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Longitudinal Outcomes of Young High-Risk Adolescents With Imaginary Companions

Marjorie Taylor, **Annmarie C. Hulette**, and **Thomas J. Dishion**
Marjorie Taylor and Annmarie C. Hulette, Department of Psychology, University of Oregon; Thomas J. Dishion, Department of Psychology, University of Oregon, and University of Oregon Child and Family Center

Abstract

The creation and cultivation of an imaginary companion is considered to be a healthy form of pretend play in early childhood, but there tends to be a less positive view of older children who have them. To test the extent that having an imaginary companion in middle school is associated with positive or negative outcomes, an ethnically diverse sample of 152 middle school children at high risk for developing problem behaviors were interviewed about imaginary companions, coping styles, and problem behaviors. Although having a current imaginary companion (n =13) was associated with using more positive coping strategies, peer nomination data indicated that these children had low social preference with peers. In addition, our data indicated that these children were perceived by their parents as having more problem behaviors compared with young adolescents who never had imaginary companions (n = 108) or children who had imaginary companions in the past (n = 31). However, a longitudinal follow-up at the end of high school indicated that the children who had imaginary companions in middle school showed greater positive adjustment on a multiple-indicator adjustment construct.

Keywords

imaginary companions; pretend play; adolescence; coping; resilience

The creation of an imaginary companion is a form of fantasy production that is relatively common in early childhood and, in the preschool period, tends to be associated with positive characteristics such as advanced theory of mind, narrative skills, and the ability to get along well with others (Gleason, 2004; Singer & Singer, 1990; Taylor, 1999; Taylor & Carlson, 1997; Trionfi & Reese, 2009). The developmental course of this type of pretend play is not well understood, but imaginary companions are not solely a phenomenon of early childhood, as has often been supposed (e.g., Somers & Yawkey, 1984). For example, Pearson et al. (2001) found that 28% of children age 5 to 12 years had imaginary companions. In addition, there is evidence that many adolescents write to imaginary companions in their diaries (Seiffge-Krenke, 1997) and that imaginary companions might have developmental ties with creative activities in adulthood (Taylor, Hodges, & Kohanyi, 2003).

Research on the forms and functions of imaginary companions in older children is needed to better understand the connection between early role-play and later developing imaginative behaviors, but there are few studies of imaginary companions created after the preschool

Correspondence concerning this article should be addressed to Marjorie Taylor, Department of Psychology, 1227 University of Oregon, Eugene, OR 97403. mtaylor@uoregon.edu.

period (see Hoff, 2005, for descriptions of imaginary companions created by 10-year-olds) and no longitudinal studies that follow young adolescents who report having imaginary companions. Given the research linking early childhood imaginary companions with creativity and social understanding, we suspected that interactions with imaginary companions might be associated with positive characteristics in adolescents. However, the prevailing view is currently much more negative. On the basis of case studies, many researchers report that imaginary companions in adolescence have clinical significance and are related to various disorders (Gupta & Desai, 2006; Sawa, Oae, Abiru, Ogawa, & Takahashi, 2004).

In an exploratory study, we examined the extent that having an imaginary companion in adolescence was associated with an increased risk for current and/or future mental health and behavioral problems. Alternatively, having imaginary companions might provide a functional coping strategy that contributes to resilience in adolescence. Certainly having an imaginary companion could be construed as a form of cognitive coping, which is beneficial for adolescents in stressful contexts (Compas, Hinden, & Gerhardt, 1995). It is also possible that imaginary companions are a form of entertainment that is associated with neither problem behavior nor resilience. To increase the base rates of problem behaviors and negative outcomes, we conducted this research with middle school children whom teachers identified as showing problem behaviors. The use of a high-risk sample limits the generalizability of our results but provides an increased prevalence of problem behaviors and therefore more power to examine the relation between early adolescent imaginary companions and adjustment. To our knowledge, there is only one other study of imaginary companions in an ethnically diverse sample (Mathur & Smith, 2008).

Method

Participants

The children and families were participants in a larger study ($N = 998$) examining problem behaviors in adolescence (Dishion & Kavanagh, 2003). For the larger study, consent from parents was obtained through the school context for administering a teacher-screening measure, peer nominations, and a self-report survey (above 90% consent was obtained). Students were paid $20 for completing the school assessment and/or returning the consent form, regardless of consent. The sample was primarily low socioeconomic status (based on parent employment status, education level, level of housing, gross annual income, and financial aid received) and was drawn from three middle schools in an urban area of the Pacific Northwest.

