

Running head: IPT-AST WHEN MATCHED ON RISK PROFILES

INTERPERSONAL PSYCHOTHERAPY-ADOLESCENT SKILLS TRAINING

WHEN MATCHED ON RISK PROFILES:

THE CASES OF “MADISON” AND “RILEY”

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Abstract

Adolescent depression is a prevalent and debilitating mental health concern associated with impairment in functioning in school, family, and peer relationships (Birmaher et al., 1996; Williams, O'Connor, Eder, & Whitlock, 2009). Adolescents who suffer from subthreshold depressive symptoms, despite not qualifying for a formal depression diagnosis, also experience impairment and decreased quality of life, including a heightened risk of Major Depressive Disorder and suicide (Bertha & Balázs, 2013). Young and Hankin (2018) developed the Personalized Depression Prevention Project to examine whether certain programs have a greater impact on preventing depression in adolescence by matching or mismatching adolescents to evidence-based prevention groups based on their risk profile. Interpersonal Psychotherapy-Adolescent Skills Training (IPT-AST; Young, Mufson, & Schueler, 2016) and Coping with Stress (CWS; Clarke & Lewinsohn, 1995) are evidence-based prevention programs for adolescents at-risk for the development of depression. IPT-AST focuses on interpersonal risk factors and CWS addresses cognitive risk factors of depression. The present study used a mixed-methods approach to examine the issue of whether personalized programs are more effective than generalized programs in preventing adolescent depression. Drawing from the Personalized Depression Prevention Project, two systemic individual case studies were conducted with participants in the same IPT-AST group: one mismatched to IPT-AST, given the name "Madison"; and one matched to IPT-AST, given the name "Riley." Qualitative data from audio recordings and progress notes of the group intervention and clinical evaluations were examined in conjunction with quantitative data from self-report and clinician-assessed measures to capture the clinical process and outcomes of the two adolescents during the intervention and in the 30 months following. The case studies found that Madison, the mismatched participant, fared better

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than Riley, the matched participant. A detailed analysis of the case study data reveals (a) several factors that appeared to contribute to the deviation in the results from the risk-profile theory, and (b) other important possible factors for the different outcomes between Madison and Riley.

These factors occurred at different systems levels, including individual-level variables such as social anxiety, interpersonal history, and level of functioning; intervention-level factors such as the setting of certain treatment goals; and group-level factors such as the degree of participation and trust in the group. Limitations of the study are also described. Overall, the study findings highlight factors to be considered for future prevention programs.

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I. Case Context and Method

There is a growing need to prevent depression, particularly during the high-risk developmental period of adolescence. Prevention programs for children and adolescents show significant reductions in depressive symptoms and the risk for future depressive disorder onset in adulthood (Stice, Shaw, Bohon, Marti, & Rodhe, 2009), subsequently decreasing later risks and costs for individuals and society.

One type of adolescent depression prevention program, Coping with Stress (CWS; Clarke & Lewinsohn, 1995), is a cognitive behavioral prevention program for adolescents at-risk for the development of depression. With the idea that individuals are predisposed to depression due to negative or irrational cognitions, interventions train adolescents in cognitive restructuring techniques in order to prevent the onset of a depressive disorder. A different type of adolescent depression prevention program is Interpersonal Psychotherapy-Adolescent Skills Training (IPT-AST; Young, Mufson, & Schueler, 2016), which specifically targets interpersonal risk factors for depression.

There are numerous studies that have identified prognostic indicators associated with treatment outcome for those with depression. However, there is a minimal amount of research focused on prescriptive indices (Hollon et al., 2005), which focus on whether those with specific characteristics do better in one treatment modality versus another. In regards to the treatment of depression, it has been identified that those with high social dysfunction, high symptom severity, and functional impairment have better outcomes in IPT, and those with less depression severity and less family conflict appear to have better outcomes in CBT (Sotsky, et al., 2006). Previous research has examined the efficacy of IPT-AST and CWS when compared to a no intervention control group in a universal prevention study (Horowitz, Garber, Ciesla, Young, & Mufson,

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2007). Findings demonstrated that both IPT-AST and CWS were effective in reducing depressive symptoms. When moderators were examined, it was found that higher levels of sociotropy were related to lower depressive symptoms in IPT-AST but not in CWS, indicating that adolescents who place high value on relationships benefit more from an interpersonally focused group.

Interpersonal Psychotherapy-Adolescent Skills Training

Interpersonal Psychotherapy-Adolescent Skills Training is an indicated prevention program for adolescents aged 12-16 with subthreshold symptoms of depression. It specifically targets interpersonal risk factors for depression and is adapted from individual IPT for adolescents (Mufson & Moreau, 1999) and its group modification (Mufson, Gallagher, Dorta, & Young, 2004). The program consists of eight sessions, with about four to six adolescents in each group. IPT-AST includes two individual pre-group sessions, eight group sessions, one individual mid-group session, and three booster sessions.

This group intervention is cost effective, reduces stigma by allowing group members to interact with others who have similar experiences and difficulties, and provides a space in which adolescents can practice interpersonal skills with peers. IPT-AST focuses on improving current relationships and teaches skills through psychoeducation and interpersonal skill-building. It uses techniques to explore and express emotions, clarify expectations of relationships, develop communication skills, use therapeutic relationships, assess depression symptoms and mood ratings, and link changes in symptoms to interpersonal events. Interpersonal work at home is also encouraged to help solidify skill building.

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Study Aims

This study used a mixed-methods approach to comparatively examine two cases in the same IPT-AST group before intervention, during intervention, and in the 30 months following intervention. These case studies were designed with two goals in mind. The first, a more specific and theory-testing goal, sought to examine the two case studies of relevant clients in order to investigate whether – and if so, how – matching a client’s risk profile to a group designed to target that risk has a distinct and positive effect on outcome. The second, a more general and exploratory goal, considered multiple variables such as interpersonal history, life circumstance, individual strengths and vulnerabilities, psychopathology, and specific symptoms to holistically investigate the clinical processes and outcomes of clients who participated in an IPT-AST group. Thus, these pragmatic case studies were designed for a better understanding of the general therapy process and whether personalized programs are more effective than generalized prevention programs.

Method

The randomized controlled trial. Young and Hankin (2018) developed the Personalized Depression Prevention (PDP) project, a two-site study that examines whether certain programs have a greater impact on preventing depression in adolescence by matching or mismatching adolescents to evidence-based prevention groups (e.g., IPT-AST, CWS) based on their risk profile (e.g., high or low interpersonal risk versus high or low cognitive risk). The IPT-AST group addresses interpersonal risk factors and the CWS group addresses cognitive risk factors of depression.

After consent and assent were obtained for the PDP study, adolescents and parents completed an eligibility and baseline evaluation which consisted of a semi-structured interview

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and self- and parent-report questionnaires. Adolescents with depressive symptoms, did not meet criteria for a depression diagnosis on the K-SADS-PL, and CDI scores below 27 were eligible for the study. Adolescents were deemed eligible if they did not meet criteria for: current Major Depressive Disorder, dysthymia, bipolar disorder, conduct disorder, substance abuse, significant psychosis, or had a suicide attempt or recent significant suicidal ideation. If their depression severity was high, as indicated scores above 27 on the CDI, a clinical assessment was completed to determine whether they would need more intensive services than this intervention. If adolescents met criteria for a depression diagnosis or experienced suicidal ideation at any point in the study, a referral for more intensive services was provided.

Assessment methods. Information was gathered through interviews and self-report measures (see Table 1). The Demographics form (DEM) was completed by parents for information on the adolescent's age, grade level, and socioeconomic status. It was completed at baseline and follow-up evaluations.

Interviews assessed adolescents' psychopathology and functioning using the Schedule for Affective Disorders and Schizophrenia for School-Aged Children – Present and Lifetime Version (K-SADS-PL; Kaufman et al., 1997). The K-SADS is a semi-structured interview designed to determine diagnoses. Adolescents and their caretakers were interviewed by evaluators to determine adolescents' diagnostic status. The K-SADS is well-validated and has good diagnostic interview inter-rater reliability (Hankin et al., 2018). The entire K-SADS was administered at the baseline evaluation. The depression section was completed at all time points; additionally the anxiety section was completed at the 18-month evaluation.

The Self-Injurious Thoughts and Behaviors Inventory (SITBI; Nock, Holmberg, Photos, & Michel, 2007) was administered to adolescents and caretakers to assess the presence,

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frequency, and characteristics of self-injurious thoughts and behaviors. This includes suicidal ideation, plans, gestures, attempts, and nonsuicidal self-injury. The SIBTI is a valid and reliable measure, showing strong inter-rated reliability and test-retest reliability over six months.

The Children's Global Assessment Scale (CGAS; Shaffer et al., 1983) was completed by evaluators to assess global functioning over the previous two weeks. It is a numeric scale from 0-100 reflecting symptoms and diagnoses, and family, peer, and academic functioning. Higher numbers reflect higher levels of functioning. The CGAS is valid and reliable between raters and over time. A CGAS score below 61 represents clinically significant impairment (Bird, Canino, Rubio-Stipec, & Ribera, 1987).

The Children's Depression Inventory (CDI; Kovacs, 1992) was completed by participants to measure depressive symptoms before, during, and after the intervention. Higher numbers indicate a higher severity of depression. It is considered a valid and reliable measure for the severity of depression symptoms in children seven to 17 years old (Smucker, Craighead, Craighead, & Green, 1986). A cutoff score of 19 has been identified as clinical depressive levels in nonclinical settings, with scores of 13 to 18 identified as subclinical levels.

The Multidimensional Anxiety Scale for Children, Second Edition (MASC-2; March, J. S., & Parker, J. D., 2002) is a comprehensive assessment of anxiety in children aged eight to 19 years. It is a self-report measure of the severity of anxiety in various indices: Separation Anxiety/Phobias, Generalized Anxiety Disorder, Social Anxiety, Obsessions and Compulsions, Physical Symptoms and Harm Avoidance. A total score or above 60 indicates clinical levels of anxiety.

The Adolescent Cognitive Style Questionnaire (ACSQ; Hankin & Abramson, 2002) is a 12-item assessment of cognitive vulnerability to depression among adolescents. The ACSQ

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includes hypothetical interpersonal and achievement-related situations (e.g., “You get in a big fight with your parents,” “You take a test and get a bad grade”). It assesses negative inferences for cause (internal, stable, global), likelihood of future negative consequences, and degree to which the adolescent feels personally flawed. Higher scores indicate a more negative coping style. The ACSQ is reliable and valid measure of cognitive vulnerability to depression in adolescence, with internal consistency of 0.91 (Hankin, 2008). A score of 3.4 or above indicates a high negative coping style.

The Network of Relationships Inventory (NRI; Furman & Buhrmester, 2009) was used to assess negative interactions/conflict and social support with parents and peers. The NRI is a 13-item self-report measure that assesses different aspects of relationships with a mother figure, father figure, sibling, boy/girlfriend, same-sex friend, and opposite-sex friend. The NRI has internal reliabilities above .80 (Hankin et al., 2018). A score of 15.5 or above on measure of parent-adolescent interaction indicates high parent-adolescent conflict. A score of 23 or below on measures of same-sex peer support indicates low peer support.

The Attitude Towards Intervention Questionnaire (ATI; Young, 2005) was used to assess attitudes towards the intervention. Adolescents and parents answered questions about their feelings regarding the type of treatment the adolescents received. The ATI was completed in the post-group evaluation and the 6-month evaluation.

The Adolescent Life Events Questionnaire (ALEQ) asked questions regarding various stressful life events, e.g., divorce, financial problems. It also assessed stressful interpersonal interactions, e.g., feeling as though parents are disappointed in you. It was examined to determine whether any life events moderated change in depressive symptoms.

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Risk profile and group assignment. In the PDP study, adolescents were assigned a risk profile (Hankin, Young, Gallop, & Garber, 2018) based on their responses during the assessment. Adolescents who scored high on measures of negative cognitive style on the ACSQ (above 3.4), dysfunctional attitude on the Children's Dysfunctional Attitudes Scale (CDAS; above 36), and/or rumination on the Children's Response Styles Questionnaire (CRSQ; 29) were assigned a "high cognitive" risk profile. Adolescents who scored high on measures of parental conflict on the NRI (above 15.5) and/or low on measures of peer support on the NRI (below 23) were assigned a "high interpersonal" risk profile (Hankin, Young, Gallop, & Garber, 2018). The present study examined scores from the ACSQ to compare cognitive variables and the NRI to compare interpersonal variables.

There were four categories of risk profiles: (1) high interpersonal/low cognitive risk, (2) high interpersonal/high cognitive risk, (3) low interpersonal/high cognitive risk, and (4) low interpersonal/low cognitive risk. Adolescents were then randomly assigned to a prevention program that was either a match based on their risk profile (e.g., high interpersonal risk receiving IPT-AST; high cognitive risk receiving CWS), or a mismatch based on their risk profile (e.g., high interpersonal risk receiving CWS; high cognitive risk receiving IPT-AST).

The clinical setting. The IPT-AST sessions were conducted in a Rutgers University clinic. The evaluations were conducted at a separate location on the Rutgers University campus in order for the evaluators to maintain blindness to treatment condition.

Case selection process. This researcher was an evaluator for the PDP project during the present study. In order to maintain blindness for the evaluations, this researcher provided PDP research assistants with specified characteristics and they selected two cases according to these specifications. Both participants were chosen from the same IPT-AST group to control for

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specific group leader and group process effects. The two participants are matched on gender and age to control for these confounding factors. None of the members in the IPT-AST group were in this researcher's evaluation pool.

The mismatched case (Madison) participated in all sessions, completed measures at all time points, and began the program with a CDI score of 3. The matched case (Riley) participated in all sessions, completed measures at all time points, and began the program with a CDI score of 8.

This researcher remained blind to the risk profile status of each participant in the IPT-AST group, including Madison and Riley, until the conclusion of the research in order to reduce the potential for bias.

Design. The selected cases were analyzed and written according to the “Pragmatic Case Study” design developed by Fishman (1999). While RCTs can provide significant information on the efficacy of various treatments, they may not capture the whole picture of clinical practice in the real world (Fishman, 1999). RCTs can often miss important moderators and treatment variables that may impact an individual's experience. As RCTs have these limitations, questions regarding individuals can best be answered through systematic, pragmatically oriented single-case research (Peterson, 1991), which represents one of the most practice-oriented forms of psychotherapy research (Fishman, 1999, 2005, 2013; Fishman, Messer, Edwards, & Dattilio, 2017). The case study is considered a necessary and sufficient method for social science research (Flyvbjerg, 2006). If conducted in a systemic manner, it allows for the generalization of results and contributions to research and theory (Peterson, 1991).

A mixed-methods approach assumes that both quantitative and qualitative approaches have their own strengths and weaknesses, and that together they provide a more valid and

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comprehensive picture of what is being studied (Dattilio, Edwards, & Fishman, 2010; Fishman et al., 2017). The synthesis of quantitative and qualitative components can shed light on the clinical process of implementing a treatment and an individual's experience in treatment. For example, mixed-methods can help to explain why one individual appeared to have more success with a treatment while another individual did not, even though both had the same presenting problems.

Quantitative evaluation. Trained evaluators assessed adolescents using semi-structured interviews, clinician measures, and parent and adolescent self-report measures. The independent evaluators were graduate students at Rutgers University. Evaluators were blind to the risk profile status and treatment condition of each participant in the PDP study. This study examined results on the measures completed before, during, and after the intervention. The battery of assessments consisted of adolescent psychopathology and functioning, interpersonal and cognitive factors, and intervention measures (see Table 1).

Qualitative evaluation. Systemic individual pragmatic case studies were conducted on one adolescent assigned a high interpersonal/low cognitive risk profile matched to an IPT-AST group, and one adolescent with a low interpersonal/high cognitive risk profile mismatched to the same IPT-AST group. As mentioned above, the cases were analyzed according to the "Pragmatic Case Study" model (Fishman, 2013; Fishman, et al., 2017), based on the "Disciplined Inquiry" model (Peterson, 1991). The "Disciplined Inquiry" model begins with an examination of the client and an assessment of the functional processes involved in a case. This assessment is directed by a guiding concept and helps to develop a formulation for a particular case. The "Pragmatic Case Study" model involves grounding practice in a guiding theory, a systemic assessment of the client's problems, development of a case formulation and treatment plan, and a

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detailed description of the course of treatment and the conclusion of therapy (Fishman et al., 2017).

Sessions and evaluations were audio recorded for treatment adherence and to address clinical issues. Audio was reviewed to collect information on group sessions, individual sessions, and evaluations conducted by the independent evaluators. Progress notes written by the group leaders of the IPT-AST group were also reviewed. The notes and recordings provided specific information on the group leaders' observations, what the two participants said in sessions and evaluations, and their interactions with other group members.

Confidentiality. Certain information, including names and the phrasing of quotations (which remain in quotes), has been modified in order to maintain confidentiality and protect participants' identities. Nonetheless, the clinical authenticity of these cases has been preserved.

