Gillett, 2007),

low self-esteem individuals who use PSI appear to do so as a way of mentally reducing the

discrepancies between their actual and ideal selves. The parasocial connections individuals feel

to favorite television characters, wherein rejection is not a risk, appear to boost self-esteem

(Derrick et al., 2009; Derrick et al., 2008). Similar effects have been reported in qualitative

reports of childhood imaginary companions (Hoff, 2005), and children's engagement in intense

imaginative play is sometimes described as an effort to boost feelings of social competence

(Coetzee & Shute, 2003; Harter & Chao, 1992).

Parasocial Processes

Prior to consideration of the nature of parasocial processes in adolescence, a word is in order about the conceptual and empirical distinction between parasocial interactions and parasocial relationships (PSR). In much of the literature, PSI and PSR are not distinguished (Dibble, Hartmann, & Rosaen, 2016; Klimmt et al., 2006); however, recent work has provided separate definitions of these processes. Specifically, PSI is defined as a person's psychological sense of interpersonal communication during media exposure, such as mentally interacting with or even talking to a talk-show host who addresses the camera directly. In contrast, PSR is defined as a, "cross-situational relationship a viewer or user holds with a persona, which may include specific cognitive, affective, and behavioral components" (Schramm & Hartmann, 2008, p. 386). In this study, we used a popular measure, the Parasocial Interaction Scale (Auter, 1992), as an indication of the extent to which adolescents were involved in parasocial processes generally. This interpretation struck us as reasonable given that this scale does not clearly distinguish PSI and PSR (Schramm & Hartmann, 2008). In keeping with historical use of this scale, we refer to this measure as PSI.

Method

Participants

Participants were 61 boys (M_{age} = 14.93, SD = .42) and 107 girls (M_{age} = 14.83, SD = .34) solicited through a letter and consent form sent to all ninth graders at a public high school in a US Northeastern suburb (participation rate: 72.3%). However, the final sample was composed of 100 girls (M_{age} = 14.83, SD = .35) and 51 boys (M_{age} = 14.90, SD = .38) given that 10 boys (16.4%) and 7 girls (6.5%) did not identify a celebrity of whom they were particularly fond.

This uneven gender ratio is common to research on PSI (J. Cohen, 1999, 2003, 2004; Cole & Leets, 1999; Derrick et al., 2009; Derrick et al., 2008; Maltby et al., 2006). Adolescents were 75% Caucasian/White, 11% Asian, 7% Biracial, 3% Latino, 2% African-American, and 1% Native-American, and most (approximately 75%) had parents who had graduated college. Adolescents received $5 gift certificates to a nearby ice cream shop, and the school received a small donation.

Measures

A survey addressed four areas in this order: a) well-being, b) relationship functioning, c), parasocial processes, and d) imaginative activities (IAs) in childhood.

Well-being (self-esteem and depressive symptomatology). The Rosenberg Self-Esteem Questionnaire (RSEQ; Rosenberg, 1965) measured feelings of self-worth and self-acceptance. The scale consisted of 10 statements (e.g., I take a positive attitude toward myself) rated on a 4-point Likert-type scale (1 = *strongly agree* to 4 = *strongly disagree*) reversed so that high scores reflected high self-esteem (Cronbach's alpha = .86). The Children's Depression Inventory-short form (CDI; Kovacs, 1992) measured symptoms of depression (Cronbach's alpha = .84). For each of 10 items, participants chose the statement of three options that best described their feelings in the past two weeks (e.g., 0 = *I do not feel alone*, 1 = *I feel alone many times*, or 3 = *I feel alone all the time*). Higher averaged scores indicated more depressive symptomatology.