To recruit high-risk participants, we conducted home visits to explain the study procedures. We selected children who had the highest levels of problem behavior for males and females within each school on a teacher-screening measure (16-item Teacher Risk Perception Scale; Soberman, 1995). Sixty-six percent of the high-risk families agreed to participate. The sample included 152 children (86 girls and 66 boys; mean age = 12.4 years, range = 11.6–14.8 years) and was ethnically diverse (61 African Americans, 49 European Americans, 13 Latinos, and 29 mixed race/other). Assessments were done in English, but Spanish-translated assessments were also available.

Materials and Procedure

Imaginary companions—The middle school assessment included interviews about activities that were conducted with the children at their homes or at the research office. As part of this interview, children were asked if they had ever had a pretend friend. Children who said yes were asked to provide further information.

Peer nominations (6th grade)—For all the students whose parents provided consent for the school assessment, lists of student names were distributed. Each child was asked to select as many students as he or she wished as *most liked* or *least liked*. Social preference scores were computed by subtracting the *z* score of the number of times the participant was nominated as *least liked* from the *z* score of the number of times the participant was nominated as *most liked* (Coie, Dodge, & Coppotelli, 1982).

Problem behaviors—Problem behaviors were assessed with the Child Behavior Checklist 4-18 (CBCL; Achenbach, 1991a, 1991b), using Parent Report, Teacher Report, and Youth Self-Report measures. Behaviors were rated over the prior 6-month period on a 3-point scale of 0 (*not true*), 1 (*somewhat or sometimes true*), and 2 (*very true/often true*). Standardized T scores were computed for Externalizing and Internalizing broadband scales, with normal range as less than 60, borderline as 60-63 and clinical as greater than 63. For the Parent Report measure, most of the informants were mothers; however, when data were available from fathers, the two scores were averaged.

In addition to the CBCL, 130 of the parents categorized their children's seventh-grade academic performance as 0 (*failing*), 1 (*below average*), 2 (*average*), or 3 (*above average*) for each of four academic subjects (reading or English, writing, arithmetic or math, and spelling).

Coping behaviors—Using the Life Events and Coping Inventory (Dise-Lewis, 1988), we asked children to rate how likely they were to engage in 52 behaviors described as "things that students your age said they might do when they are feeling stressed," ranging from 1 ("*I would definitely not do this*") to 9 ("*I would definitely do this*"). Positive coping was indexed by the mean subscale scores for Stress Recognition (e.g., "get advice from someone"), Distraction (e.g., "read a book"), and Endurance (e.g., "try to forget about it"). Negative coping was indexed by the mean subscale scores for Aggression (e.g., "get in a fight with someone") and Self-Destruction (e.g., "hurt myself physically").

Longitudinal follow-up—Six years after the middle school assessment, Composite International Diagnostic Interviews (CIDI) were conducted by trained interviewers in person or by phone. The CIDI is a structured diagnostic interview developed by the World Health Organization (1997) to assess for mental health disorders based on criteria from the *Diagnostic and Statistical Manual of Mental Disorders* (*DSM–IV*; 4th ed.; American Psychiatric Association, 1994). These interviews also provided information about the participants' dependence on and/or abuse of illegal drugs. In addition, we collected high school graduation records and juvenile court records of arrests.

Results

Imaginary Companions

Two coders categorized a child as currently having an imaginary companion (IC) if the child described one and reported that he or she was still communicating with it (current-IC group: $n = 13$; mean age = 12.2 years, range = 11.7–12.7; 8 girls and 5 boys; see Appendix for descriptions of these imaginary companions). An additional 31 children described imaginary companions but reported that they were no longer communicating with them (past-IC group: mean age = 12.6 years, range = 11.7–14.2; 11 boys and 20 girls). One hundred and eight children reported never having imaginary companions (no-IC group: mean age = 12.4 years, range = 11.6–14.8; 58 girls and 50 boys). The three groups did not differ in age, gender, or ethnicity.

Peer Nominations

A one-way analysis of variance (ANOVA) yielded a significant effect for IC group, $F(2, 141) = 5.25$, $p = .006$, $\eta^2 = .07$ (see Table 1). The no-IC and past-IC groups did not differ, but children in both of these groups were rated more positively by peers than were children in the current-IC group, $t(113) = 2.98$, $p = .004$, Cohen's $d = 0.86$, CI = [.48, 2.37], and $t(40) = 2.99$, $p = .005$, Cohen's $d = 1.01$, CI = [.57, 2.92], respectively.

Problem Behaviors

There were no differences for the current-IC, past-IC, and no-IC groups on the self-report or teacher-report measures, but children with current ICs were rated by parents as exhibiting more externalizing problems than were children with no IC, $t(110) = -2.23$, $p = .03$, Cohen's $d = 0.71$, CI = [−11.57, −.68]; see Table 1. There were no group differences for parent report of academic performance; the children in this high-risk sample were not doing well academically ($M = 0.92$, $SD = .54$; score of 1 = below average).