II. The Clients

The Group

The participants of the RCT were randomly assigned to either a CWS or IPT-AST group. Two doctoral level students led this IPT-AST group. This particular IPT-AST group (see Table 2) had eight adolescents: “Rosa,” “Madison,” “Charlotte,” “Riley,” “Jasmine,” “Victor,” “Ben,” and “Gio.” Three adolescents were matched to the IPT-AST group as they had high interpersonal risk for depression. Four adolescents were mismatched as they had high cognitive risk. One adolescent did not have either high interpersonal or cognitive risk for developing depression. The group members’ scores on the CDI ranged from 1 to 9 with a mean of 4, indicating mild depression levels. Their CGAS scores ranged from 63 to 76, with a mean of 70.3, suggesting generally good functioning with peers, family, and school.

Madison

Madison was a 12-year-old female in the seventh grade at the start of the study. She resided with her biological mother who had full custody. She reported that she did not have contact with her biological father and he was not discussed in sessions or evaluations. She had previously lived with her mother, stepfather, stepsister, and stepbrother. Her mother and stepfather had recently separated and they moved to a new house one month prior to the start of the study. Madison no longer had contact with her stepfather or stepsiblings. Her mother had full-time employment and Madison received free or reduced fee lunch at school. She was receiving As in all of her classes. She had a group of close friends and felt supported by her mother.

Riley

Riley was a 12-year-old female in the seventh grade at the start of the study. She resided with her biological mother and biological father. She described conflict and emotional distance from her family members. Riley described her relationship with her mother as “okay” and they argued weekly. She said she did not argue with her father and they occasionally went to the movies together. Her 27-year-old sister lived 20 minutes away and they did not argue or talk with one another. Riley had As and Bs in school. She reported that she did not have any friends inside or outside of school. She denied being teased or bullied. Riley described herself as “quiet” and spent most of her time alone.

III. Guiding Conception

Depression is a disorder that is prevalent across the world and throughout the lifespan. It is the leading cause of disability worldwide and a major contributor to the overall global burden of disease (World Health Organization, 2017). The most vulnerable time for the development of depression is arguably in adolescence, when most individuals experience their first depressive episode. The most common age of onset for a first depressive episode is 12-13 years old (Avenevoli, Swendsen, Burstein, & Merikangas, 2015; Hankin et al., 2015). About 14% of adolescents experience a major depressive disorder in their lifetimes, with 4.6% endorsing severe depression (Avenevoli et al., 2015). The age of onset has been decreasing and the prevalence of depression increasing each year (Birmaher et al., 1996).

Adolescents with depression are more likely to experience impairment in their functioning in school, family, and peer relationships (Birmaher et al., 1996; Williams, O'Connor, Eder, & Whitlock, 2009). Suicide attempts are significantly greater in those with adolescent-onset depression than child- and adult-onset, and suicide is the second leading cause of death among those aged 15-24 (Andersen & Teicher, 2008; Sullivan, Anest, Simon, Luo, & Dahlberg, 2015). Adolescents who suffer from subthreshold depressive symptoms, despite not qualifying for a formal depression diagnosis, also experience impairment and decreased quality of life, including a heightened risk of Major Depressive Disorder and suicide (Bertha & Balázs, 2013).

As studies have identified a strong relationship between interpersonal functioning and depression, Interpersonal Psychotherapy (IPT) is considered a suitable treatment model. IPT (Klerman, Weissman, Rounsaville, & Chevron, 1984) was created for treating depression in adult outpatients, based on attachment theory, communication theory, and social theory. These theories posit that individuals experience distress when there are disruptions in their attachments

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and poor attachments lead to maladaptive interpersonal communication, which leads to difficulties in relationships. Furthermore, poor social support affects the ability to cope with interpersonal stress and contributes to depression. Due to the efficacy of IPT with depressed adults and the similarity between adult and adolescent depression (Harrington, 1990), IPT was modified for adolescents (IPT-A; Mufson & Moreau, 1999). As adolescents begin the individuation process of development, relationships become a larger focus, and this may lead to interpersonal stressors with peers and family. Peer stress is one of the strongest associations of depression in adolescence (Hankin et al., 2015). Those who experience more peer victimization, more rejection, and less popularity are more likely to become depressed. Relatedly, adolescents with depression are also more likely to have less stable friendships consisting of poorer quality, less intimacy, more hostility, conflict or criticism (Borelli & Prinstein, 2006). IPT-A directly targets this reciprocal connection between one's mood and interpersonal relationships.

Overview of Theory and Intervention

Interpersonal Psychotherapy (IPT) highlights the reciprocal relationship in that one's mood can affect relationships and relationships can affect mood. IPT seeks to provide education on the link between depressive symptoms and events in relationships, decrease depressive symptoms, and improve skills. It does this through phases of treatment, in which the sessions identify problem areas, focus on current relationships, emphasize the interpersonal nature of the problem, and help the client understand the interpersonal context of depression.

IPT-AST. Interpersonal Psychotherapy-Adolescent Skills Training (IPT-AST; Young, Mufson, & Schueler, 2016) is an indicated prevention program for adolescents aged 12-16 with subthreshold symptoms of depression. An IPT-AST group typically has two co-leaders who take a directive and active stance in sessions. IPT-AST consists of three phases: initial, middle, and

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termination. In the initial phase, group members are taught about depression and the relationship between interpersonal relationships and mood. This phase also introduces techniques such as communication analysis and interpersonal skills. In the middle phase, the group members apply these interpersonal skills to various problems through the use of role-plays. The termination phase then reviews the adolescent's progress, highlights useful strategies, discusses ways to use the skills outside of the group, and reviews warning signs of depression.

IPT-AST teaches adolescents better ways of communicating with the following strategies:

Strike when the iron is cold: find the right time and place to have a conversation.

I statements: tell another person about how you are feeling; "I feel [an emotion]."

Be specific: provide a specific example to avoid overgeneralizing by saying things like "you always" or "you never."

Put yourself in their shoes: acknowledge the other person's feelings or needs, while also expressing one's own feelings.

Have a few solutions in mind and remember to compromise: prepare in advance with ideas of how one might wish to resolve the conflict, and be flexible in the moment to compromise.

Don't give up: don't give up on learning new ways to communication or solving an interpersonal problem that is important.

While previous research on IPT-AST demonstrated an immediate reduction in depressive symptoms, the benefits were not consistent six months after treatment (Young, Mufson, & Gallop, 2010). Therefore, individual booster sessions were added in an attempt to lengthen the

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effects of the program. These three booster sessions are spaced out to occur within the six months after the final group session.

Empirical Support

Several randomized controlled trials (RCTs) have demonstrated that IPT-AST has significant effects on the reduction of depressive symptoms and diagnoses and increases in social, family, and school functioning. Young, Mufson, and Davies (2006) examined the efficacy of IPT-AST when compared to school counseling for adolescents with elevated depressive symptoms. Adolescents in IPT-AST showed significantly greater improvements in depressive symptoms and overall functioning at post-intervention and at 3 and 6-month follow-ups.

Further, Young, Mufson, and Gallop (2010) compared IPT-AST to school counseling with adolescents with elevated depressive symptoms. At post-intervention, none of the adolescents met criteria for a depressive disorder. At 6-month follow-ups, none of those in IPT-AST met criteria for a depressive disorder, as compared to 19.1% of those in school counseling. Large effect sizes were found at post-intervention and medium effect sizes were found at 6-month follow-ups, which is more robust than other types of prevention programs (Stice et al., 2009). However, these results were not significant at 12 and 18-month follow-ups, reflecting stable scores in those who received IPT-AST and continued improvements in those who received school counseling.

Young et al. (2016) conducted another indicated prevention trial in which adolescents were randomly assigned to receive IPT-AST or group counseling. The group counseling was an active control group that reflected counseling typically delivered in schools, several of which were cognitive behavioral. At 6-month follow-ups, adolescents in the IPT-AST group had significant reductions in depressive symptoms. Significantly more adolescents in IPT-AST

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(83.5%) reported confidence that they did not need additional services after the group, when compared to the school counseling group (67.0%). Those in IPT-AST also showed significantly greater improvements in overall functioning. Thus, there is significant evidence for the efficacy of IPT-AST in reducing depression and improving functioning in adolescents with subthreshold depression (Young, Kranzler, Gallop, & Mufson, 2012).

IV. Assessment of Madison and Riley

Madison: Mismatched Case

Presenting problem and history. Madison met with an independent evaluator in January 2016 and was in seventh grade at the time of the initial interview. The evaluator administered the K-SADS with both Madison and her mother to assess past and current psychopathology. Madison endorsed subthreshold symptoms of depressed mood, irritability, and initial insomnia in November 2015. She reported a subthreshold fear of spiders and needles in the past but not at the time of this evaluation.

Madison endorsed one current subthreshold symptom of depression: initial insomnia. She denied all questions related to suicide and nonsuicidal self-injury on the SITBI. Madison's score on the CDI (total = 3) was considered mild at baseline. She did not meet criteria for a current mood disorder. The evaluator assigned a CGAS score of 75, reflecting no more than slight impairment in functioning at home, school, or with peers.

Interpersonal and cognitive factors. According to standardized self-report measures, Madison displayed low interpersonal risk for developing depression. Her scores on interpersonal measures of the NRI indicated high support (NRI same sex support = 30) and low conflict (NRI parent-adolescent conflict = 8). Madison displayed high cognitive risk for depression. Her scores on cognitive measures at baseline suggested a negative cognitive style (ACSQ = 3.77). For instance, she was more likely to attribute negative situations, such as getting a bad test grade, to something bad about herself. Based on her self-report measures, it was determined that Madison had low interpersonal/high cognitive risk for developing depression. After randomized assignment, she was mismatched to the IPT-AST group.

Vulnerabilities and strengths. Madison endorsed environmental stressors that may make her more likely to develop depression. On the ALEQ, she reported financial problems, divorce, and arguing between parents at baseline. Her mother reported full-time employment, making \$25-39,000 annually. Madison received free or reduced fee lunch at school.

She was receiving As in all of her classes. She had a group of close female friends and had recently made some new male friends. She did not endorse any teasing or bullying. She described her relationship with her mother as good and that she “lets her do anything.” She denied arguing with her mother and reported that they frequently talked with each other.

Riley: Matched Case

Presenting problems and history. Riley met with an evaluator in January 2016 and was in seventh grade at the time. The evaluator administered the K-SADS to both Riley and her mother to assess past and current psychopathology. Riley endorsed subthreshold irritability in July 2015 and denied all current symptoms of depression. Her mother endorsed past subthreshold symptoms of depression in January 2016 including: depressed mood, irritability, fatigue, decreased concentration, indecision, worthlessness, and hopelessness. She described times that Riley felt sad regarding school and irritable regarding chores. She said that Riley had some insecurity around her body image and seemed unsure about her future. Riley had a moderately low score of depression on the CDI (total = 8) at baseline. Riley denied all questions related to suicide and nonsuicidal self-injury on the SITBI. Riley spoke in a soft, slow rate of speech with one-word responses or no verbal response when speaking with the evaluator.

Riley’s parent also endorsed clinical levels of Social Phobia, as Riley felt more shy than other kids her age, would not use the bathroom at school, and had trouble meeting new people for fear of negative evaluation. Her mother described Riley as “introverted...just like her dad.”

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Riley described difficulty answering questions or speaking in front of the class, and worried what others would think of her. She endorsed subthreshold fears of dogs and the dark.

Riley was assigned a diagnosis of Social Phobia. Riley's mother was contacted with referrals to address her social anxiety symptoms, as neither IPT-AST or CWS would directly target those symptoms. The progress notes reflect that the family did not follow through with these referrals and appeared uninterested in pursuing treatment focused on her anxiety. The evaluator assigned a CGAS score of 63, reflecting difficulty in functioning at school, home, and/or with peers.

Interpersonal and cognitive factors. Riley displayed high interpersonal risk for developing depression. Her scores on interpersonal measures indicated low support (NRI same-sex support = 11) and high conflict (NRI parent-adolescent conflict = 12). Riley had low cognitive risk for depression at baseline. Based on her self-report measures, it was determined that Riley had high interpersonal/low cognitive risk for developing depression. After randomized assignment, she was matched to the IPT-AST group.

Vulnerabilities and strengths. Riley endorsed some environmental stressors that may have made her more likely to develop depression. On the ALEQ, Riley reported that her parents argued frequently. Riley also had several protective factors against depression. She lived at home with her parents who were married. Both parents were fully employed, making \$90-179,000 annually. Riley was involved in several extracurriculars, including the debate club and band.

V. Case Formulation, Goals, and Treatment Plan

An IPT case formulation involves the identification of a specific problem area that is considered to play a central role in the development and maintenance of depression. The treatment goal targets this problem area through communication and interpersonal problem solving in order to decrease depressive symptoms and interpersonal problems. As opposed to choosing one problem area, IPT-AST groups focus on how its strategies can be applied to various relationships and situations so that it can be relevant to many group members.

Still, in their individual pre-group sessions, adolescents were asked to choose their goals for the group, largely focused on the problem areas. IPT identifies four problem areas in interpersonal functioning: grief, role disputes (e.g., arguments or conflict when two people have different expectations for the relationship), role transitions (e.g., developmental changes, parents' divorce, a move, family member becomes ill), and interpersonal deficits (e.g., lack of social and communication skills to initiate and maintain relationships) (Weissman, Markowitz, & Klerman, 2000).

Madison

Madison's symptoms may be related to various role transitions, namely her mother and stepfather's recent divorce and their move to a new home. Madison's depressive symptoms also appear related to her role disputes with her mother, as they frequently had different expectations and difficulty communicating with each other. These disputes were not indicated in the self-report measures but in the sessions with the group leader. Madison's specific goals for treatment were: 1) express her feelings to her mother regarding her mother controlling what she does (e.g., homework), and 2) negotiate with her grandmother about specific issues they disagree on.

Riley

Riley's symptoms of depression appear related to interpersonal deficits, as she noted that she had difficulty making friends and did not feel close to anyone. She also described role disputes with both her mother and father. Her goals for the group focused on these problem areas. Riley's specific goals for treatment were: 1) reduce conflict with her mother about schoolwork, 2) reduce conflict with father about chores, and 3) be more open with sister about her problems.

VI. Course of Intervention

Pre-Group Phase

Pre-group sessions. Prior to beginning the group sessions, each group member has two individual sessions with one group leader. These sessions help to begin the therapeutic relationship and orient participants to the group by identifying symptoms and providing education on depression and prevention. Together, the clinician and adolescent conduct an interpersonal inventory to identify important people in the adolescent's life and the quality of those relationships. The group leaders set expectations for the group and work with the adolescents to focus on goals.

Madison. Group leader A met with Madison and her mother in February 2016 for the pre-group session. The group leader met with both together then met individually with Madison. During an informal verbal assessment, Madison endorsed symptoms of depression, including subthreshold levels of sadness, irritability, anhedonia, and fatigue. She noted that she was irritable "if people make me irritable." When discussing thoughts about death, Madison said that she did "not really" think about it, but had a friend who did and tried to support him. She did, however, endorse *I think about killing myself but I would not do it* on the CDI provided at this time. Madison reported an average mood for the past week of a 3 on a scale of 1 to 10 (1 being the happiest and 10 being the worst).

Madison spent the remainder of the session completing an interpersonal inventory (see Figure 1) to describe her relationships with her best friends, mother, grandmother, grandfather, and uncle. She reported a history of close and stable relationships with friends and family, with a total of 16 people in her closeness circle. She reported that she and three friends were very close

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and talked daily. She described her relationship with one friend, saying, “I can tell her basically anything...she doesn’t disregard my ideas.”

When talking about her mother, she described a close relationship and said that she liked that she was lenient, though she could be strict at times. She reported that she could not talk with her about friends or any “drama” at school as her mother would attempt to solve the problem in a way that Madison did not agree with. She said that arguments were typically resolved when someone made the other person laugh, and they would not talk about the argument afterward. Madison said that she would like to change her mother’s strictness. Due to the arguments with her mother, a primary goal was created to communicate feelings and thoughts to her mother. More specifically, Madison wanted to speak with her mother about her feelings on extra academic work that they disagreed on.

Madison also described her relationship with her grandmother. She reported that “we have very different ideas of life; she believes that a girl has to be perfect and pretty and polite, and not speak out and not do anything that looks weird... she’s very old-fashioned.” To resolve any arguments, Madison said that she usually slept to avoid feeling guilty. When asked about things to change about the relationship, she said she would like to change her grandmother’s attitude about Madison’s behaviors. This was reframed and chosen as a secondary goal, to communicate her feelings with her grandmother.

Madison said that she had a close relationship with her uncle, saying, “I like that he doesn’t have a grown-up mind. He doesn’t think that children are always wrong. He’s still young; he still gets it.” Because this relationship had a positive effect on her mood, the goal was created to find more ways to spend time with and talk to her uncle.

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The group leader asked about those who were not listed on the circle. Madison said that her biological father should not be listed on the closeness circle as she did not have contact with him, and her stepfather was not listed on it because he did not affect her mood anymore. She also decided against putting her former stepsiblings on the circle.

