Self-perceptions, parent-perceptions, and meta-perceptions of the interpersonal efficacy of adolescents with autism spectrum disorder

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ABSTRACT

Background: How do adolescents with autism spectrum disorder (ASD) perceive their interpersonal skills and are these "self-efficacy perceptions" accurate? And how do they perceive that their parents perceive their interpersonal skills and are these "meta-perceptions" accurate?
Method: We used the Circumplex Scales of Interpersonal Efficacy to assess self-perceptions and parent-perceptions of the efficacy of adolescents with ASD ($n = 22$) and without ASD ($n = 22$) for a broad set of social behaviors varying in agency (from assertive and controlling to timid and yielding) and varying in communion (from friendly and cooperative to wary and distancing). We also assessed adolescents' meta-perceptions of their parents' perceptions, and parents' meta-perceptions of the adolescents' perceptions.
Results: Parents of adolescents with ASD lacked confidence in their child's interpersonal skills (especially to connect with and lead others), but correctly predicted that their children would express more confidence than they did. Indeed, adolescents with ASD felt as efficacious as control adolescents and did not realize the degree to which their parents did not share their confidence. Nonetheless, adolescents with ASD and control adolescents did show similar levels of child-parent agreement and meta-perception accuracy regarding the adolescent's *relative* strengths/weaknesses.
Conclusions: Adolescents with ASD were overconfident, which may protect them from feeling discouraged, but ultimately only if they engage in activities and interventions that can improve their social skills. The observed agreement regarding an adolescent's relative strengths/weaknesses may enable parents and professionals to use relative strengths to bolster adolescents' confidence while simultaneously working with them on their relative weaknesses.

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1. Introduction

Self-efficacy beliefs are self-perceptions that one can successfully perform a particular action or task (Bandura, 1997). Accordingly, interpersonal self-efficacy beliefs are self-perceptions that one can successfully perform particular interpersonal actions or tasks (e.g., "I can get them to listen to me" or "I can avoid getting into arguments"). Developing

positive interpersonal self-efficacy is important because people tend to only attempt and persist at activities (e.g., playing with others) and actions (e.g., making suggestions) to the extent that they expect to be successful at those activities and actions (Bandura, 1997). At the same time, developing accurate interpersonal self-efficacy is important in order for people to appreciate which type of behaviors are strengths (that actually tend to yield positive outcomes) for them and which are weaknesses (that they may want to work on improving). Persistent deficits in social communication and social interaction are essential criteria for a diagnosis of autism spectrum disorder (ASD; American Psychiatric Association [DSM-5], 2013). Therefore, if adolescents' interpersonal self-efficacy beliefs accurately reflect their interpersonal competencies, then adolescents with ASD should report less interpersonal efficacy than their typically developing peers. But do adolescents with ASD have an accurate appreciation of their interpersonal strengths and weaknesses?

The answer from studies of the interpersonal self-efficacy of older children and adolescents with ASD is mixed. On the one hand, most studies have found that youth with ASD evaluate their social skills more negatively than do youth without ASD (Johnson, Filliter, & Murphy, 2009; Vickerstaff, Heriot, Wong, Lopes, & Dossetor, 2007). On the other hand, youth with ASD may only feel less confident in their ability to express certain specific social behaviors (e.g., assertion) and not others (e.g., cooperation) (Koning & Magill-Evans, 2001), and at least one study found that youth with ASD and youth without ASD reported similar levels of social competence (Lerner, Calhoun, Mikami, & De Los Reyes, 2012). Importantly, there is no evidence that adolescents in general overestimate their social competence; for example, adolescents without ASD do not rate their social skills or personality traits more positively than their parents or teachers (Johnson et al., 2009; Koning & Magill-Evans, 2001; Schriber, Robins, & Solomon, 2014). In contrast, in a number of studies youth with ASD made ratings of their social skills that were significantly higher than those made by their parents or teachers (Green, Gilchrist, Burton, & Cox, 2000; Knott, Dunlop, & Mackay, 2006; Koning & Magill-Evans, 2001; Lerner et al., 2012; McMahon & Solomon, 2015; Vickerstaff et al., 2007). In sum, previous research suggests that youth with ASD may recognize that they have social challenges, yet may also underestimate the breadth and severity of their challenges.