Coping Behaviors

A multivariate analysis of variance (MANOVA) with IC status as the between-groups variable was significant, Wilks's lambda =.931, $F(4, 294) = 2.68$, $p = .03$, $\eta^2 = .035$. Positive coping was significantly related to IC status, $F(2, 148) = 3.99$, $p = .02$, $\eta^2 = .05$, but negative coping was not related to IC status, $F(2, 148) = 1.22$, *ns.* Children in the current-IC group reported higher rates for positive coping than did children in the no-IC group, $t(118) = 2.81$, $p = .006$, Cohen's $d = 0.91$, CI = [.32, 1.87], and children in the past-IC group, $t(42) = 2.14$, $p = .038$, Cohen's $d = 0.74$, CI = [.05, 1.73]; see Table 1.

Longitudinal Follow-Up

About six years after the middle school data collection (mean age = 18.9 years, range = 18.0–21.3 years), 84 of the 108 children from the no-IC group (77.8%), 25 from the past-IC group (81%), and 11 from the current-IC group (85%) participated in the follow-up assessment. Attrition was primarily due to the inability to locate the participant, with very few declining to participate. The retention rate was comparable to the rate for the larger sample (Dishion & Connell, 2007). An aggregate measure of positive outcome was derived from the diagnostic interview, systematic search of court records and school graduation records (i.e., no illegal drug use, no *DSM–IV* (American Psychiatric Association, 1994) psychiatric diagnoses, graduation from high school, and no history of police arrest). Of the adolescents in the current-IC group, 72.7% (8 out of 11) showed this successful outcome pattern, compared with 32% of the past-IC group (8 out of 25) and 26.2% of the no-IC group (22 out of 84), $\chi^2(2) = 9.74$, $p = .008$, Cramer's $V = .285$.

Discussion

In this study, we followed high-risk children longitudinally to assess the extent to which having an imaginary companion in middle school was predictive of later positive or negative outcomes. During the middle school assessment, children with current imaginary companions showed a mixed pattern of higher scores on positive coping strategies yet more externalizing behaviors. In addition, these children had received lower social preference scores in the sixth grade. However, the assessment at the end of high school indicated that having an imaginary companion in middle school was not necessarily an early marker of pathology for high-risk children and could potentially be a vehicle for coping.

It is noteworthy that although imaginary companions have sometimes been linked with dissociation (e.g., McLewin & Muller, 2006), we did not find evidence that having an imaginary companion in early adolescence was an early sign of a pathological dissociative

disorder. However, the small number of children in the current-IC group (13 middle school children, with only 11 participating in the follow-up assessment) was a challenge for our analyses and certainly limited statistical power. Similarly, although the relation between imaginary companion status in middle school and positive outcome at the end of high school was significant, caution is in order when interpreting this finding. Not only was the sample of middle school children with current imaginary companions small, it also was highly selective. Our 12-year-old participants were among the children considered by their teachers to show the highest levels of poor school adjustment in the sixth grade and, by extension, the most likely to continue and escalate problem behavior in later adolescence (Loeber & Dishion, 1983). And the teachers' ratings did turn out to be predictive; by the end of high school, 39.2% of the 152 participants met the criteria for one or more mental disorders (mostly mood and anxiety disorders, but also instances of psychotic and somatoform disorders). In addition, 31.7% were abusing and/or dependent on illegal drugs, 39.5% had dropped out of high school, and 16.7% had a history of police arrest.

The incidence of having current imaginary companions in this sample (8.6%) replicated the results for a normative sample of 12-year-olds (9%; Pearson et al., 2001), but the social and emotional functions of imaginary companions for high-risk children might be somewhat different. The striking mix of positive and negative characteristics in the descriptions of the imaginary companions suggests that collecting such descriptions in a larger sample might provide important clues about function. With our small sample, longitudinal analyses of the developmental processes that link entertaining imaginary companions in young adolescence with positive adaptation were undetected, perhaps due to low statistical power. Perhaps interactions with imaginary companions in middle school are simply associated with an effective coping style. Or, as studies with younger children have suggested that it is possible to derive comfort from imaginary companions (Sadeh, Hen-Gal, & Tikotzky, 2008), imaginary companions might contribute more directly to resilience.

The finding that high-risk youth with imaginary companions do not increase their levels of problem behavior in high school might in part be a side effect of their marginal peer relationships. It has been noted in previous research that peer rejection and isolation can serve as protective factors in adolescent development (Bierman, 2004). Our participants with imaginary companions had low social preference scores at age 11. This lack of peer acceptance might have served as a barrier to engaging in peer cliques in general and deviant peer cliques in particular. Deviant peer involvement has been well established as the social context that leads to amplification in problem behavior during adolescence (Dishion, Piehler, & Myers, 2008). Thus, not engaging in the dynamics of friendships that promote problem behavior might have prevented escalations in problem behavior, despite their teacher-identified risk. Perhaps the attractions of involvement with deviant peers are less compelling for adolescents who have the capacity and inclination to supplement their social world with their imagination. While this account is speculative, an important direction for future research will be to explore the peer context of children and adolescents with imaginary friendships, with respect to longitudinal change in adaptation and maladaptation.