Throughout the session, Madison appeared engaged and cooperative. She openly shared her thoughts and feelings. She appeared to be aware of her emotions in different interpersonal situations. She indicated less awareness around the impact of her mood on relationships, as she was more focused on the other person's behaviors (e.g., her mother's strictness, her grandmother's attitude). She clearly described her relationships with friends and family and identified elements that she found supportive. These qualities suggest that Madison was interpersonally oriented and valued her relationships. The group leader also appeared to develop rapport with Madison by preparing her for the group process, addressing her questions and concerns, and showing an interest in her relationships and goals.

Riley. Riley and her mother met with group leader B for the pre-group session. During an individual verbal assessment, Riley endorsed one depressive symptom of fatigue. There was no verbal response for the rest of the items, and most likely a head nod or shake. She reported that her mood was an average of a 6 this week, on a scale of 1 to 10.

The group leader and Riley then completed an interpersonal inventory (see Figure 2). When addressing the inner circle on her closeness circle, Riley said, "I don't know...there isn't really anyone I would put in there," suggesting there was not anyone she felt particularly close to. She included her mother, father, sister, and younger cousin in the middle circle. When describing her relationship with her parents, Riley said that she liked that they helped her with her homework. She said that she did not feel the need to talk to them about anything other than

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school. Her biggest disagreement with her mother was over her completing schoolwork, and the biggest disagreement with her father was on chores. Riley typically resolved these arguments by talking back or completing the task, but she often still felt upset afterward. Based on this, the leader suggested goals of reducing conflict with her mother about schoolwork and a secondary goal of reducing conflict with her father about chores. Riley described her relationship with her older sister as “pretty good” and had a neutral effect on her mood.

After completing the circle, the group leader reoriented her by explaining that it could include anyone who had an impact on her mood, positive or negative. Riley still did not include others. The leader highlighted that Riley did not mention anyone she could confide in and asked about the possibility of it being difficult to talk with others or make friends. Riley agreed that this was an area of difficulty. Based on this, the leader suggested the goal of being more open with her sister and talking about her problems.

Riley exhibited a soft, slow rate of speech throughout the session. She paused before responding to questions and responded in short phrases (e.g., “mhmm,” “yes,” “I don’t know”). Her responses were often vague and she had difficulty providing examples. She was cooperative and responsive when prompted by the group leader. She appeared to develop rapport with the clinician, providing somewhat longer descriptions as the session progressed.

Initial Phase

The initial phase of IPT-AST is comprised of sessions one through three. The sessions focused on developing rapport amongst group members, providing psychoeducation on depression, and introducing the interpersonal skills used in the group. All group sessions began with each adolescent independently completing a weekly checklist of depressive symptoms and a mood rating.

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Group session #1. The two group leaders A and B, and all eight group members (Madison, Riley, Victor, Gio, Ben, Rosa, Charlotte, and Jasmine) attended the initial group session. The group began with an icebreaker activity. After playing the game, group members established group rules aimed to create a comfortable and safe atmosphere. Group leaders asked for preferences from members and provided examples. The group members were quiet and did not respond much during this stage. They agreed on the following rules:

1. Have respect: Give respectful, constructive feedback. Listen to what others are saying.
No talking while other group members and group leaders are talking.
2. Confidentiality/Privacy: Keep what is said in the group private. If group members want to share topics or discuss the group, that's okay as long as they don't use names. Use code names when discussing group members outside of the group.
3. Group members can interact outside of the group: Texting and social media is fine if group members want to contact each other outside of the group. If members run into each other outside of the group, it's okay to talk but not specifically about the group.
4. Commitment to group: Come to group on time. Let group leaders know if group members would be late by calling, texting, or emailing.

After establishing rules, the discussion focused on learning the symptoms of depression. The leaders provided examples through vignettes of adolescents and the group discussed symptoms and what qualifies as depression. They engaged in activities to practice distinguishing between adolescents who were depressed and those who had some symptoms but did not meet criteria for a diagnosis of depression. They then explored common problems in relationships. Group leaders framed their roles as experts in communication skills and the adolescents' roles as experts on middle school and common issues that adolescents face today. This appeared to elicit

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more participation from the group. Group members seemed to connect over their shared experiences of peer pressure and issues with parents and siblings. Group leaders also suggested that it is often difficult to make friends and finding people to be close with, highlighting the problem area of interpersonal deficits.

Madison. Madison reported her mood rating over the past week as a 3. On her depression checklist, she indicated that in the past week, she sometimes felt irritated, had less energy, felt bad about herself, and had trouble making decisions. She also indicated that she experienced a change in appetite, was taking naps, and had more aches and pains. She was cooperative and actively participated in group activities and discussions. Madison answered all questions in the activity, and volunteered an idea when prompted by the leaders. When asked, she reported that her goal for the group was to meet new people.

Riley. Riley's mood rating over the past week was a 4. On her depression checklist, she endorsed that in the past week she sometimes felt irritated, and had difficulty concentrating and making decisions. Riley arrived 10 minutes late to the group session. She presented as quiet and spoke in a soft, slow voice. She cooperated with activities and volunteered once when discussing symptoms of depression. Riley answered most of the questions in the icebreaker activity, and also said that she was looking forward to meeting new people.

Group session #2. The two group leaders and all the eight group members attended the second group session. All members completed the symptom checklist and mood rating at the start of group. They reviewed the rules and set an agenda for this group: to discuss how different ways of communicating can affect mood and relationships, and how mood can affect the way one communicates.

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When reviewing the rules, Madison asked about the specifics of Rule #3: interacting outside of the group. The group leaders asked for input from the group, and the members remained quiet, with some saying “I’m cool with whatever.” Some said that they were fine interacting outside, indicating that they wanted to build friendships as a part of the group. The group did not appear to have a strong preference and decided that speaking outside of the group was okay.

They reviewed the previous session, which focused on depressive symptoms. One leader provided an example from her life, highlighting the impact of an interpersonal interaction on her mood. The leaders asked for thoughts and examples and the group remained quiet. The group leaders then initiated an activity to highlight the importance to paying attention to what is said in a conversation and how it is said. Throughout the activity, the leaders brought attention to body language and tone of voice. The leaders then began to model communication analysis, which focused on breaking down each part of a conversation and how it makes people feel.

The group leaders asked for volunteers and Rosa and Ben volunteered in the first role play. Madison volunteered to participate in the second role play, and others participated in the third and fourth. These role play exercises introduced the IPT-AST strategy of communication analysis. The group members appeared more comfortable, as they were laughing and talkative throughout the exercises. The group members encouraged work at home to practice paying attention to conversations in the same way: who said what, in what order, and how they felt.

Madison. Madison’s mood rating for the past week was a 3. She indicated that she sometimes felt irritable, bored, guilty, and bad about herself. She was open and actively participated in the group. She shared stories and made jokes throughout. When she volunteered in a role play, she made some playful responses.

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Riley. Riley's mood rating over the past week was a 5. On her depression checklist, she endorsed that she sometimes had difficulty making decisions. She presented as quiet and spoke in a soft voice. During one of the role plays a group leader whispered to Riley and encouraged her to participate in one. Afterwards, the leaders praised her for participating, saying "good one!"

Group session #3. The two group leaders and all eight group members attended the third group session. This group began by asking the members what they learned from last week's role plays and members discussed how people have different reactions based on how one communicates. This session introduced IPT-AST communication skills. The group leaders began with a role play designed so that all volunteers had an opportunity to participate. This appeared more successful in actively involving all members.

The group leaders introduced each communication skill and applied it to role plays. One role play focused on a disagreement with a parent and the second involved an argument with a friend. Group leaders then modeled the concept of scripting, which involves planning each part of a conversation. They continued to use positive reinforcement when quieter group members participated. Throughout the session, the leaders were supportive and encouraging of members. Instead of directly challenging the incorrect application of a skill, they used Socratic questioning to facilitate the members' thoughts on the effect of specific comments. They also highlighted the importance of practicing these skills, as one would with a musical instrument or sport.

The leaders oriented members to the shift to the middle phase of the program, in which the group would focus on real life situations in order to apply the skills to real problems and receive support from group members. They encouraged the members to think about personal situations they could bring in for the next session.

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Madison. Madison's mood rating for the past week was a 3. On the depression checklist, she indicated that she experienced a change in appetite, took naps, had less energy, had more difficulty making decisions, and sometimes felt hopeless. She was engaged and actively participated in the group, and displayed some knowledge of the skills. For instance, when discussing **strike when the iron is cold**, Madison suggested that the time and place is an important indicator of whether it is a good time to have a conversation. She appeared to have some difficulty with the **put yourself in their shoes** skill, providing an example of a statement using the phrase "I understand" but not focused on the other person's emotions.

Riley. Riley's mood rating over the past week was a 4. On her depression checklist, she endorsed decreased attention. She presented as quiet and spoke in a soft voice. She participated when prompted in the role play activity. She seemed unsure about most of her comments, as they ended in the form of a question (e.g., "I'm still your friend too?"). She demonstrated a fair understanding of the skills, as group leaders highlighted the positive turn the conversation took after one of her comments.

Middle Phase

Group session #4. The two group leaders and seven of the eight group members (Madison, Riley, Victor, Gio, Ben, Rosa, and Charlotte) attended the fourth group session. Jasmine did not attend this session. The middle phase shifted the focus of the group towards real-life situations. The leaders highlighted the rationale behind doing so and reasons it was important way to check in on how everyone was doing and decide what to focus on each week. They also changed the way they would be completing their mood ratings: that day, they would verbally share whether their mood was better, worse, or the same as last week. Leaders modeled sharing

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both a better mood and a worse mood, and each connected their mood to an interpersonal event that week. The members then followed suit and shared a mix of mood responses.

The group leaders then asked for someone to share a real situation that they would like support on. Several minutes were spent alternating between silence and the leaders' encouragement of a volunteer by providing examples and support. Rosa said that she would like help with having longer conversations. When the leaders asked for other thoughts and were again met with silence, Rosa provided another example. The session focused on Rosa's situation with her father, in that she often wanted to have more conversations but he did not want to talk for long. When the leader asked whether other members experienced something similar, Madison said, "Constantly, because my mother is always working. And I try to say something and she just won't be listening. This happens all the time."

After talking through each skill and scripting a conversation between Rosa and her father, Rosa and Ben role played the conversation. The leaders asked about what went well and if anything could have gone better. After members made suggestions, the leaders provided feedback in a supportive manner. For instance, they gave examples of how to phrase some sentences with the **put yourself in their shoes** strategy. Rosa and Ben then incorporated this feedback and role played the conversation again.

Madison. Madison's mood rating for the past week was a 4. In the group mood check-in, she said her mood was worse this week as she had plans to see a friend but the friend was busy. On the symptom checklist she indicated that she sometimes felt irritable, had changes in appetite, took naps, had less energy, and felt bad about herself. She was cooperative and active in the session. She listened and responded to group members.

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Riley. Riley's mood rating for the past week was a 4. Riley said her mood was the same as last week and she did not know why. She endorsed that she sometimes experienced difficulty with concentration and had more aches and pains. She did not verbally participate in this group session. She shared her mood rating but did not talk for the remainder of the group.

Individual mid-group sessions. Participants met individually with their assigned group leader between group sessions #4 and #5 for their mid-group sessions.

Madison. Madison met individually with group leader A after group session #4. She endorsed a depressive symptom of boredom. The group leader asked whether she remembered her goals, and Madison reported that she wanted to improve communicating her feelings to others. The leader reminded her of the specific goals she set in the pre-group session and assessed whether any changes had been made or if it was still a relevant goal. Madison reported that her relationship with her mother had improved because her mother had become "a bit calmer" and the changes have been "mostly been her. Maybe it's been me and I haven't noticed."

The leader encouraged her to focus on the goal with her mother. Madison labeled her goal as "I don't think she should be as strict and formal with me because I'm her daughter." The leader helped her reframe this goal into something she had control over: to talk about whether she could reduce the amount of extra academic work outside of school. They talked through the various IPT-AST skills. Regarding **put yourself in their shoes**, they discussed her mother's possible point of view of wanting Madison to succeed. Madison had difficulty scripting with this skill and the leader helped her phrase it so it did not place blame on her mother. Madison noted that her mother will "never change" and often made assumptions of how her mother would absolutely respond. "She's just going to say you should be doing your work, you should be doing this all the time, you shouldn't be on your phone, you shouldn't be on your computer."

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The group leader then brought Madison's mother into the room so that she and Madison could have a conversation about this issue. The leader oriented everyone to the goal of this conversation: to practice the IPT-AST communication skills.

Madison: This is weird. I don't know how to put this.

Leader: What do you want to talk about?

Madison: Okay, this extra schoolwork.

Mother: [Laughs]

Madison: See! All the time!

*Leader: What **specifically**? How is it making you feel?*

Madison: [Tears up] Obviously I haven't been liking this extra work. It has not been helping me or my schoolwork.

Leader: How do you feel?

Madison: Stressed.

Mother: Why?

Madison: Because it's extra work that I haven't been using in school and day-to-day life and I don't think it's worth doing.

Mother: I do think it has helped in school. English is not your strongest subject and think this extra work helped you with that. I've done everything I possibly could do to accommodate you.

Madison: I just don't have enough time to do all of it.

Mother: You know what, Madison? I do think you have free time. If there is time to text, you have the time.

*Leader: Can you tell Mom how you're feeling? Maybe using **put yourself in their shoes**.*

Madison: You care about my education and I do too and I want to get good grades BUT this hasn't helped me...my teachers don't like it. I don't like it.

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The leader then acknowledged Madison's emotions and encouraged her to move on to providing some **solutions**.

Madison: Even though it's been somewhat helpful, I think I can live without it.

Mother: [Laughs]

Madison: See! I'm never taken seriously. Ever.

Mother: What are you so frustrated? I've made many accommodations. This little bit of extra work shouldn't be causing you so much stress.

Eventually, Madison and her mother came to a **compromise** after Madison listed some possible solutions of doing the same amount of work with some free time set aside each day. Throughout the conversation, Madison had difficulty utilizing **put yourself in their shoes** and made several emotional statements throughout. She began crying when the leader asked about her feelings. Madison and the leader debriefed individually after the conversation. The leader provided feedback, particularly around Madison's emotional statements and praised her for expressing her emotions to her mother. When asked about the overall feeling of the conversation, Madison said, "I didn't get to a compromise about doing less work but I got more compromise than I expected."

Riley. Riley met with group leader B the week after group session #4. Riley rated her mood at a 3 for the past week but did not connect her improved mood with anything in her relationships. The leader asked about her feelings about the group and her comfort in the group.

Leader: Is there anything you particularly like?

Riley: I can't really think of anything. [Pause] I can't think of anything.

Leader: Is there anything you don't like?

Riley: No.

Leader: Are your needs being met in the group?

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Riley: Yes?

Leader: Do you feel comfortable in the group sharing in the group?

Riley: Yes.

Leader: Is there anything we can do to make you feel more comfortable?

Riley: Not really.

The leader provided Riley with positive feedback and highlighted “we love to have your input,” possibly to encourage more participation. Riley did not remember her initial goals and the leader reminded her. She reported that some things have improved, “I don’t really argue with my dad as much,” saying that she does her chores versus use the IPT-AST skills to communicate with him. They then decided to focus on her disagreement with her mother on schoolwork. Initially, Riley said she wanted to “get her to understand.”

The leader then met with both Riley and her mother together, provided feedback and asked her mother whether she noticed any changes. Her mother said, “I think maybe she’s a little more vocal.” They then started the conversation around the schoolwork conflict.

Riley: Ok. I- I feel...I feel that I shouldn’t – feel that when I get um – when I get work from school that I- I shouldn’t have to do it when it’s not due the next day or it’s not homework.

Leader: Mom, would you like to respond?

Mother: I don’t see a problem with you doing the work. Sometimes it’s a class grade and you’ve missed a lot of assignments.

Leader: Do you want to respond, Riley?

Riley: I understand that you’re worried, but sometimes I don’t have to um do it because sometimes I already have work and I don’t have to do more.

Mother: I don’t know, Riley. We can probably come to some kind of agreement but we need to work on organization.

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*Leader: I'm hearing that some assignments don't get in on time. Do you have an idea for another **solution**?*

Riley: Yeah maybe I can do the work two days before it's due.

Mother: Yeah that's a good idea. To me, it's less stressful when you get it done ahead of time.

The leader met with Riley individually to provide feedback, highlighting IPT-AST skills such as **put yourself in their shoes** and asking for **solutions** she used in her conversation. She asked whether Riley would be willing to share this experience with the group, to which she was receptive.

Group session #5. The two group leaders and all eight group members attended the fifth group session. This session continued to focus on applying IPT-AST skills to real-life situations. The session began by reviewing everyone's mid-group sessions and what they individually agreed to share with the group. The group leaders highlighted IPT skills that were used in sessions with their parents and addressed the members' feelings. The group then reviewed the previous week's planned conversation. Rosa reported that the conversation had not gone as well as she had hoped. The group leaders conducted a communication analysis and asked for feedback from the group on what could have made it more successful.