Schriber et al. (2014) found analogous results for the "Big 5" personality traits: Youth with ASD made self-ratings that were more positive than their parents' ratings of them but less positive than the self-ratings of typically developing (control) youth. Schriber et al. also examined child-parent agreement in two additional ways. First, for each trait, they computed the correlation between parent-ratings and child self-ratings; these trait-centered correlations indicate the degree of child-parent agreement regarding whether the child is relatively high or low on a particular trait. Second, for each child-parent dyad, they computed the correlation between the child's profile of self-ratings and the parent's profile of child-ratings across the various traits; these dyad-centered correlations indicate the degree of child-parent agreement regarding which traits are more or less descriptive of the child. In both the ASD and control groups, Schriber et al. found significant child-parent agreement on both indices. However, whereas the ASD and control groups showed similar levels of trait-centered child-parent agreement (regarding the child's ranking on each trait), the control group showed stronger dyad-centered child-parent agreement (regarding which traits better described the child).

The current study was designed to build on the preceding studies in two ways. First, the current study assessed not only self-perceptions (how adolescents perceive themselves) and parent-perceptions (how parents perceive their adolescent children), but also perceptions of others' perceptions or *meta-perceptions* (Kenny, 1994). In the context of the current study, meta-perceptions specifically refer to (a) adolescents' perceptions of their parents' perceptions of their child's interpersonal efficacy and (b) parents' perceptions of their child's self-perceptions of his or her interpersonal efficacy. Individuals with ASD typically have difficulties with tasks that involve meta-representations—that is, mental representations *of* mental representations such as perceptions, thoughts, emotions, and intentions (Grainger, Williams, & Lind, 2016). Specifically, individuals with ASD tend to perform more poorly than typically developing individuals on "metacognitive" tasks that involve representing one's own mental representations and also on "theory-of-mind" or "mindreading" tasks that involve representing others' mental states or perspectives (Happé & Frith, 2014; Lombardo & Cohen, 2011). Because meta-perceptions are meta-representations of others' perceptions, individuals with ASD may have difficulty forming accurate meta-perceptions and keeping those meta-perceptions distinct from their own perceptions.

Second, the current study assessed efficacy for behaviors from each region of the interpersonal circumplex, a well-validated model for conceptualizing and organizing interpersonal dispositions and actions (Gurtman, 2009; Wiggins, 2003), including those of children and adolescents (Trucco, Wright, & Colder, 2014). As shown in Fig. 1, the circumplex is defined graphically by two orthogonal axes. The vertical ("agentic") axis ranges from being interpersonally assertive, decisive, controlling, and self-assured to being interpersonally timid, yielding, and conflict-avoidant. The horizontal ("communal") axis ranges from being interpersonally cooperative, friendly, warm, and empathetic to being interpersonally wary, distancing, and disengaged. Diverse research paradigms (e.g., psychometric, cognitive, neuroendocrine) suggest that agency and communion are essential, fundamental dimensions of social cognition and behavior (Locke, 2015). By using a measure of interpersonal efficacy based on the interpersonal circumplex, the current study assessed efficacy for a set of behaviors that was simultaneously narrower and broader than those typically considered in studies of social competence. Specifically, whereas the social skills measures in previous studies included non-interpersonal behaviors (in particular, behaviors reflecting conscientiousness, self-regulation, and self-control), the current study focused more narrowly on peer interactions; and whereas previous studies typically focused on interpersonal behaviors from the communal side of the circumplex (e.g., being friendly, expressive, and agreeable), the current study assessed efficacy for a broader range of behaviors that included the uncommunal side of the circumplex (e.g., being competitive, setting boundaries, and hiding feelings).