Relationship functioning. The relationship measures included attachment to parents and social support from parents and peers. Furman and Wehner's Behavior Systems Questionnaire (BSQ; Furman & Wehner, 1999) measured participants' parental attachment through 45 statements on a 5-point Likert scale. The BSQ contains three subscales, comprised of 15 items each: Secure Behavioral Style (e.g., My parents and I really try to understand each others' points

of view), Dismissing Behavioral Style (e.g., I do not put much effort into trying to have good

relationships with my parents), and Preoccupied Behavioral Style (e.g., I am afraid that I turn to

my parents more often than they want me to), with higher scores indicating higher endorsement

of that attachment style. Based on a previous factor analysis (Jones & Furman, 2010) that found

two factors we used two scores: an avoidant score (Cronbach's alpha = .93), which was

calculated by reverse scoring the secure items and averaging them with the dismissing items, and

an anxious score (Cronbach's alpha = .77)—the average of the items for the preoccupied style.

A modified version of Procidano and Heller's (1983) scale of Perceived Social Support

(PSS) from Friends and from Family measured the extent to which friends and family fulfilled

perceived support needs. Responses to the 20 items on each subscale of the PSS were altered

from three choices (yes/no/don't know) to a 4-point Likert scale (1 = *strongly disagree* to 4 =

strongly agree) so as to increase scale variance. Sample questions included, "Most other people

are closer to their [friends/family] than I am" and "My [friends/family] give me the moral

support I need." Coefficient alphas were .83 for friends and .93 for family.

Parasocial interactions (PSI). Consistent with previous research (e.g., Derrick et al.,

2008), participants were first asked to identify a same-sex celebrity of whom they were

particularly fond ("Most teenage girls/boys have a favorite celebrity or a favorite character from

TV, film, or pop culture: which FEMALE/MALE CELEBRITY are you particularly fond of?").

Next, they completed a commonly-used version (Auter, 1992; Cole & Leets, 1999; Rubin &

Perse, 1987) of the 20-item Parasocial Interaction Scale (Rubin, Perse, & Powell, 1985) with

good construct validity and reliability (Auter, 1992; alpha for this study = .91). Items describe

behaviors and feelings toward a favorite media figure (e.g., "I think this person is like an old

friend") on a 5-point Likert scale (1 = *disagree strongly* to 5 = *strongly agree*) and were

averaged for an overall score.

Imaginative activities. We asked adolescents for their recollections (yes/no) and ages of childhood engagement through questions regarding four imaginative behaviors: a) *Did you have an invisible imaginary companion as a child?* b) *Did you have an imaginary companion that was an object as a child? These are objects children treat as people, with personalities—not just an object that provides comfort.* c) *Some children like to pretend that they are a different person. As a child, did you ever impersonate a specific character for a long time (days or weeks on end)?* and d) *Some children create imaginary worlds. As a child, did you ever create an imaginary world?* We also asked participants for descriptions of each imaginative activity, and although we did not code these responses, we used them to verify that phenomena described were consistent with descriptions in the literature (Carlson & Taylor, 2005; Gleason, Sebanc, & Hartup, 2000; Root-Bernstein & Root-Bernstein, 2006).

Procedure

Consent forms were distributed two weeks prior to data collection; participants completed assent forms. Surveys took approximately 45 minutes and were completed on paper during a 52-minute class period. Researchers were present to supervise and answer questions.

Results

Descriptive Statistics

Descriptive statistics and correlations between study variables are presented in Table 1.

Parasocial interactions (PSI). Average scores for PSI fell in the lower half of the range (see the first column of Table 1), suggesting normative levels of engagement in parasocial interactions. No gender difference emerged, $t(149) = 1.68$, $p = .867$.