The session then focused on conducting a role play with a new situation. As they had trouble getting volunteers, the group leaders called on a few members for ideas then chose a topic that seemed most relevant. The group worked with Victor to script his conversation with a peer. The group members were quiet while scripting this conversation. Towards the last quarter of the session, group members were laughing and had a difficult time focusing. After several minutes, group leaders attempted to redirect them and eventually suggested they all do jumping jacks. There continued to be laughing through the scripting and group leaders suggested that

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people take breaks if needed. Ben volunteered several times to participate in role plays. The group leaders asked Jasmine and Victor to participate in one role play in order to include more people. Group members continued to joke and laugh through the exercises. While this group session appeared to display more bonding of the group members, there was much less focus. It appeared that one or two members did not engage in the jokes and made comments about wanting to focus on the conversation.

Madison. Madison's mood rating for the past week was a 3. On the symptom checklist, she endorsed that she sometimes felt sad, had less energy, and a change in appetite. Madison was engaged and made many jokes throughout the session. When asked about real-life situations, she offered to talk about her friend who was having a problem, but not herself. When called on to participate in a role play, she said "no thanks." She shared her experience in her mid-group session with the group:

Madison: My mom likes to put me in front of my classmates so she has me do a bit of extra work except I don't think it was necessary. So we had a conversation about that and how I wanted to reduce the workload.

Leader: How did that end up making you feel?

Madison: It was stressful! But my mom wasn't really budging. I tried some things but we came to a compromise.

Leader: Have you tried it?

Madison: Yeah, it's good.

Leader: Does it meet some needs?

Madison: Mhmm. I don't feel as bad because I got awards for [the extra work].

Leader: Were there any skills that were really helpful?

*Madison: **Being specific**, in that I did not feel it was necessary and I wanted more time to myself.*

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Leader: Is there room for follow-up with Mom or does it feel resolved?

Madison: Resolved for now because she doesn't really budge when it comes to extra work.

While she and her mother did come to a compromise, she still said that it was resolved because her mother would not budge. While this may partly be true, Madison still seemed to demonstrate some assumptions of how others would respond before trying a skill. When discussing the issue of another group member, the leader asked whether others had apologized to someone else before. Madison displayed some understanding, though difficulty, with **put yourself in their shoes**.

Madison: There's a friend that I have and we kind of constantly have fights but quickly get over it. So what I do is if maybe I didn't apologize after the incident, I will talk to her the next day and say look I'm sorry this WAS both our faults but I'm very sorry on my part of it. And if she agrees with me then we're fine and if not then we try to resolve it later.

Leader: And you want to apologize specifically for your part in it, right?

Madison: Yes.

Riley. Riley's mood rating for the past week was a 4. On the checklist, she endorsed difficulty with concentration. She shared her experience in the mid-group session. She continued to speak in a soft tone and ended her statements in the form of questions. When asked about the outcome of the conversation with her mother, she said, "I think we came to an agreement?" The group leader highlighted skills she used in the session, including **I statements**, **put yourself in their shoes**, and **strike while the iron is cold**. Riley did not verbally participate in the rest of the session.

Group session #6. The two group leaders and all the eight group members attended the sixth group session. During mood check-ins, several group members had a difficult time connecting their mood to something that happened in their relationships in the past week. Group

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leaders reframed adolescents' responses to highlight this connection several times. The group leader told three members, including Riley, that their assignment for the week was to pay attention to the connection between their mood and relationships (however, the leaders did not specifically follow up with these three members in group session #7).

The group followed up on last week's planned conversation for Victor, which did not occur. The leaders then asked for a new example and the group was quiet. Rosa volunteered, but the leaders asked for new volunteers as Rosa had volunteered several times. They reminded the members that this was almost their last chance to focus on personal issues in the group as they were nearing the end of the program.

The leaders asked if Madison wanted to share an example related to communication with her mother, but Madison declined and said it was no longer relevant. She then said she may have another example but "I don't really think it's important enough to be discussed." The group leaders encouraged her to share and the group could decide whether to focus on it. Madison explained, "I have like a lot of guy friends, I'm just one of those people. And my girl friends, they kind of tease me about it...I mean it was a little bit worse before and I've told them not to."

The leaders explored whether there were any other issues and none of the members volunteered. They thus decided to focus on what went well in Madison's situation. She explained that she confronted her friends several months prior the start of the group, meaning that she had not explicitly used any IPT-AST skills. When the leaders asked for input from the group, a couple members chimed in.

Rosa shared a related example and Madison provided collaborative feedback, developing an analogy for Rosa's situation. The two members were both on volleyball teams, so Madison

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gave an example related to the sport that could be applied to Rosa's feelings in communicating with her peers. Madison then provided apt feedback while scripting this conversation:

*Madison: What you could do is **put yourself in their shoes**...you could tell her 'I know that you like having these conversations...but maybe sometimes when I'm not around you can decide to have them because I do want to be friends with you guys but I don't feel very comfortable with these conversations. And it's fine that you want to talk about it, just not so much around me so if you could understand that, that would be really great.*

Rosa: Yeah, I really like that.

Madison demonstrated a clearer understanding of the **put yourself in their shoes** skill than in previous sessions. Rosa and Ben volunteered to participate in the role play.

Madison. Madison's mood rating for the past week was a 2. On the symptom checklist she indicated that she sometimes felt bored, took naps, had a change in appetite, and experienced aches and pains.

Riley. Riley's mood rating for the past week was a 4. She did not endorse any symptoms on the depression checklist. She participated during the mood check-in but not for the remainder of the group. She reported that her mood was the "same" and nothing happened in her relationships over the week.

Termination Phase

Group session #7. The two group leaders and all the eight group members attended the seventh group session. The group leaders prefaced this mood check-in to think about something that happened in their relationships in order to highlight the connection between mood and interpersonal relationships. After they did this, most members connected their mood to events in their relationships over the past week. The three members assigned to specifically notice this connection were not specifically followed up with in this session.

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The group followed up on Rosa's planned conversation, which she reported had not occurred. So far, two out of the three conversations were not implemented outside of session, potentially decreasing the likelihood of members using the skills outside of group.

The leader then shifted focus to this week, asking, "Is there anything off top of head your head that you're dying to share?" which was met with silence. The leaders then opted to follow-up on the mid-group conversations. When discussing changes in relationships, the members did not connect it with skills they were using but said it just changed over time. The leaders inquired about several members' mid-group sessions but not all before choosing a topic.

The leaders aided in scripting a conversation between Ben and his mother. The group decided to role play one best-case scenario and one worst-case scenario. The role play consisted of the same volunteers, Ben and Rosa. Ben and other members made disruptive comments during the role play, and they had to practice one scenario three times.

The group moved on to a new situation, suggested by Rosa. The group began laughing about something off-topic, requiring redirection from the group leaders. It's unclear about the potential impact this had on Rosa sharing her personal issue during the laughter and the overall level of trust and comfort in the group.

Madison. Madison's mood rating for the past week was a 2. She endorsed sometimes feeling irritated, a change in appetite, and difficulty making decisions. When checking in on mid-group sessions, Madison said that there was not much of a change on the academic situation but she appeared to care less about it. The **put yourself in their shoes** skill had been difficult for her to implement in conversations. In this group, she said, "sometimes when I try to butter my mom up, it's usually because I have something bad to tell her. And she knows right away."

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Riley. Riley's mood rating for the past week was a 4. On the depression checklist she indicated that she sometimes experienced decreased attention. Riley reported that her mood was a little bit better and that it was unrelated to anything in her relationships. She did not participate in the group discussion.

Group session #8. The two group leaders and all the eight group members attended the final group session. The leaders began by asking the members to think about their changes in mood and symptoms since the start of the program. They were able to note changes and patterns from looking at their checklists and ratings in their binders.

The group played a quick game of naming all the depression symptoms they could remember in 30 seconds. Together, the group was able to remember nearly all of the symptoms. The group then focused on their own warning signs of depression. The leaders followed up on Ben's planned conversation, which reportedly went very well.

The group reviewed what they learned and progress that they made. Each group member was asked to share their biggest accomplishment in the group. They reviewed which skills were the most helpful and which were the most challenging to use. The group discussed values that they look for in friendships, including honesty, loyalty, and friendliness.

Towards the end of group, some members had a difficult time focusing, as they wanted to exchange contact information. The group completed an activity that consisted of writing comments about what made each person a good group member. After spending time writing in the cards, the leaders shared some of the comments given for each person. The leaders asked for feedback on the program. One member said that he wished the program was a couple of weeks longer, and someone else said it was fun to listen to other people.

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Madison. Madison's mood rating for the past week was a 3. On the symptom checklist, she endorsed sometimes feeling guilty and bad about herself, and a change in appetite. Madison said that her mood was worse because her friend was annoying her, demonstrating an understanding of a connection between her mood and relationships. She said that over the course of the group her mood and symptoms were "pretty much the same overall...nothing severe has happened." She noted her warning signs of indecision and fatigue, but did not connect them to her mood. Rather, she said that indecision was "in her DNA," and her fatigue is due to waking up early. She provided feedback to other group members. She said that her biggest accomplishment was getting closer with her friends but did not connect this with any specific skills she used. She said that the most helpful skill was **be specific**.

*Madison: I found **put yourself in their shoes** the hardest because it's weird. Like you don't go into people's heads and see how they feel, and you can't really see how people usually view things so it is kind of hard. Because if you do make a wrong assumption or you think they see something a certain way and they don't, then the whole conversation can be turned around so...I find that kind of hard.*

This skill had been difficult for Madison to implement in the conversation with her mother and the group, so it may have been beneficial to distinguish making assumptions and acknowledging how someone may feel. Her interactions demonstrated many assumptions on how her mother would respond.

During the activity, she received several positive comments regarding her helpfulness. She seemed to feel a certain degree of trust and comfort with the group members, as she said, "we've seen each other eight times, and we're all pretty close friends...that's something."

Riley. Riley's mood rating for the past week was a 4. On the symptom checklist she endorsed sometimes experiencing decreased attention. Riley said that her mood was better that week. When asked whether anything happened in her relationships she again said, "not really."

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She did not connect her mood to her interpersonal relationships during any mood check-in. She noted her warning signs and said that making decisions had been easier. She said she did not know the reason behind the change, but when asked whether she was getting along with certain people better or communicating in a different way, she said, “I’m able to communicate.”

Riley: My biggest accomplishment was being more communicative.

Leader: With anyone in particular?

Riley: Just in general. Because I wouldn’t really talk to people if I had a problem but now I don’t have a problem with it.

Leader: You did a great job with that in the mid-group session with your mom.

She said that the most helpful skill was **be specific** and most challenging was **put yourself in their shoes**. The latter was difficult because “when I’m disagreeing with someone, it’s hard to see where they’re coming from.” During the activity, she received positive feedback that she was a good listener.

Post-Group Phase

Post-group evaluation. Participants met with their evaluator two weeks following the final group session to assess psychopathology and functioning.

Madison. Madison and her mother met with her evaluator in April 2016. Madison reported that she was enjoying school, and especially liked reading and writing. She was receiving all As at the time and liked her teachers. She described a good group of friends with girls and boys. They were all busy, and saw each other mostly at lunchtime in school.

Madison was asked about her relationship with her mother. She reported that she did not argue with her mother and could talk with her about her problems. This report was somewhat discrepant from her descriptions to the group leader, noting areas of conflict with her mother.

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Madison said that her mother was “constantly working” but she felt fine as long as she could text with her friends.

Madison was involved in volleyball and played in the school band. She was still involved with extra academic work, saying “it’s still annoying and beyond stupid...I’ve been trying to get out of it the whole time but [my mom] won’t budge.” While she minimized this during the group, she still appeared to be upset about the arrangement here.

Madison was then asked questions from the K-SADS to assess her depressive symptoms over the past two weeks. Madison described a situation in which one friend was annoying her, describing a situation between others rather than herself. On the K-SADS, Madison endorsed current subthreshold initial insomnia and her mother denied all depressive symptoms. The evaluator assigned a CGAS of 77, indicating no more than slight impairment in functioning at home, school, or with peers.

Riley. Riley met with her evaluator two weeks after the group ended in April 2016. Riley reported that school was good and felt neutral overall. She was receiving As, Bs, and Cs (with mostly Bs) and attended tutoring. Riley said that she did not have friends, but did see people in debate club. She did not see people outside of school. Riley described a friendship with one peer, whom she saw three times a month at church. She denied any teasing or bullying. Riley was involved in the debate club and band at school. In her free time, she continued to watch TV and play on her phone.

Riley was asked about relationships with her family members. She said that things with her mother were “okay” and they sometimes got along, arguing once or twice a week about school. She would not go to her mother for advice and they did not spend much time together. Riley described her relationship with her father as “okay” as well, arguing once or twice a week

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about chores. Riley said that she occasionally went to the movies with her father. This is consistent with the conflict reported during the pre-group session.

Riley continued to endorse symptoms of Social Phobia. After the evaluation, Riley's mother was again contacted about these symptoms. The progress note reflected that Riley's mother "did not say much and did not have any questions when prompted." The supervisor sent a list of referrals and encouraged her mother to call if they needed further assistance in coordinating treatment.

On the K-SADS, Riley endorsed current subthreshold worthlessness and hopelessness. Her mother endorsed current subthreshold difficulty with concentration, indecision, weight gain, psychomotor retardation, and worthlessness. The evaluator assigned a CGAS score of 66, reflecting difficulty in functioning with peers, family, and/or school.

Booster sessions. Booster sessions were added over the course of six months after the group ends in order to lengthen the effects of IPT-AST. Madison and Riley met individually with the same group leaders they met with prior to beginning the group.

Booster session #1: Madison. Madison met with group leader A approximately one month after the group sessions ended in May 2016. The session began similarly to the group, with the group leader gathering mood ratings. Madison rated her mood at a 2 over the past month and attributed this happy mood to some summer trips. She rated her mood at a 3 for the past week, as she felt nervous for school ending and a change in routine. The group leader reviewed symptoms and Madison endorsed feeling sad with school ending and not seeing her friends and teachers in the same way. In this instance, she connected her mood to interpersonal events.

The group leader then reviewed Madison's initial goals for treatment. Madison did not remember the goals she began with. As Madison's initial goal was to address conflict with her

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mother, the group leader encouraged her to focus on this goal. However, Madison appeared resistant to working on this goal as she felt a conversation would not change her mother's response. The leader attempted to distinguish between expressing her feelings to her mother (e.g., tell her how it feels when she responds in a certain way) as opposed to Madison explicitly getting what she wants in a certain situation.

Leader: You made a comment towards the end of the group that Mom said your relationship had been better. Do you remember that?

Madison: No. I don't think it's gotten any better. It hasn't really changed.

Leader: It seems to be upsetting to you because you have different expectations.

Madison: I don't know why but we've been really different. I've tried to talk to her and I don't know how to say it.

Leader: It's a challenge but might make you feel better.

Madison: I don't know. I think it will be fine. I have lots of summer plans [laughs].

Leader: What kind of things have been hard with Mom?

Madison: I don't know. Little things.

Leader: I don't think you're going to change Mom. And yet, it does seem like sometimes that upsets you, Potentially just making her aware of your feelings might make you feel better.

Madison: Yes, but she counters it every time.

Leader: It sounds like maybe you shut down when that happens.

Madison: I don't know.

Leader: Changing it seems a little scary, but seems like things are not having best effect on your mood so it might be worth it to try.

Madison: Mhmm.

*Leader: Remember the **don't give up** card. You can keep reminding her how it makes you feel.*

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Madison: Mhmm. So I have another problem with a girl at school.

Leader: Is that something you want to talk about?

Madison: Yeah.

Leader: Okay we can talk about it today. And for next time, I want you to think about this stuff with Mom.

Madison hesitantly described a situation with her mother, but it was vague and she frequently said, “I don’t know” to the group leader’s questions. She attempted to change the subject several times and said that she doesn’t see the point in having a conversation with her mother.

Booster session #1: Riley. Riley met with Group Leader B one month after the group sessions ended. Riley rated her mood at a 4 over the past month and at a 3 for the past week. She endorsed a depressive symptom of fatigue.

The group leader then assessed Riley’s symptoms of social anxiety, and she reported that she continued to feel nervous when talking to other people. The group leader then provided information on therapy in a clinic or at school, at which Riley expressed interest.

The booster session then focused on addressing Riley’s goals. She did not remember her initial goals developed in the pre-group session. When the group leader reminded her of her goals, Riley said she had been fighting with her mother less because she did her chores versus arguing about it. She did not connect this change to changes in her communication patterns. She continued to argue with her father the same amount and had not spoken with her sister as she did not have “a lot of serious problems happening so that’s why I don’t say anything.”

Riley decided to focus on the conflict with her father in this session. She and the group leader identified a goal and scripted the conversation around expectations of chores, implementing IPT-AST communication strategies.