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Appendix

Descriptions of Current Imaginary Companions (ICs) of Children in Seventh Grade

Participant	Description of imaginary companion
Male 11 years, 11 months Mixed race	He was another me, acted like me. Muscles and super strong. Curly hair with brown eyes. Johnny Five. Child likes that he is always there; does not like that he isn't real. IC is a secret ("They wouldn't believe me, just laugh at me").
Female 12 years, 5 months African American	She wants you to say something about someone and runs back and tells someone. Child likes that she listens; does not like that she starts many problems. IC is a secret ("not something to talk about").
Female 12 years, 5 months Mixed race	She acts shady. She is small and greedy. She likes people to buy her stuff. Child likes that she shares. Does not like that she is shady; that she "takes all my stuff; if you give her something, she is greedy." IC is a secret ("I don't like to tell people things that much").
Female 12 years, 6 months Mixed race	Acts goofy, like me. Blonde hair, blue eyes, always wears dark clothes, black lipstick. Likes that he actually understands people. Does not like that "some times he gets angry at me and throws things at me. They don't hit me; they go through me." IC is a secret ("They wouldn't believe a thing").
Male 12 years, 8 months European American	Tazmanian Devil dolls. Child likes that they listen and do not talk back and that they can get grounded. There is nothing that he does not like about them. Child has told people about IC.
Female 12 years, 8 months European American	There's six infants, three 4-year-olds (Marco, Mario, and Sandy), seventh grader (Jesse), Sydney, and two adults (Brain and Jason). Child likes that they are babies; does not know what she does not like about them. IC is a secret; child does not know why she has not told anyone.
Male 12 years, 8 months European American	Short, 12 years old, acts nice. Child likes that she is nice to others and to him; does not like that sometimes she is mean. Child has told people about IC.
Male 12 years, 9 months European American	White, short hair, baggy pants, annoying. There is nothing that child likes about him; does not like that he is annoying, thinks he is really tough, but he isn't. IC is a secret ("Real friend wouldn't be friends anymore").
Female 12 years, 11 months European American	She's imaginary and doesn't like when people sit on her. She's short, she's white. Child likes that it makes everybody laugh. There is nothing that she does not like about her. Child has told people about IC.
Male 13 years, 1 month African American	Looks "like a brainiac; he thinks he knows everything. Actually he does know everything." Child likes that he's cool ("Tries to keep you out of trouble. Helps me on bad stuff—like if I'm messed up—gets back on track.") There is nothing that child does not like about him except that he dresses nerdy. IC is a secret ("Didn't tell anyone because I think it's embarrassing; think they'd laugh at me").
Female 13 years, 2 months Mixed race	Twin, acted like me and looked like me. Child likes that she is smart and short. There is nothing that she does not like about her. IC is a secret ("Didn't tell anyone—she told me not to").
Female 13 years, 2 months European American	Fred: He's funny. Dirty blonde hair down to his cheekbones, bluish green eyes, long lashes. Child likes that he's fun to talk to ("We always know what the other one's going to say"); does not like that he can be rude. Child has told people about IC.
Female 13 years, 4 months Mixed race	Jack the Ripper: nice, talks to him through cards, looks like the real Jack the Ripper. Child likes that he is nice, that she can talk to him and that he likes her. Does not like that he killed people in the past. Child has told people about IC.

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Table 1

Adjustment Patterns in Middle School as a Function of Imaginary Companion (IC)Status

Group	Positive coping	Negative coping	Social preference (6th grade)	Externalizing behaviors	Internalizing behaviors
No IC	*n* = 107	*n* = 107	*n* = 102	*n* = 99	*n* = 99
	6.88 (1.36)	2.12 (1.15)	−.29 (1.62)	55.45 (9.49)	49.83 (9.58)
Past IC	*n* = 31	*n* = 31	*n* = 29	*n* = 25	*n* = 25
	7.09 (1.33)	2.45 (1.23)	.03 (1.77)	56.94 (9.33)	53.54 (7.64)
Current IC	*n* = 13	*n* = 13	*n* = 13	*n* = 13	*n* = 13
	7.98 (1.04)	1.97 (.96)	− 1.71 (1.69)	61.58 (7.73)	53.54 (8.94)

Note. Standard deviations are in parentheses.