Insert Table 1 about here

Imaginative activities. Overall, 60.7% of the adolescents in the sample reported engaging in childhood imaginative activity (IA), but a significantly higher proportion of girls than boys remembered such activities (see Table 2). Similar gender differences emerged in the

Insert Table 2 about here

proportions of adolescents reporting invisible imaginary companions and imaginary worlds, and to a marginal extent, personified objects. Reports of impersonation of characters did not differ significantly by gender. Girls ($M = 1.17$, $SD = 1.02$) also remembered engaging in a higher number of different IAs than boys ($M = .51$, $SD = .78$), $t(148) = 4.05$, $p < .001$, $d = 0.67$. Of the adolescents reporting such activities, 73.7% of boys and 59.7% of girls endorsed a single type, 15.8% of boys and 22.22% of girls endorsed two types, and 10.5% of boys and 15.3% of girls endorsed three types. Two girls (2.8%) but no boys reported engaging in all four types. Overlap was greatest among recollections of invisible friends and imaginary worlds, but every IA appeared in combination with every other. IAs reported were largely recollections from early childhood as all reports of invisible imaginary companions and personified objects, 75.8% of impersonation, and 81.1% of creation of imaginary worlds began at age 7 or younger.

In the following analyses, we combined adolescents who reported participation in any of the four types of imaginative activity into a single group for three reasons. First, theoretically, they all involve the same type of imaginative process—removing oneself from the here and now and creating imaginary others (Harris, 2000). Second, many adolescents reported multiple types, but the overlap between types was not systematic, and third, the small ns observed within types, particularly among boys, made investigation of our questions within IA type impractical.

Individual Differences in Fantasy

Our first hypothesis was that adolescents might show some continuity between current

engagement in PSI and memories of childhood IA, suggesting a predilection for fantasy related

to these forms of imaginative behavior. To test this hypothesis, we ran a 2 (gender) by 2 (yes/no

reports of IA) ANOVA using PSI as a dependent variable. No main effects emerged for IA

memories or gender, but the interaction was marginally significant, $F(1, 146) = 3.80, p = .053$,

partial $\eta^2 = .025$. Pairwise comparisons revealed that PSI of girls who did not recall childhood

IA ($M = 2.92, SD = .74$) was marginally higher than that of girls who did ($M = 2.64, SD = .78; p$

$= .091$, partial $\eta^2 = .02$) and that of boys who did not ($M = 2.59, SD = .71; p = .087$, partial $\eta^2 =$

$.02$). No other group differences emerged. These results do not support the hypothesis; if

anything, they demonstrate a discontinuity in fantasy, but the effect is minimal and only for girls.

Relationship Functioning and Well-Being

Our hypotheses concerning PSI and childhood IA focused on whether they were related

to adolescent relationship functioning and well-being in the same way. To test this hypothesis,

we ran a multiple regression entering gender first, followed by memories of childhood IA, and

lastly PSI (centered). This order was chosen because of the gender differences in PSI found in

the literature (e.g., Hoffner & Buchanan, 2005; Raviv, Bar-Tal, Raviv, & Ben-Horin, 1996) and

in interaction with IA in this study, and the fact that childhood IA was based on memories of

behavior that preceded adolescent PSI. All possible interactions were also entered as predictors.

Measures of relationships (i.e., attachment, social support) and well-being (i.e., self-esteem,

depression) were used as dependent variables. None of the coefficients for the interaction terms

were significant for any model for any of the dependent variables, so below we report only main

effects.

Regression results for the relationships variables are shown in Table 3. For avoidant

attachment, none of the coefficients were significant predictors. However, individual differences

in anxious attachment were significantly predicted by both childhood IA and PSI, but in opposite

directions. Adolescents who reported childhood IA reported lower levels of anxious attachment

($M = 2.15$, $SD = .48$) than those who did not ($M = 2.47$, $SD = .54$), whereas anxious attachment

was positively predicted by adolescent PSI. The relation with social support from friends was

also different for PSI versus childhood IA. PSI positively predicted social support from friends,

but childhood IA did not (see Table 3). Social support also differed by gender; means were

higher for girls ($M = 3.17$, $SD = .35$) than boys ($M = 2.89$, $SD = .40$). None of the variables

significantly predicted social support from family. As for well-being, none of the predictors

related to self-esteem or depressive symptoms (see Table 4).