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Riley: I feel like it's unfair to wash dishes that aren't mine.

Leader: Which skill is that?

*Riley: An **I statement**.*

*Leader: Remember, **I statements** have an emotion word. What emotion do you feel?*

Riley: Upset.

When role playing, Riley remembered every line that was scripted, integrating feedback in the several role plays. They reviewed warning signs of depression and discussed what to do if the symptoms worsen. The leader encouraged Riley to use the skills and planned to follow up on the conversation with her father in the next session.

Booster session #2: Madison. Madison met with her group leader for the second booster session approximately one month after the first. Madison rated her mood at a 3 over the past month and at a 3 for the past week. She noted one time when her mood was better at a 1 or 2 when she attended a day camp. She denied symptoms of depression and said that she was occasionally bored at home at night.

The group leader then followed up on her planned conversation with her friend. Madison reported that she did not have a chance to talk to the friend and no longer thought it was a relevant conversation. Thus far, Madison had not practiced any scripted conversations outside of group or individual sessions.

As the leader said in the previous session, she followed up on Madison's relationship with her mother. As this was an initial goal for the group and Madison continued to report conflict with her, the group leader encouraged her to focus on this topic.

Leader: I think you sometimes you feel like you're disappointing Mom. It could be helpful to have clear expectations sometimes.

Madison: I guess.

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Leader: I know that your mom loves you and proud of you, yet losing her temper, changing rules, and being unclear about expectations can be difficult for you.

Madison: It's summer so I don't have to worry about my grades and what she's going to say.

Leader: Okay, and it may still be helpful to talk about now in case this comes up in the future.

Madison: I know what expects, but if we disagree, she will find a way to contradict it.

Leader: Have you ever tried telling her it feels really bad when she doesn't hear out?

Madison: No, I know what she's going to say.

Leader: Could you communicate that you can understand that doesn't agree, but it feels really bad? There's a slight difference there.

Madison: Mhmm.

Leader: Every time we talk about it, I see the impact it has on you...I feel like every time we meet, it goes up and down. Last time we met you got tears in your eyes, this time you're less emotional about it, which suggests there's something there to talk about.

The group leader highlighted the use of improving relationships with these skills, even when the relationships are already good. Throughout the above conversation, Madison became quieter so they changed the subject to one focused on her friends. She became much more verbose in this conversation. Madison described a conflict between two of her friends. The group leader responded by clarifying goals and limits regarding what people can change, i.e., can change how they communicate but cannot change how others respond. Madison's suggestions continued to focus on people other than herself. The leader also warned Madison that some people may perceive this mediation as suggesting that she knows more than her peers and they may take this poorly. Madison did not see this as the case with her friends, and thought it be perceived as thoughtful.

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She then role played the conversation and again had some difficulty with **put yourself in their shoes** and **I statements**, and Madison noted that these particular skills were hard to use. The group leader validated their difficulty and provided suggestions on how to use them. The session ended by encouraging Madison to check in with her mother about how things were going since she began the group:

Leader: I remember at end of group that Mom had spontaneously said things were going better. Since we're approaching the last booster session, maybe you can check in with Mom about how things are going in your relationship – any things you've done well or could work on more.

Madison: Okay.

Leader: How do you feel about trying that?

Madison: I just really don't want to jinx that [things are going well]. I think it's a good idea but I have no idea how it's going to turn out. I'm worried whether she says something to improve but I disagree then turns into a bigger conflict.

Leader: Maybe you can keep it specific to the communication skills, and even pull out the cards from your binder.

Madison: I don't know.

Leader: I'm not going to force you to have the conversation, but it's something to think about.

While she speaks about this conflict often, Madison appeared to be avoidant of focusing on this in sessions. She seemed particularly set on the idea that she knows how her mother would respond to her.

Booster session #2: Riley. Riley met with her group leader for the second booster session approximately one month after the first. She rated her mood at a 4 over the past month and at a 5 for the past week. She denied all symptoms of depression. During this session, Riley volunteered more responses and was less monosyllabic. The group leader inquired about her social anxiety

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and whether she sought treatment. Riley did not meet with anyone and was “maybe” still interested.

The group leader followed up on the planned conversation with her father about chores. Riley said that she could not find a good time to talk, then forgot to have the conversation. The group leader then problem solved how to address this issue, such as writing down the conversation to help Riley remember. Riley agreed and the group leader began writing the script.

She asked if Riley remembered her goals for group, which she did not. They reviewed the goals and their current state. She said she argued with her mother less (once every two weeks) and argued a little less with her father (once a week). Again, instead of having a conversation, Riley did whatever her parent asked. She and the group leader identified a recent conflict that Riley had not communicated to her father: they had been arguing because Riley had not done her summer homework.

Riley and the group leader began scripting a conversation with the goal that he “understand me” and a second goal of finding a solution to complete the summer reading. The group leader rephrased the first goal to Riley expressing her feelings to her father. They wrote the script, integrating the various communication skills. Riley role played this by first reading from the script with her father as being amenable, and role played a second time with her father as less willing to compromise. The leader provided feedback of Riley’s strengths of staying calm and clear, using “I statements,” and providing different solutions. They role played a third time without the script, and Riley remembered all of the script. She decided to have the conversation her father later that day. The leader ended the group by encouraging Riley to use the skills as much as possible in the next month.

Booster session #3: Madison. Madison met with her group leader for the final booster session approximately six weeks later. She rated her mood at a 2 or 3 for the past month. She said she had a really good time at sleep-away camp and went to California with her mother; she reported that it was fun because it was California, but not fun because she was with her mother. She rated her mood and a 4 for the past week because school had started. She rated her mood higher at a 2 or 3 when she was able to see friends at home, noting a time her mood was connected to her interpersonal relationships. In regards to depressive symptoms, she again endorsed feeling bored at home but did not endorse anhedonia.

The leader inquired about the planned conversation with friends and whether Madison talked with her mother about the communication skills. Madison said she did not “because I’m not exactly sure how it’d go...in my eyes, even though I didn’t ask her I think it’s going fine.”

Madison noted differences in their relationship, such as less arguing. The leader explored what may have changed, highlighting that Madison may be communicating differently, even without realizing it. Madison said, “I don’t think I have really been doing anything, I’ve never noticed it.”

As Madison’s interpersonal issues had focused on those issues between other people, the leader decided to discuss the potential consequences of this. They clarified the risks of getting in the middle of other people’s conflicts, and she encouraged Madison to communicate how the conflict feels to her. During the first role play, she said, “Because of your fighting, I feel a lot more stress about what will happen in the group and I do think this affects everyone in the group – not just you, not just me...I feel like if you guys tried, you could come to a solution about whatever you guys are fighting about.”

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Madison tended to jump to problem solving before using some of the IPT-AST communication skills. When providing feedback, the leader again expressed her concern of speaking on behalf of the group. She role played it a second time, still placing some blame on the other two people through her **I statement**. In the third role play, she incorporated some of the feedback and said, “I’ve been feeling a lot more stressed lately, probably because there’s been a lot more stress going on in the group and I think this has been affecting the group – I don’t want to say that it has because I don’t want to speak for everyone...I do think that if you guys talk a bit more, express what you think, just not in an angry way, just state your opinion, I think we could come to a conclusion.” As they were not sure when Madison could have this conversation, the leader encouraged her to write some of the key statements in her phone.

They then reviewed her warning signs of depression. Madison said her friends were a good alert system for her, as they asked about her feelings when she was quiet. They discussed what she would do if the warning signs worsened and identified people she could talk to.

The final part of the session focused on termination. Madison said she was somewhat sad to end and told the group leader, “I like you; you’re a nice person.” Madison liked the setup of the individual and group sessions, saying, “I do like the individual one cause warms you up to the idea of group. And I did like the kids in the group and I’m glad that I met them.” She said that had not been in touch lately but occasionally saw one at sporting events.

Madison said she had been using **putting yourself in their shoes** lately, mostly with her friends. She wanted to work on **striking when the iron is cold** more. The leader then provided Madison with feedback, highlighting her participation, open-mindedness, and support of other members. She encouraged Madison to try the communication skills with her mother and to have realistic expectations about what she can and cannot change. Madison stated, “I do think that I –

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whether it's consciously or unconsciously – that I have been using these skills just through whatever conflict comes up...and I think I've been a bit more open about talking about conflicts after sharing in group.”

Booster session #3: Riley. Riley met with her group leader for the final booster session approximately six weeks after the previous one. She rated her mood at a 5 for the past month and a 4 for the past week. When the group leader asked whether anything happened, Riley said no and did not identify a connection to her mood. She denied all depressive symptoms.

When asked about her social anxiety, she said it was the same and had not met with a therapist. At this point, the leader shared that she had spoken with Riley's mother about connecting her with a therapist but her mother was a bit reluctant. Riley said she was interested in therapy, so they agreed to practice a conversation communicating this to her mother.

The group asked about the planned conversation with her father. Riley reported that she had the conversation and it went well. She said that her father agreed to the change if her teacher agreed. Riley said the solution did “not really” happen and it “made me a little upset because neither my mom or dad did anything to ask my teacher.” Here, Riley displayed some social anxiety or dependence on her parents to communicate with her teacher.

The leader and Riley reviewed her initial goals for therapy, and Riley said she continued to argue about chores about once a week. She still felt it was unfair but was convinced her father would not change his mind. When the leader pointed out the positive result after the previously scripted conversation, she inquired what Riley could do this time. Riley seemed to need significant guidance from the leader in brainstorming solutions.

The session then focused on scripting a conversation around therapy. When asked about the goal of the conversation, Riley said after a long pause, “I need help with my social skills?”

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The leader then distinguished between social skills and social anxiety and reframed the goal as communicating that she needed help with her social anxiety. They scripted the conversation and Riley said that communicating an **I statement** is “kind of uncomfortable.” They continued to script and then role played the conversation.

Riley stated, “I think that I should see a therapist about social anxiety. I feel this way because I get really nervous in social situations.” They role played a final time without reading it from a script and the leader provided feedback about Riley’s **I statements** and **solutions**.

They discussed what Riley could do if she noticed warning signs of depression. When asking for feedback on the group, Riley said it was helpful, particularly in learning how to speak up and use the skills. The leader encouraged her to write, as that seemed to have been useful recently. The group leader then brainstormed techniques to address her nerves before having a conversation, such as encouraging herself. When ending the final session, the leader asked Riley how she felt, who expressed some hopelessness after ending the sessions. She stated, “I think [the program] helped me speak up and have conversations that I didn’t have before, so um so like it helped me improve the conversations. And now that won’t happen anymore... I don’t know how it will improve now that I won’t be coming here anymore.”

The group leader expressed significant hope for Riley, expressing that the group laid the groundwork so that Riley could be her own coach and possibly continue with a new therapist.

Follow-Up Phase

6-month evaluation. Participants met with their evaluator six months following the end of the program, in October 2016.

Madison. Madison met with an evaluator for a 6-month evaluation. Madison had started eighth grade at this point. She described school as “pretty good” and “boring.” She was receiving

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all As and was in two advanced classes. She was friends with the same people at this time and mostly saw them in school or at each other's houses. She did note that her mother did not trust her male friends as much as her female friends, so she saw them less often outside of school.

When asked about her relationship with her mother, she said that it was "pretty normal" and there were no major arguments. She said that they watch a TV show together regularly. Her former stepbrother was in the same grade and a couple of the same classes as her. They tended to get along with each other. She did not talk to her former stepfather or stepsister. Madison was involved in reading, photography, band, and watching TV. She had recently been biking less than in the past.

Madison noted that she felt sad and bored at summer camp, particularly because there were certain people there that she did not like. Currently, she described some sadness and irritation with her extra academic work. As she mentioned this extra academic work in these evaluations, there still seemed to be some disagreement with her mother on the topic.

Overall on the K-SADS, Madison endorsed subthreshold levels of depressed mood, initial insomnia, and fatigue over the past two week. Her mother noticed subthreshold initial insomnia for Madison over the past two weeks, and no symptoms of depression over the past six months. The evaluator assigned a CGAS of 76, indicating no more than slight impairment in functioning at home, school, or with peers.

Riley. Riley met with an evaluator for a 6-month follow-up evaluation. She had started the eighth grade, and "kind of" liked school. She liked some of her classes but disliked the early and long hours. Art and band were her favorite classes. She disliked science and had a D in the class at the time. She had As and Bs in the rest of her classes. She was not attending tutoring or receiving extra support in school.

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Riley said that she did not have friends. She talked with people at lunch and recess, but felt they were not friends as she did not know them well. She denied teasing and bullying at the time. Riley mostly spent her time at home, playing on her phone and watching TV. She was also involved in the school band.

Riley reported that she got along with her mother but they typically argued about school, particularly her grades. Riley said that she did not feel she could go to her for advice and they did not do things together. She described a similar relationship with her father, saying that they did not talk or do things together. They argued about several things but not everything. In regards to her sister, Riley said, “I actually don’t really know where she lives” but saw her once or twice a week. While they got along, she described their relationship as not very close.

She described a time in July and August 2016 that she felt sad at summer camp. She said that she mostly stayed in her room and was bored, then felt sad because she was bored. She had continued difficulty describing things she liked about herself, saying, “I guess I like that [long pause] I don’t get into trouble. Not really anything else. And I dislike that I’m quiet.”

After the evaluation, Riley’s mother was contacted regarding her social anxiety symptoms and a recommendation was made for additional treatment for anxiety and referrals were given. It was also noted that Riley had expressed interest to her group header in starting such treatment. Her mother reported that they had not had any conversations about this.

Overall on the K-SADS, Riley endorsed subthreshold levels of worthlessness and denied all depressive symptoms over the past six months. Her mother endorsed threshold levels of hypersomnia and fatigue, and subthreshold levels of irritability, concentration, indecision, weight gain, worthlessness, and hopelessness over the past two weeks. The evaluator assigned a CGAS score of 66 (a decrease from the post-group evaluation), reflecting difficulty in functioning.

12-month evaluation. Participants met with their evaluator 12 months following the end of the group program, in April 2017.

Madison. Madison described school as normal and relatively boring. She continued to receive all As and continued in her advanced classes. She said that she had great teachers this year. Madison was involved in music extracurriculars through several different bands. She had also restarted volleyball at school. Madison said that she had the same friend group, with some new friends who were “nice but not my style.” She mostly saw her friends in school.

When asked about her relationship with her mother, she responded with “pretty good,” knocking on the table as to ‘knock on wood.’ She said that there was nothing to argue about currently, and she could talk to her.

On the K-SADS, both Madison and her mother endorsed subthreshold levels of initial insomnia and fatigue over the past two weeks and denied all depressive symptoms over the past six months. The evaluator assigned a CGAS of 80, indicating increased functioning compared to the previous evaluation, with no more than slight impairment in functioning at home, school, or with peers.

Riley. Riley reported receiving As and Bs, with more Bs. She liked some things about school, such as the assemblies, but disliked how long the school day was. She said that band was her favorite class and science was her least favorite.

Riley said that she had no friends and was alone most of the time. When the evaluator asked about her friendship with a girl from church that had previously spoken about, Riley said that she no longer saw her, “maybe because we go to different schools.” She did not experience any teasing or bullying at this time. Riley continued to play in the band, watch TV, and play games on her phone.

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Riley said that her relationships with her mother and father were “okay” and they did not argue; this was a change since the previous evaluation. When asked if Riley could talk to her mother if she needed to, she said “No. I think she would listen but I don’t feel comfortable. I would feel more comfortable talking to someone my age.” She described a similar relationship with her father, though they occasionally did things together, such as seeing movies. However, the last time they saw a movie together was last year for Riley’s birthday. She saw her 28-year-old sister about once or twice a week. They did not fight, nor did they talk or do things together.

Riley presented with flat affect with minimal elaboration on her answers to questions. Her parent reported that she still struggled with social anxiety and was attending “holistic therapy” to manage these concerns.

On the K-SADS, Riley endorsed subthreshold level of worthlessness and denied all depression symptoms over the past six months. Her mother endorsed threshold difficulty with concentration, and subthreshold hypersomnia, indecision, weight gain, worthlessness, and hopelessness. Her mother denied symptoms over the past six months. The evaluator assigned a CGAS score of 63, reflecting difficulty in functioning in school, home, and/or with peers.

18-month evaluation. Participants spoke with their evaluator 18 months following the end of the group program, in October 2017. At this point in the study, evaluations were conducted over the phone with adolescents and their caregivers.

Madison. Madison’s previous evaluator concluded her time with the RCT, and a new evaluator was assigned to speak with Madison for the remainder of the study. She spoke with this new evaluator for the 18-month evaluation.

Madison had started ninth grade in high school and was not enjoying it, as middle school was more fun. She was attending three honors classes and received mostly As and three Bs.

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Madison disliked that she had not been seeing friends in her classes. She said she had friends and a best friend and that they often saw each other outside of school. Madison said that her relationship with her mother was good and she sometimes went to her for support. The presence of conflict or arguments was not verbally assessed at this point. Madison continued her involvement in band.

Madison said that she felt sad during August 2017 after attending a summer camp, when she saw her friends less often. Of note, she connected her mood to her interpersonal relationships, which was taught in the IPT-AST group sessions.

Madison's voice sounded more down and monotone during this interview, and she was not making jokes as she had in previous sessions and interviews. It is unclear whether this stemmed from the change from in-person to phone evaluations, a change in evaluators, her mood, or something else.

On the K-SADS, Madison endorsed subthreshold difficulty with concentration and agitation over the past two weeks. She also described subthreshold levels of anhedonia in August 2017. Her mother did not endorse any symptoms of depression for Madison. The 18-month evaluation assesses for anxiety in addition to depression. She denied all symptoms of anxiety disorders. She endorsed some worry a few days a week regarding what others think of her. She denied symptoms of PTSD and denied all questions related to suicide and self-harm on the SITBI. The evaluator assigned a CGAS of 79, somewhat lower than before, indicating no more than slight impairment in functioning at home, school, or with peers.

Riley. Riley continued with the same evaluator for the entire study and began participating in evaluations over the phone at this time point. She began ninth grade, which was

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reportedly “okay.” She received mostly Bs and disliked one class. She said that she did not have friends or speak with her peers. Riley did not report experiencing any teasing or bullying.

Riley reported that her relationship with her mother was “alright” and they sometimes argued about schoolwork. She described arguing with her father, mainly around chores when “he’ll just get mad and yell at me.” This was the same issue described in the pre-group session, which was almost two and a half years prior. Her relationship with her sister remained the same; they saw each other once to twice a week and did not talk or argue with each other. Riley said that she liked to watch TV and continued to play in the band.

Riley described feeling sad over the past two weeks when her parents compared her performance to other kids’ performances in school, and said, “it made me feel really bad about myself.” When asked whether Riley had thoughts of death, she said no. However, the evaluator followed up after Riley endorsed an item on the CDI, in which she indicated *I think about killing myself but would not do it*. She said, “My parents are always letting me down and they make me feel really bad about myself like the way they talk to me and stuff. So I just said what’s the point of living anymore if this is what it’s going to be like every day...I just thought they wouldn’t realize it really hurt my feelings until I did something like that.”

Riley reported that she told her mother about these thoughts in the week before this evaluation, though she said it was not helpful as she felt her mother turned the conversation back to her lack of effort in school. She most recently had these thoughts three days before this evaluation and said she would reach out for help if she needed to. On the SITBI, she endorsed suicidal ideation three times over the past week and no other times in the past. She denied nonsuicidal self-injury, a plan for suicide, and suicidal behaviors. Riley continued to be future-oriented and described reasons to keep living, such as graduating and attending college. After a

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risk assessment was completed, it was determined the Riley was not at imminent risk of harm to herself.

On the K-SADS, Riley endorsed the following subthreshold symptoms over the past two weeks: depressed mood, irritability, suicidal ideation, fatigue, worthlessness, and hopelessness. She endorsed subthreshold symptoms of worthlessness and hopelessness at a time in the past six months. Her mother endorsed current subthreshold symptoms: irritability, indecision, decreased appetite and weight loss, worthlessness, and hopelessness. The 18-month evaluation also assessed anxiety symptoms on the K-SADS. She met criteria for Social Phobia. Riley's CGAS decreased to 61, reflecting poor functioning with some difficulty in school, home, and with peers.

After this evaluation, feedback was given to Riley's mother. Despite her report, the parent was not aware of suicidal ideation and "expressed surprise and concern." The evaluator explained that there was no intent or plan, and Riley was not at imminent risk. Her mother was encouraged to discuss this with Riley. She said that Riley was not in treatment at this time. The evaluator discussed referrals with mother again but was told they were not interested.

24-month evaluation. Participants spoke with an evaluator 24 months following the end of the group program, in April 2018.

Madison. Madison was in ninth grade and reported that school was better than during the previous evaluation. She was receiving As and Bs and "really loved" some of her teachers. She had friends inside and outside of school and a best friend from another school. Regarding her relationship with her mother, she said she would more likely talk with her friends but could talk with her mother. She joined a school organization a couple of months before, and was involved in band until it ended in the fall.

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Madison endorsed a sad mood from December 2017 to February 2018. Band, which helped with her mood, had ended during November 2017, and she said “I feel a lot better when I’m social, when I’m with people.” Again, Madison connected her mood to her interpersonal relationship (as is done in IPT-AST) and appeared to retain the psychoeducation and understanding of the model. Madison reportedly began to feel happier when she joined the school organization and met new people.

Madison endorsed some passive suicidal ideation in the past, reporting, “I wanted to take a break from living and take like a really long nap.” She denied past and present thoughts of killing herself, and denied all questions related to suicide and self-harm on the SITBI. It was determined that Madison was not at imminent risk of harm to herself. Madison’s voice sounded more upbeat than in the previous evaluation.

Madison denied all current symptoms of depression on the K-SADS. She described a time in November 2017 when she experienced threshold anhedonia and subthreshold depressed mood, irritability, initial insomnia, fatigue, difficulty with concentration, worthlessness, and hopelessness. Her mother denied all current and past symptoms. Madison’s CGAS returned to an 80, indicating good functioning at home, school, and with peers.

Riley. Riley was in ninth grade and she disliked her teachers because she felt as though they would ignore her when she raised her hand in class. Riley said she did not have any friends; she did note, however, that she occasionally talked with her peers at church once a week.

She continued to have arguments with her mother about schoolwork and said they did not talk or do many things together. She reported to argue less with her father than her mother but still did not talk with each other much. Riley said that they occasionally went out to eat and used to go to the movies but no longer did. She saw her sister at home and they did not talk, argue, or

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spend time with each other. Riley said that she liked to spend time on her phone or watch movies. She continued her involvement in band.

Riley described feeling sad currently, mainly about school. She also felt sad for several months before but had difficulty pinpointing a reason, saying it “comes at random times” and “sometimes I just feel really sad and I don’t like it; I don’t know why.” On the K-SADS she endorsed threshold sadness in February 2018. She described feelings of worthlessness, again wanting to change her “shyness.” Riley endorsed past suicidal ideation at this time in February 2018, with no plan or intent. She said that she had this thought once and did not tell anyone about it. She continued to be future-oriented, looking forward to getting her driver’s license soon. Riley endorsed current subthreshold depressed mood and worthlessness. Her mother endorsed current worthlessness and hopelessness, and denied depression symptoms in the past. The evaluator assigned a CGAS score of 63, as Riley was experiencing difficulty in functioning.

Riley’s mother was again contacted about treatment referrals for Social Phobia, and her mother said she would reach out to the supervisor if they decided to pursue it.

30-month evaluation. Participants spoke with an evaluator 30 months after the end of the group program, in October 2018.

Madison. Madison spoke with an evaluator over the phone for the 30-month evaluation. She had started tenth grade and was enjoying it much more than the previous year. She liked her classes but disliked that she did not get to see her friends much during school. She had friends in and out of school and had a best friend. She said that she had a few issues with a friend recently and felt sad at that time, but had been feeling better since it was resolved. When asked about her relationship with her mother, she said it was “pretty good...but I would go to any one of my

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friends over her because she tends to insert herself.” She denied having recent arguments with her mother. She continued her involvement in band.

Riley. Riley was in tenth grade, which was “okay” and she did not know her grades for that semester. She continued to say that she had no friends or acquaintances. She saw people at church but did not consider them friends. She described her relationships with her mother and father as “okay,” arguing weekly and not talking or doing things together. She saw her sister about twice a week and they continued to not argue, talk, or do things together. Riley mostly spent time on her phone or watching movies. She continued her involvement with the band.

On the K-SADS, Riley endorsed current subthreshold symptoms of fatigue, difficulty with concentration, worthlessness, and hopelessness. She denied all symptoms in the past six months. Her mother endorsed subthreshold irritability, indecision, decreased appetite, weight loss, psychomotor retardation, worthlessness, and hopelessness in the past two weeks. She denied depressive symptoms at other times over the past six months. When asked about self-worth, Riley said that she disliked that it was “hard for me to talk to people.” Her symptoms of Social Phobia were not formally assessed during this evaluation. The evaluator assigned a CGAS score of 68, reflecting improved functioning compared to the previous evaluation, though still with some difficulty.

VII. Therapy Monitoring and Use of Feedback Information

Symptom Monitoring

Depression symptoms were monitored through weekly depression checklists that participants completed at the start of each session. The depression checklist consisted of 15 questions about one's feelings and behaviors over the past week. Mood was monitored weekly through a mood rating scale. Adolescents were asked to circle a number on the scale, which ranged from 1 to 10, with 1 being "the best you have ever felt," and 10 being "the most depressed you have ever felt." Figure 3 shows the change in Madison and Riley's reported mood over the course of the intervention and after the intervention. Depression symptoms were also monitored through the CDI before, during, and after the group program.

Feedback and Supervision

Group leaders received weekly feedback through formal supervision. Supervision was based on the review of session audio recordings and involved the discussion of the use of IPT-AST skills and any issues that arose in the group. Group leaders modified and adapted the treatment to address these issues.

The independent evaluators met with the assessment supervisor to review the K-SADS and CGAS scores.

VIII. Concluding Evaluation of Therapy Process and Outcome

The battery of assessments (see Table 1) evaluated depression symptoms and functioning, anxiety symptoms, as well as interpersonal and cognitive variables. Figures 4-9 illustrate the change for Madison and Riley in these variables. The results on the clinician and standardized self-report measures completed by Madison and Riley are summarized in Table 3. Overall, the quantitative data indicate a positive effect of intervention for Madison and a slight improvement for Riley during the intervention with some decline in the follow-up phase.

Results Concerning Aim 1 of the Study: Matching Risk Profile

Qualitative evaluation. While Riley was matched to the IPT-AST group due to high interpersonal risk, her depressive symptoms did not improve over the course of the study. Riley began the group with high parent-adolescent conflict and low peer support. Several factors, including her Social Phobia, made it difficult for her to socially engage in the group and therapeutically benefit from the treatment. Nonetheless, Riley did not develop a depression diagnosis in the 30 months following the group. Although Madison began with low interpersonal risk and was thus mismatched to the IPT-AST group, the intervention appeared to be effective in preventing depression. Madison verbally described moderate conflict with her mother, which was not necessarily reflected in the self-report measures. Nonetheless, she reported feeling supported by her mother and peers. IPT-AST appeared to be a helpful intervention for Madison due to her social competence in expressing her feelings and initiating interactions with others in and out of the group.

Madison began with an elevated negative coping style and Riley began with a low negative coping style at the start of the study. Although she had high cognitive risk for depression, Madison's negative cognitions did not appear to significantly impact her experience

in the group and in fact decreased over the course of the intervention. On the other hand, Riley's negative cognitions increased over the study. Still, it is possible that some of Madison's cognitive style affected her experience and outcome of the group. For instance, she often made assumptions of how someone else would respond if she tried one of the IPT-AST skills. For example, she often noted that her mother would "always" react a certain way or "never respond well." The tendency for her to make negative attributions may have affected how effective this group was for her. Nonetheless, her negative cognitive style decreased, depressive symptoms decreased, and functioning increased 30 months after the program.

Quantitative evaluation.

Interpersonal variables. At baseline, Madison endorsed high support from peers and low conflict with her parent, and was assigned a risk profile of low interpersonal risk for depression. She also answered questions about a friend of the same-sex and opposite-sex at all time points. She had known most of these friends for at least one year, and indicated high support and little conflict. As demonstrated in Figure 7, her perceived support from a same-sex friend was high over the course and after the IPT-AST intervention and increased at 30 months.

Madison reported little conflict and moderate to high support from her mother (see Figure 8). She felt her mother treated her with respect and admiration. Madison's feeling that her relationship with her mother would last and that she could tell her mother her secrets both increased over treatment. It should be noted that this self-report somewhat differed from what was verbally reported to her group leader and evaluator, which highlighted areas of conflict with her mother.

Madison's self-reports on the ALEQ indicated some conflict with peers and parent, and feeling as though she was disappointing or not pleasing her parent. Madison reported a breakup

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at both the 12 and 18-month follow-ups; she did not report a significant other on the NRI at any time point.

At baseline, Riley endorsed low support and high conflict, and was assigned a risk profile of high interpersonal risk for depression. Riley endorsed low same-sex support on the NRI over the course of intervention and in the follow-up phase (see Figure 7). Riley consistently endorsed, “I do not have any friends” on the CDI and having “few or no friends” on the ALEQ.

Riley answered questions about her relationships with both her mother and father on the NRI. As her scores were the same for both parents and the scores for her mother were used to assign her risk profile, this study examined the scores of her relationship with her mother. Riley endorsed moderate parent-adolescent conflict over the course of treatment on the NRI (see Figure 8). The level of reported conflict increased then returned to its baseline after the intervention, and increased at the 18 and 30-month follow-ups. Riley endorsed fairly low support with her parents over the study, fluctuating between feeling supported “little to none” or “sometimes.” According to the ALEQ, she also often felt that she disappointed or could not please her parents at 18-months, which was not present at prior time points.

Cognitive variables. Madison displayed high cognitive risk for developing depression at baseline. This risk profile was based on the ACSQ, the Children’s Dysfunctional Attitudes Scale (CDAS), and the Children’s Response Style Questionnaire (CRumSQ). This study examined scores from the ACSQ. As shown in Figure 9, Madison’s score on the ACSQ (3.77) indicated a higher likelihood that she would attribute a negative situation to something negative about herself. However, this thinking pattern was only somewhat elevated and appeared in specific circumstances, namely academic versus social. For example, she was more likely to attribute *not making the honor roll* to being caused by something about her, but was more likely to attribute

not being invited to a party to being caused by something other than her. Nonetheless, while the IPT-AST group did not target cognitive patterns, Madison displayed less negative thinking over the course of the intervention (3.17) and follow-up (2.97).

Riley displayed low cognitive risk for developing depression at baseline as shown in Figure 9. Her score on the ACSQ (2.30) indicated a greater likelihood to attribute negative situations to something other than herself. Riley's negative attributions remained at this level and decreased slightly during and after the intervention. However, it increased at the 18-month evaluation (3.70), reflecting a high negative coping style.

Results Concerning Aim 2 of the Study: Overall Process and Outcome Patterns

Qualitative evaluation.

Interpersonal history. Though Madison verbally described a conflictual relationship with her mother, she did not endorse high conflict on self-report interpersonal measures. And with this conflict, she still described feeling supported by her mother. Madison also described strong friendships with significant support throughout the study. Riley, on the other hand, described conflict with her parents and a disconnection from her sister and peers. This did not appear to change over the course of the intervention. The closeness circles completed in the pre-group sessions (see Figures 1 and 2) demonstrate very different interpersonal histories prior to the start of the study. Madison had the opportunity to practice IPT-AST skills with these friends over the course of the intervention. However, as Riley lacked social connections, she likely did not have the opportunity to implement these skills in conversation.

Social Phobia symptoms. Riley's symptoms of Social Phobia remained consistent throughout the intervention and follow-up phases. Madison denied symptoms of Social Phobia during all evaluations. Riley's symptoms likely made it difficult to engage in a group format. It is

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likely that this diagnosis is connected with her interpersonal deficits and impacted her depressive symptoms. It also made it so that Riley rarely, if at all, participated in group discussions.

Madison was not always the first to volunteer, but she participated more often and was able to practice the communication strategies. While the IPT-AST group is meant to function as a sort of “interpersonal lab” where adolescents can practice these skills, Riley did not practice the skills in the group, likely making it more difficult to transfer the skills to real life situations.

Riley’s mother was contacted by project staff during the group intervention and after every follow-up evaluation to recommend therapy to target her Social Phobia. According to a progress note after the 12-month evaluation, it appears that Riley tried a “holistic approach” for therapy but discontinued for an unknown reason. Riley seemed interested in attending therapy to address these symptoms, as discussed in the individual booster sessions. However, her parents did not pursue the referrals provided.

Depressive symptoms. Although both began with some symptoms, they endorsed different levels of subthreshold depression (Madison’s CDI = 3; Riley’s CDI = 9). Neither met criteria for a depressive disorder before, during, or after the study. However, Riley did endorse higher levels of depressive symptoms throughout and after the intervention. Both adolescents endorsed suicidal ideation without intent at different time points. Madison’s ideation appeared more passive and fleeting, endorsing thoughts of taking a break from life or falling asleep and not waking up. Riley’s suicidal ideation was tinged with more hopelessness and emerged more frequently (three times in one week).

Madison and Riley’s specific symptoms of subthreshold depression may have impacted the effectiveness of the intervention. Madison most commonly reported fatigue and initial insomnia, which she did not attribute to depressive symptoms but to her busy schedule. Among

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Riley's most commonly reported symptoms were worthlessness and hopelessness. Riley's feelings of worthlessness appeared pervasive, though mostly focused on her symptoms of Social Phobia, i.e., disliking how quiet she was. Her feelings of hopelessness also may have impacted her confidence in and use of the IPT-AST skills, thereby affecting their effectiveness. This became particularly clear when she expressed little hope that she would be able to use these skills in the future without a group leader to help.