Insert Tables 3 and 4 about here

Discussion

The findings from the current study suggest that parasocial interaction (PSI) and

childhood imaginative activities (IAs), despite their shared basis in fantasy, function differently

in development. The lack of correspondence between PSI and recollections of childhood IAs

suggests that these phenomena are not a function of individual differences in the predilection for

fantasy. The differential associations between each phenomenon and the relationship functioning

variables similarly suggest that these behaviors are not fostered by the same interpersonal issues.

Instead, PSI may be a marker for compromises in adolescent relationship functioning with

parents, but an indicator of social support from friends. Memories of early childhood IAs,

however, appear associated with positive aspects of adolescent relationship functioning with

parents and unrelated to support from friends. As for well-being, the lack of connection to our

measures is not consistent with the adult literature on PSI. Taken together, these findings suggest

differentiated functions for childhood IA and PSI in development, and that PSI might have a

different meaning with respect to psychological well-being in early adolescence versus at later points in development.

Imaginative Activities and Social Development

Retrospective reports of childhood IAs and adolescent PSI were largely unrelated, arguing against the notion that engagement in both behaviors is promoted by a predilection for fantasy or a cognitive style that invokes imaginary others. Although these phenomena are prevalent, the current findings do not offer support for systematic individual differences in the use of social fantasy across development. Instead, they suggest that social imagination might be a strategy employed by a wide range of individuals for varying purposes. Those purposes might relate to the developmental task for which social imagination is used rather than some characteristic of the person using it.

The connections between memories of childhood IAs and lower levels of anxious attachment emphasize the different developmental links of these early imaginative behaviors in comparison with those of PSI. Adolescents who remembered IAs were less likely to endorse an anxious attachment style than their peers, suggesting that early IAs might be less common among children growing up in a social context characterized by this type of insecurity in relationships with parents. This interpretation has merit for two reasons: a) anxious attachment has been associated with reduced pretend play in exploration among preschool-aged children (McElwain, Cox, Burchinal, & Macfie, 2003), and b) engagement in early childhood IAs has been associated with positive functioning in interpersonal relationships (Singer & Singer, 1990). If children in early childhood are focused on aspects of social cognition such as perspective-taking and differentiation of relationships (Gleason, 2002; Taylor & Carlson, 1997), childhood IAs might constitute a context in which securely attached children (or at least non-anxiously

attached children) address these goals. In addition, childhood IAs did not link to adolescent

well-being, which is consistent with research examining IA and well-being simultaneously in

early childhood (Bouldin & Pratt, 2002; Taylor, 1999). If anything, childhood IA appears to be

an indicator of social adjustment in early childhood, and theoretically, beyond. Prospective

research is needed to describe the role of early childhood IA, if any, in adolescent psychological

adjustment.

Parasocial Interaction in Early Adolescence

As one of a few examinations of PSI focused specifically on early adolescence, our

findings provide both parallels and differences with respect to the adult literature on PSI. For

example, the connections between PSI and anxious attachment style replicate those found for

attachment to romantic partners in older samples (J. Cohen, 2004; Cole & Leets, 1999), despite

the focus in this study on attachment to parents. The relation between PSI and a preoccupied

attachment style thus appears to transcend the orientation of the relationship to the attachment

object, which is consistent with the theory that attachment influences a person's general schema

for relationships. A significant benefit and function of PSI might be to supplement existing

relationships with an imagined one that provides positive affiliation and security from rejection

(Adams-Price & Greene, 1990). These findings support the theory that engagement in PSI helps

individuals compensate for problems in relationship functioning (Greenwood & Long, 2009).

The lack of correlation between PSI and self-esteem is also consistent with some of the

adult literature, particularly with work describing an interest in celebrities and their lives as a

form of entertainment rather than an imagined relationship per se (North et al., 2007). Other

work with adults finds a self-esteem enhancing property to PSI for those individuals who engage

in a more intense, emotional relationship with their favorite celebrities (Boon & Lomore, 2001;

Derrick et al., 2008; North et al., 2007). One interpretation of our results is that the average

scores we obtained on our PSI measure are indicative of a level of PSI that is more consistent

with its use as a form of entertainment, rather than an intensely personal imagined relationship.