Setting and accomplishing goals. Both Madison and Riley's goals focused on the problem area of interpersonal disputes. While conflict was present for Riley in her relationships with both her mother and father, it seems that her interpersonal deficits had a greater role in affecting her and her ability to engage in the group. Therefore, setting initial goals focused on this problem area may have allowed for more interpersonal connections and skill-building.

Both Madison and Riley had trouble remembering their goals throughout the intervention. Riley appeared to considerably benefit from written reminders, making it more likely to have scripted conversations outside of sessions. It may have been helpful for Riley in particular to keep written goals and scripts somewhere she could reference later, such as in her IPT-AST binder.

Participation. Madison and Riley were in the same IPT-AST group for all eight sessions, with the same two group leaders. This group appeared to be particularly quiet, with little participation from most members. The leaders often asked for volunteers, which tended to consist of the same people, with Rosa and Ben as the most active participants. Participation from more members increased in sessions that leaders designed the activities and role plays differently (e.g., round robin, ask for different volunteers each time). When asked for participants, Madison occasionally volunteered and Riley did not.

Level of trust and comfort. Madison expressed that though the group was quiet, she enjoyed it, saying, “I did like the kids in the group and I’m glad that I met them.” Riley’s comfort level and trust with the group was unclear, though it appears she did not interact with the other adolescents inside or outside of the group. Overall, it appeared that Madison was more comfortable interacting with the members of the group, which seemed to positively impact her experience and outcome.

Nearly every member attended every group, with only one person missing one session. It was clear, especially in the final group session, that many group members felt comfortable with each other, saying, “I’d have seven less friends if we didn’t have the group,” “we’re all pretty close friends,” and exchanging contact information to stay in touch.

Quantitative evaluation.

Symptoms and overall functioning. Based on diagnostic interviews using the K-SADS, Madison did not meet criteria for a depression diagnosis before, during, or in the 30-months after the group intervention. Furthermore, Madison consistently reported mostly positive social relationships and excellent academic functioning through the follow-up phase of the study.

As illustrated in Figures 4 and 5, Madison’s reported depressive symptoms (CDI) decreased and her overall functioning (CGAS) steadily improved over the course of intervention, which was maintained in the 30 months following. Her depressive symptoms increased slightly at 18-months and returned below its baseline at 24-months, eventually decreasing to the minimum of 0 on the CDI.

Madison’s most commonly reported symptoms were initial insomnia and fatigue on the K-SADS, and fatigue, indecision, and not always enjoying school on the CDI. She endorsed

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suicidal ideation without intent on the CDI at baseline and the mid-group session, and then denied at all follow-up evaluations.

According to the MASC (see Figure 6), Madison's subthreshold anxiety symptoms, which began at an Average level, also decreased over the course of the intervention and returned to its baseline at 18-months. The results of the MASC at following time points were not available at the time of the present study.

Based on diagnostic interviews using the K-SADS, Riley did not meet criteria for depression diagnoses before, during, or 30-months after the group intervention. Her mother did endorse several threshold depressive symptoms throughout the study, but it was not sufficient for a diagnosis. Riley consistently reported conflict and distance from her family, impaired academic functioning, and lack of peer support.

As can be observed in Figures 4 and 5, Riley's reported depressive symptoms (CDI) and overall functioning (CGAS) did not consistently improve over time. Her symptoms increased mid-way through the group and decreased after its final session. Her depressive symptoms increased through the follow-up phase, with a moderate severity of depression at the 18- and 24-month follow-ups. There was an improvement in depressive symptoms and functioning at the 30-month follow-up.

Riley's most commonly reported symptoms on the K-SADS were worthlessness, indecision, changes in weight, and hopelessness. On the CDI, she consistently endorsed fun in only some things, feelings that she did not have any friends, occasionally feeling unloved, and feeling inadequate as compared to other kids. Riley endorsed suicidal ideation without intent at 18- and 24-months.

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Symptoms of anxiety were assessed at baseline and the 18-month follow-up evaluations. Riley met criteria for a Social Phobia diagnosis at both of these points. As shown in Figure 6, her symptoms of anxiety on the MASC fluctuated but remained high over the course of intervention and after. She endorsed clinical levels of anxiety at baseline (66), 6-months (67) and at 18-months (60).

Attitude toward intervention. Madison and Riley completed the Attitude Toward Intervention (ATI) after the final group session. Madison reported that she found the group a little helpful, with very helpful group leaders and very relevant topics. She felt there was the right amount of group sessions and right amount of parental involvement. She did note that the length of the group sessions felt too long. Overall, Madison endorsed feeling satisfied with the IPT-AST fit.

Riley reported that she found the program very helpful, with very helpful group leaders and topics that were somewhat relevant to her. She noted that she was left wanting more group sessions, consistent with her feelings expressed in her individual sessions. She felt there was the right amount of parental involvement. Overall, Riley endorsed feeling satisfied with the IPT-AST fit for her.

Adolescents also completed the ATI at the final booster session. Madison found the booster sessions helpful. The ATI inquired about her interest in future treatment and provided a choice between individual, group, and combined individual and group treatment, and Madison reported that she would be interested in individual only in the future. Riley found the booster sessions a little helpful. When asked about her interest in future treatment, Riley similarly reported that she would be interested in individual only in the future. Overall, both reported a similar attitude toward the intervention in feeling that it was helpful and a good fit.

Limitations

There were limitations to the present study. The PDP study determined risk profile based on several measures including the NRI, ACSQ, CRSQ, and CDAS. This study used the NRI to examine interpersonal variables and the ACSQ to examine cognitive variables. Therefore, while this is not necessarily a limitation as risk profile had already been determined by the PDP study, more detail from the other measures could have been useful. The assessment measures from all time points were not all available: the KSADS, CGAS, SITBI, CDI, and NRI were examined from baseline to 30 months; the MASC, ACSQ, and ALEQ were examined from baseline to 18 months. Finally, the data and conclusions of this study are limited to only two cases, albeit randomly selected cases. While this is a major limitation, these cases illustrate how productive it would be to add more cases to the systemic analysis and build inferential weight to its conclusions.

Discussion

This study examined two adolescents who participated in an IPT-AST, one matched to the group due to her high interpersonal risk (Riley) and one mismatched due to her high cognitive risk (Madison) for developing depression.

Over the course of intervention and in the 30 months following, neither developed a depressive disorder. However, Madison demonstrated lower levels of depressive symptoms and higher levels of functioning when compared to Riley. Madison's results indicate lower depressive scores (CDI = 0) and higher functioning (CGAS = 80) 30 months following the end of the program. Riley's scores indicate depressive scores (CDI = 9) and functioning (CGAS = 68) 30 months following the end of the program that are similar to the start.

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Overall, for this randomly selected pair of cases, the matching risk profile hypothesis was not supported, which was based on several factors. Madison began the program with lower depressive scores and higher functioning. She also began with a different interpersonal inventory, which listed more connections than Riley's. Madison and Riley also endorsed different types of depressive symptoms. Riley tended to endorse worthlessness and hopelessness, which appeared to affect her use of the IPT-AST strategies.

Though Madison had been mismatched to the IPT-AST group, it appeared to be effective in preventing depression and maintaining or increasing functioning in her relationships with family, peers, and in school. Madison's positive outcome suggests that youth who experience dysfunctional attitudes and negative thinking patterns can benefit from IPT interventions. This may be particularly true for adolescents who are interpersonally-oriented. Madison reported perceived support from a close friend group and her mother; the IPT-AST intervention therefore appeared to foster her interpersonal strengths. This allowed Madison to participate in the group, and she had opportunities to implement the skills with others outside of the group and after the intervention.

Riley was matched to the IPT-AST group and did not develop a depressive diagnosis. Her Social Phobia diagnosis and associated interpersonal deficits appeared to weaken the effectiveness of IPT-AST, as reflected in her depressive symptoms, lower functioning, and impaired interpersonal relationships. These results are consistent with previous findings of IPT-AST and social anxiety and social dysfunction. Those with social anxiety and fewer social connections may have less opportunity to practice and therefore internalize the IPT-AST skills. Focusing on a primary goal of developing connections may be more effective in increasing these opportunities. However, it is difficult to address this type of goal in a group setting, as other

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adolescents may not relate. So while Riley's interpersonal deficits were a good match for IPT-AST as the group targets interpersonal issues, this problem area actually made it difficult for her to engage in the group process. Furthermore, as she was inhibited from increasing her social contacts, she did not demonstrate the motivation to implement new communication skills.

Previous research has demonstrated that cognitive therapy can be significantly more effective than IPT for social anxiety disorder (Stangier, Schramm, Heidenreich, Berger, & Clark, 2011). Both treatments have been effective in reducing depressive symptoms, but 65.8% of patients with cognitive therapy showed improvement in social-phobic symptoms compared to 42.1% of those with IPT. Similarly, both supportive therapy and IPT have shown improvement in social anxiety and associated impairment, but IPT has not demonstrated superior results (Lipsitz et al., 2008) with a lower proportion of responders than those in CBT. It is possible that specific components of CBT are more effective in addressing issues of Social Phobia. As the PDP study excluded comorbidities such as conduct disorder and significant substance use, future studies may consider Social Phobia when matching adolescents to group prevention programs.

While the matching hypothesis was not confirmed in these two cases, it provides further information on how to refine the matching hypothesis in the future. Madison and Riley illuminate numerous variables in addition to risk profile that can impact the effect of matched programs. More can be learned through the analysis of other cases to contribute to our understanding of personalized depression prevention in adolescence.

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Tables and Figures

Table 1

Assessment Instruments

	Type	Baseline	Mid-Group	Post-Group	6-Month	12-Month	18-Month	24-Month	30-Month
General Information									
DEM	PR	X			X	X	X	X	X
Adolescent Mental Health									
K-SADS-PL	INT	X		X	X	X	X	X	X
SITBI	INT	X		X	X	X	X	X	X
CGAS	INT	X		X	X	X	X	X	X
CDI	SR	X	X	X	X	X	X	X	X
MASC	SR	X	X	X	X	X	X		
Cognitive Measures									
ACSQ	SR	X	X	X	X	X	X		
Interpersonal Measures									
NRI	SR	X	X	X	X	X	X	X	X
Intervention Measures									
ATI	SR			X	X				
Life Events									
ALEQ	SR	X		X	X	X	X		

Note. Assessment instruments and time points examined for the present study.

PR = Parent-report; SR = Self-report; INT = Interview; DEM = Demographics;

K-SADS-PL = Schedule for Affective Disorders and Schizophrenia for School-Aged Children-Present and Lifetime Version; CGAS = Children's Global Assessment Scale; SITBI = Self-Injurious Thoughts and Behaviors Interview; CDI = Children's Depression Inventory;

MASC = Multidimensional Anxiety Scale for Children; ACSQ = Adolescent Cognitive Style Questionnaire; NRI = Network of Relationships Inventory; ATI = Attitude Towards Intervention Questionnaire; ALEQ = Adolescent Life Events Questionnaire.

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Table 2

Pre-Intervention Profiles of IPT-AST Group

Case	Sex	Age	CDI	CGAS	Risk profile	Matched to group
“Madison”	F	12	3	75	Low interpersonal/ High cognitive	No
“Riley”	F	12	8	63	High interpersonal/ Low cognitive	Yes
“Victor”	M	12	1	76	High interpersonal/ Low cognitive	Yes
“Gio”	M	12	2	73	High interpersonal/ High cognitive	Yes
“Ben”	M	13	2	64	Low interpersonal/ High cognitive	No
“Rosa”	F	13	9	63	Low interpersonal/ High cognitive	No
“Charlotte”	F	13	6	76	Low interpersonal/ High cognitive	No
“Jasmine”	F	13	1	72	Low interpersonal/ Low cognitive	No

Note. CDI = Children’s Depression Inventory; CGAS: Children’s Global Assessment Scale

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Table 3

Results of Assessments

	Baseline	Mid-Group	Post-Group	6-Month	12-Month	18-Month	24-Month	30-Month
Madison								
K-SADS-PL	None	-	None	None	None	None	None	None
SITBI	None	-	None	None	None	None	None	None
CGAS	75	-	77	76	80	79	80	80
CDI	3	3	2	2	0	3	1	0
MASC	52 ^a	36	54 ^a	47 ^a	33	42	-	-
NRI: Same-sex peer support	30	31	27	28	30	29	26	33
NRI: Parent-adolescent conflict	8	10	9	9	8	11	12	12
ACSQ	3.77 ^d	2.93	3.17	2.10	2.13	2.97	-	-
Riley								
K-SADS-PL	Social phobia	-	Social phobia	Social phobia	Social phobia	Social phobia	Social phobia	Social phobia
SITBI	None	-	None	None	None	Suicidal ideation	Suicidal ideation	None
CGAS	63	-	66	63	63	63	63	68
CDI	8	10	5	7	8	16	18	9
MASC	66 ^a	56 ^a	54 ^a	67 ^a	56 ^a	60 ^a	-	-
NRI: Same-sex peer support	11 ^b	13 ^b	10 ^b	10 ^b	11 ^b	14 ^b	12 ^b	14 ^b
NRI: Parent-adolescent conflict	12	17 ^c	12	12	12	18 ^c	18 ^c	24 ^c
ACSQ	2.30	2.16	1.63	1.77	1.73	3.70 ^d	-	-

Note. ^a above clinical cutoff; ^b low support; ^c high conflict; ^d high negative cognitive style; - = not administered

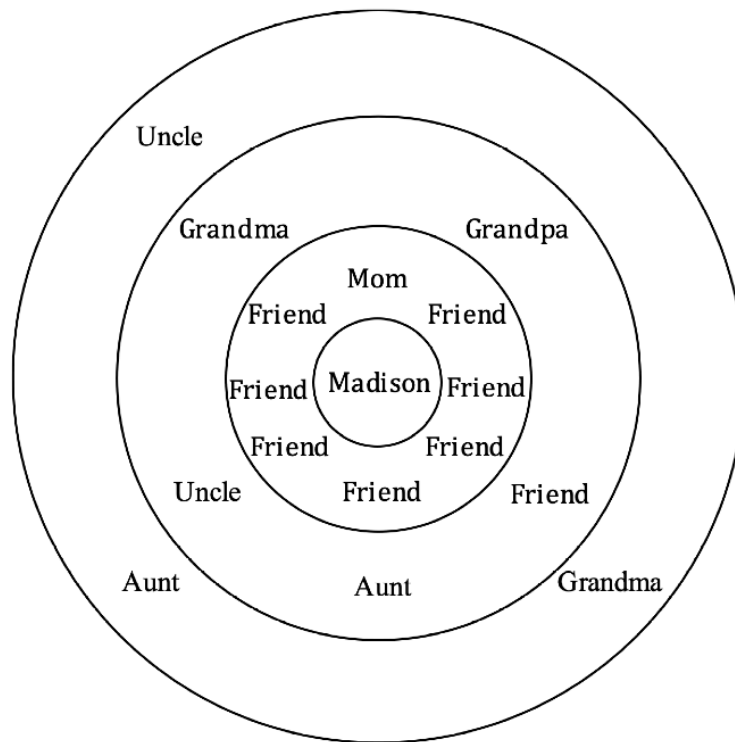


Figure 1. Madison's interpersonal inventory.

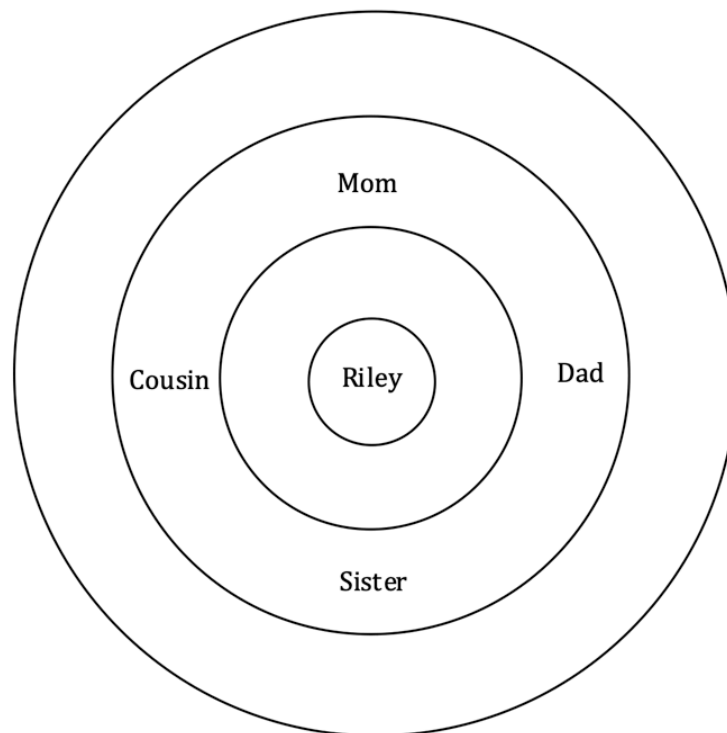


Figure 2. Riley's interpersonal inventory.

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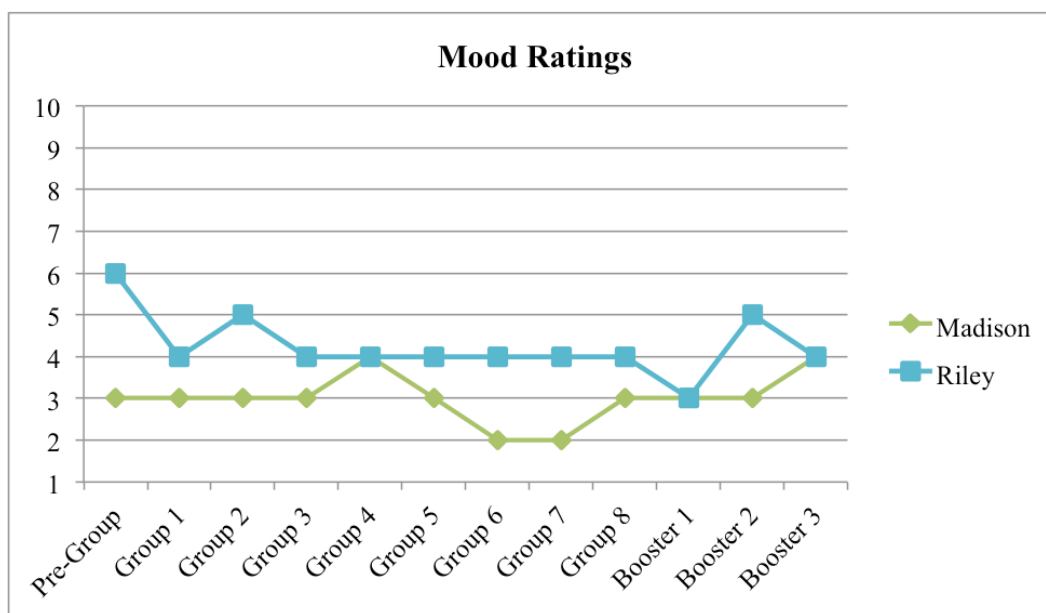


Figure 3. Subjective mood ratings reported by adolescents over the course of intervention, ranging from 1-10, with 1 being “the best you have ever felt,” and 10 being “the most depressed you have ever felt.”

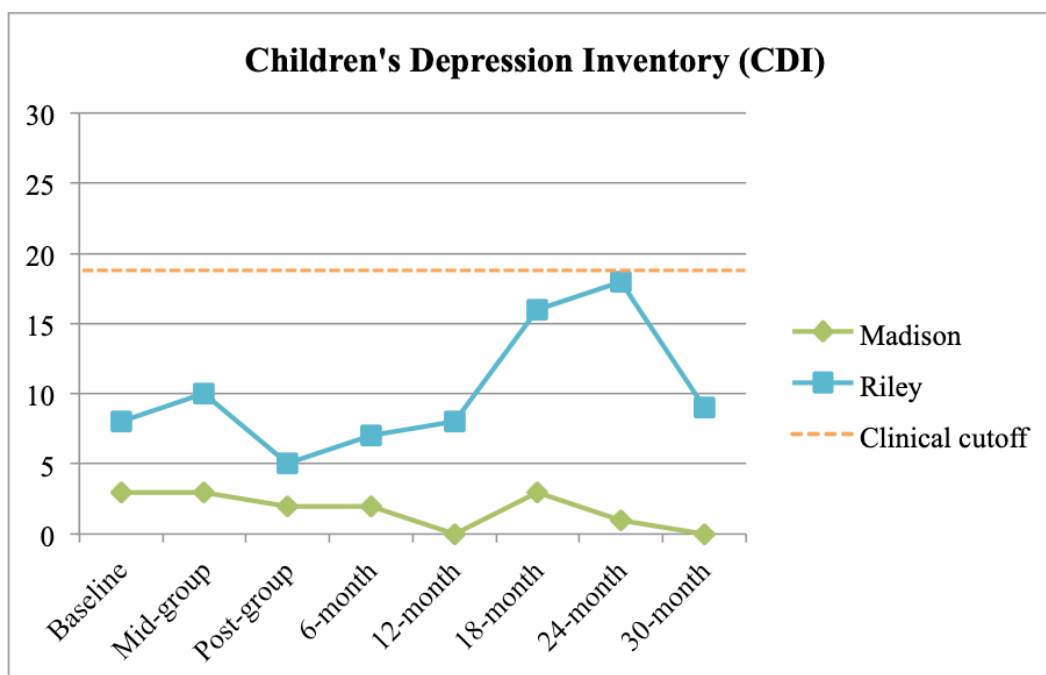


Figure 4. Self-report depression scores completed by adolescents before, during, and after the group intervention.

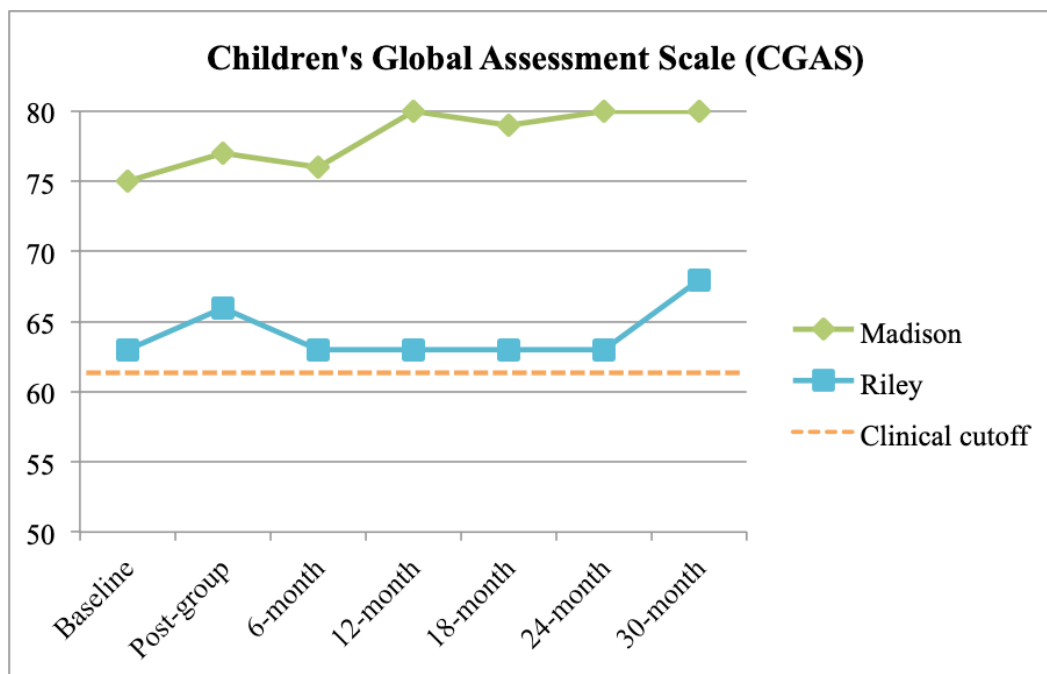


Figure 5. Level of global functioning completed by evaluators on a numeric scale from 0-100 reflecting symptoms and diagnoses, and family, peer, and academic functioning. Higher numbers reflect higher levels of functioning.

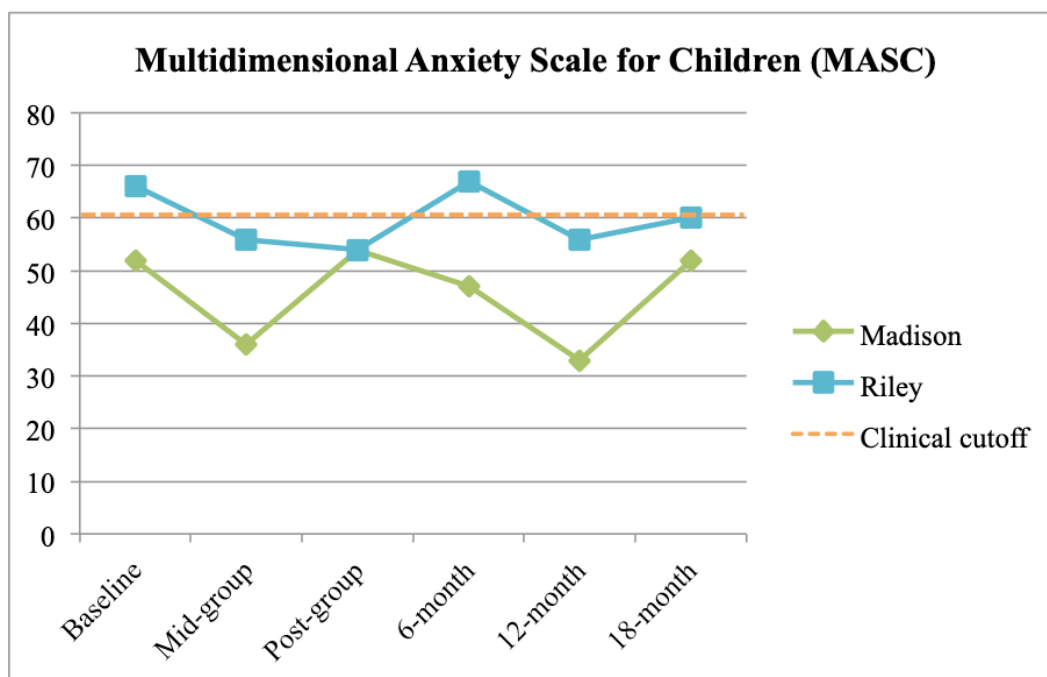


Figure 6. Self-report measure of the severity of anxiety ranging from 0-80, with higher numbers reflecting a higher level of overall anxiety.

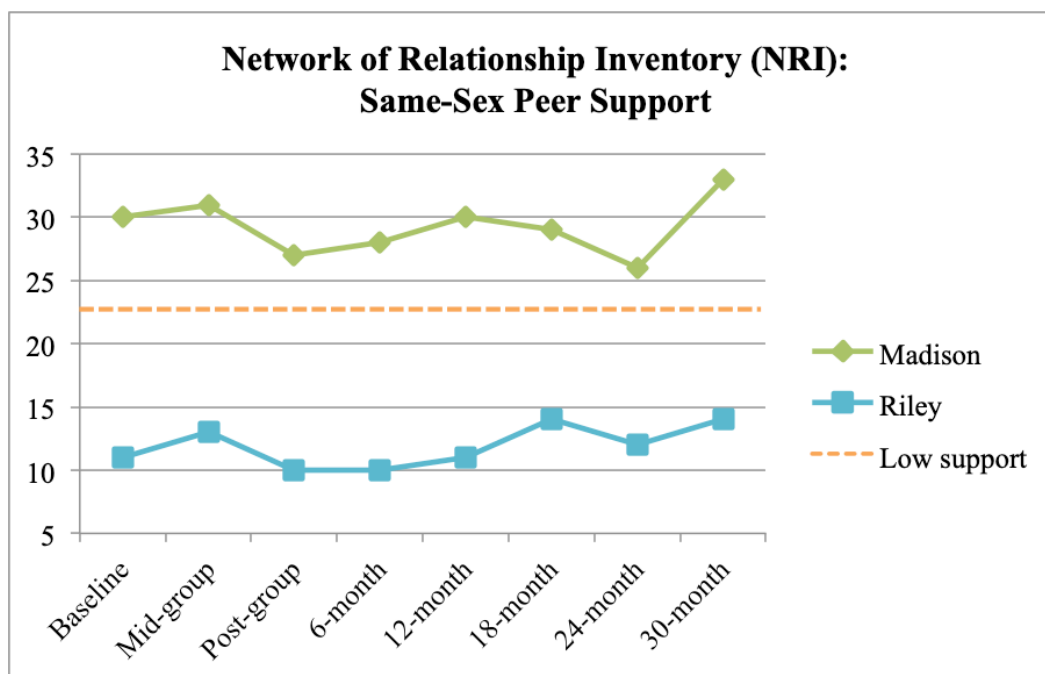


Figure 7. Self-report measure of support from a same-sex peer, ranging from 5-35, with higher numbers indicating higher levels of perceived support.

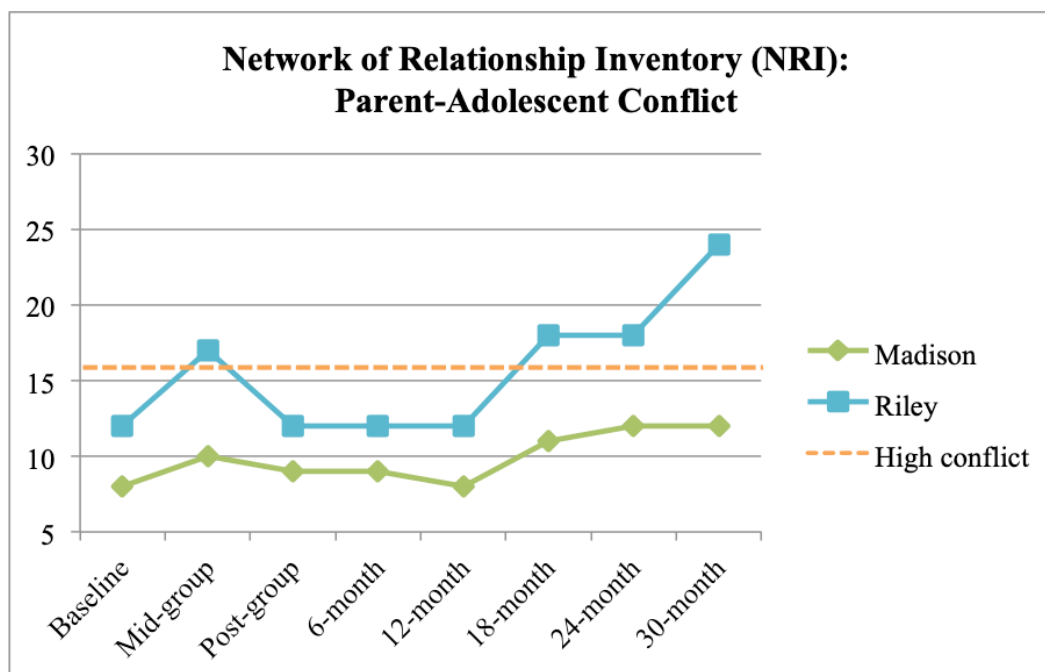


Figure 8. Self-report measure of conflict with parent, ranging from 5-30, with higher numbers indicating higher levels of perceived conflict.

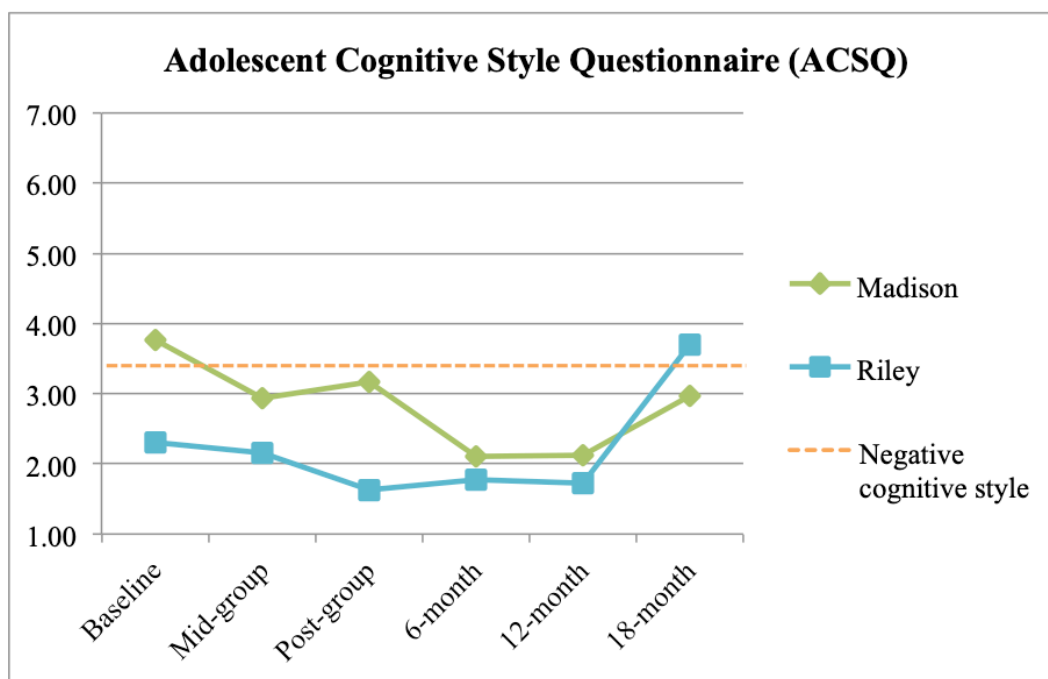


Figure 9. Self-report cognitive measure completed by adolescents from average scores of 1-7. Higher scores indicate higher negative cognitive style.