Such interpretations are also relevant to the lack of relation found in this study between PSI and

depression, given that such mental health issues often emerge in adult samples reporting higher

intensity of involvement in PSI (Maltby et al., 2004).

An alternative, or additional, interpretation of our results is that the self-esteem-

enhancing properties of PSI experienced by some adults might not be part of PSI in early

adolescence. This idea is consistent with work focused on romantic PSI in early adolescent girls,

which also found no relation between idolization of media figures and self-esteem (Engle &

Kasser, 2005). However, self-esteem and anxious attachment were positively correlated in this

study—a finding consistent with the adult attachment literature (Bartholomew & Horowitz,

1991). The lack of relation between PSI and self-esteem, despite the positive relationships

between each of these variables and anxious attachment, suggests the hypothesis that creation of

these secondary attachments in early adolescence might have a different purpose from their use

in early adulthood. Low self-esteem adults appear to use PSI as a way of moving closer to their

ideal selves; for adolescents, who are still exploring options for their ideal selves (Giles &

Maltby, 2004), PSI might be a more normative process rather than of particular use to those with

low self-esteem.

Our findings that PSI is associated with anxious attachment and social support from

friends are consistent with the idea that this imaginative behavior might be related to normative

social challenges of early adolescence. This developmental stage is often characterized by

increasing autonomy from parents, which might be particularly difficult for adolescents with

anxious attachment relationships, and increasing focus on peer relationships. Engaging in PSI might be a strategy used to experience simulated acceptance by the peer group without fear of rejection (Giles & Maltby, 2004). Also, as normative forms of PSI often include discussing celebrities or media characters with friends (Giles, 2002), an empirical question for future research is whether collective admiration of media figures might evolve into PSI among groups of adolescents and bolster their perceptions of social support from each other.

Limitations

This study has several limitations. For example, the use of retrospective data for childhood IAs is, of course, subject to the vicissitudes of memory, and we depended upon brief descriptions and adolescents' own evaluation of whether any IA was experienced. We were also unable to parse the differential relationships between types of IA (e.g., invisible friends versus imaginary worlds) and our variables of interest owing to overlap in these phenomena and the small ns; similarly, the smaller sample of boys versus girls in the sample restricted the number and type of analyses that could be conducted. Perceptions of the social desirability of the behaviors studied might also have affected responses regarding both IA and PSI. Another shortcoming of our approach is that we did not assess current involvement in IA, despite evidence that these activities may last into adolescence (e.g., Aguiar, Mottweilier, Taylor, & Fisher, 2017). Lastly, this study did not make a distinction between parasocial interaction and parasocial relationships as has been described in recent literature (Dibble et al., 2016). Our results regarding IA and PSI, in particular, could have been owing to the large proportion of IAs that included imaginary relationships and the mixture of interactions and relationships tapped by the PSI.

Conclusions

In adolescence, social forms of imagination such as PSI might afford a context for adolescents to address issues of identity development and autonomy from parents (Giles & Maltby, 2004). The connections between PSI, relationship functioning, and well-being beg the question of whether engaging in these imagined interactions leads to improved outcomes for these adolescents later in development. After all, Taylor, Hulette and Dishion (2010) found that high risk adolescents with imaginary companions experienced concurrent behavioral difficulties, but that these same adolescents showed better outcomes than their peers a few years later. The data presented here likewise suggest that imaginative activities in childhood contexts are correlated with better social functioning in adolescence, pointing to the need for longitudinal research to address the possibility that this relationship is predictive.

While imagined social behaviors are unlikely to supersede real ones in importance, they might play a significant role in development. Indeed, the findings presented here suggest a meaningful—albeit modest—role for imagination within the social domain. The emphasis on imagination as a tool for mentally escaping the here-and-now and engaging in sophisticated cognitive processes such as consideration of counterfactuals, planning, and decision-making is certainly well-deserved, but it belies the centrality of social relationships at all points in human development. Our findings suggest some ways in which this tool might be of interest to researchers of social developmental processes and psychological well-being.

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Table 1

Overall Group Means (M) and Standard Deviations (SD) and Correlations between Study Variables

Variable	*M*	*SD*	1	2	3	4	5	6
1. Parasocial interactions	2.69	.75	-					
2. Avoidant attachment	2.82	.61	-.002					
3. Anxious attachment	2.27	.53	.21**	.11				
4. Social support: friends	3.07	.39	.17*	-.13	-.25**			
5. Social support: family	2.94	.61	-.05	-.78***	-.16+	.23**		
6. Self-esteem	3.06	.57	-.11	-.35***	-.27***	.30***	.46***	
7. Depressive symptoms	.38	.38	.10	.33***	.28***	-.28***	-.46***	-.66***

Note. N = 151.
+*p* = .051. **p* < .05. **p ≤ .01. ***p ≤ .001.

Table 2

Percentage of Participants Reporting Imaginative Activities by Type and Gender and Chi-square Analyses of Gender Differences

	Percentage reporting imaginative activities			Gender differences		
	Total sample	Girls	Boys			
	($N = 150^{a}$)	($n = 99^{a}$)	($n = 51$)	χ^2 (1, $N = 150^{a}$)	p	Cramer's V
Any imaginative activity	60.7	71.7	37.3	16.29	< .001	.34
Invisible imaginary companion	25.2	32.0	11.8	6.31	.012	.22
Personified object	19.3	24.2	9.8	3.62	.057	.17
Impersonation of character	23.3	25.3	19.6	0.33	.568	.06
Imaginary world	26.7	35.4	9.8	9.97	.002	.25

[a]$N = 151$ (girls $n = 100$) for invisible imaginary companions, but one participant did not provide information on any other imaginative activity.

Table 3

Regression Analyses for Gender, Childhood Imaginative Activities and Parasocial Interactions Predicting Relationship Variables (N = 150)

	Variable	Avoidant attachment				Anxious attachment			
		R^2	ΔR^2	F for ΔR^2	β	R^2	ΔR^2	F for ΔR^2	β
Step 1:	Gender	.004	.004	0.63	-.065	.002	.002	0.36	.049
Step 2:	Gender				-.050				.061
	Childhood IA	.006	.002	0.26	-.044	.093	.091	14.75***	-.321***
Step 3:	Gender				-.049				.053
	Childhood IA				-.045				-.310***
	PSI	.006	.000	0.01	-.007	.131	.038	6.37**	.195**
		Social support from friends				Social support from family			
Step 1:	Gender	.112	.112	18.75***	.335***	.001	.001	0.20	.037
Step 2:	Gender				.300***				.009
	Childhood IA	.121	.009	1.51	.101	.007	.006	0.88	.080
Step 3:	Gender				.294***				.011
	Childhood IA				.110				.078
	PSI	.149	.028	4.77*	.167*	.009	.002	0.24	-.041

Note. IA = imaginative activities; PSI = parasocial interaction. PSI is centered at the mean.
*$p < .05$. **$p \leq .01$. ***$p < .001$.

Table 4

Regression Analyses for Gender, Childhood Imaginative Activities and Parasocial Interactions Predicting Well-Being

	Variable	Self-esteem				Depression			
		R^2	ΔR^2	*F* for ΔR^2	β	R^2	ΔR^2	*F* for ΔR^2	β
Step 1:	Gender	.003	.003	0.45	.055	.000	.000	0.80	-.020
Step 2:	Gender				.039				.002
	Childhood IA	.005	.002	0.29	.047	.004	.004	0.46	-.065
Step 3:	Gender				.044				-.002
	Childhood IA				.041				-.060
	PSI	.019	.014	2.12	-.120	.012	.008	0.27	.091

Note. IA = imaginative activities; PSI = parasocial interaction. PSI is centered at the mean.
p < .05. **p ≤ .01. ***p < .001.