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CHAPTER 11

Preventing Girls' Depression during the Transition to Adolescence

Jane E. Gillham *and* Tara M. Chaplin

The transition to adolescence is a critical period for preventing depression in girls. However, despite the sex difference in depression that emerges during adolescence, little research has focused on developing programs that target gender-related risk factors. Most prevention programs teach cognitive-behavioral skills and use a coeducational group format. Some of these programs, including our research team's program, the Penn Resiliency Program (PRP), appear to reduce and prevent symptoms of depression. However, across the depression prevention literature, average effects are small. Effects of specific programs such as PRP are often inconsistent. In general, girls appear to benefit as much as boys from the existing programs, but programs developed specifically for girls could have more substantial effects. Research on children's social and emotional development identifies a variety of biological, psychological, interpersonal, and contextual risk factors that occur simultaneously during early adolescence, making them ideal targets for interventions aiming to prevent depression in this period. Moreover, many of these factors affect girls more than boys. Yet, many have not yet been targeted by depression prevention efforts. This observation points to a rich and important new area for prevention efforts. We describe our recent work toward developing one such program that targets gender-related risk factors in early adolescent girls.

DEPRESSION IN CHILDREN AND ADOLESCENTS

Rates of depression increase sharply during adolescence. Prior to age 10, depression is relatively rare. By late adolescence it is one of the most common public health problems, affecting 5–10% of youth each year (Office of Applied Studies, 2005; U.S. Department of Health and Human Services, 1999). Even more adolescents suffer from sub-clinical levels of depression that can lead to significant impairment in interpersonal relationships and academic achievement (Gotlib, Lewinsohn, & Seeley, 1995). Rates of depression increase more steeply in girls than in boys, so that by late adolescence a sex difference in depression emerges that will endure through most of adulthood (Hankin & Abramson, 2001; Nolen-Hoeksema & Girgus, 1994). This increase in depression occurs in the context of a developmental period, the transition to adolescence, that is difficult for many children because multiple biological, psychological, and social changes and stressors converge.

There are multiple pathways to depression in children and adolescents. For example, recent research indicates a moderate to strong genetic component to depression (Kendler, Gatz, Gardner, & Pederse, 2006). Depression has also been linked to inhibited temperament, neuroticism, anxiety, pessimistic cognitive styles, and passive and ruminative coping styles (Garber, 2006; Hankin & Abela, 2005; Kendler et al., 2006). Family environments, including parental conflict and parenting characterized by abuse, intrusiveness, and low levels of affection are also linked to depression in children and adolescents (Downey & Coyne, 1990; Garber, 2006) and may interact with biological risk factors for depression (Yap et al., 2008). Parental depression is a particularly strong risk factor for depression in youth (Beardslee, Versage, & Gladstone, 1998; Downey & Coyne, 1990; Weissman et al., 2006b). This finding probably reflects genetic factors, to some degree, but it also appears to be related to the interference of depressive symptoms with parents' interpersonal interactions, including parenting behaviors (Beardslee, 2002; Compas, Langrock, Keller, Merchant, & Copeland, 2002; Garber, 2006; Goodman & Gotlib, 1999). Recent studies indicate that children's psychological adjustment improves when their depressed mothers receive effective treatment (Weissman et al., 2006a). Life stressors such as abuse, loss, and humiliation, as well as stressful contexts such as poverty, increase risk for depression (Bruce, Takeuchi, & Leaf, 1991; Kendler, Gardner, & Prescott, 2002; McLoyd, 1998). Many of these risk factors co-occur (e.g., neuroticism and anxiety, parental depression and parental conflict), and several appear to interact with each other to produce depression (Caspi et al., 2003; Hankin & Abela, 2005; Kendler, Kuhn, & Prescott, 2004). Over the past few years, research has begun to suggest

that biological, psychological, and social risk factors do not necessarily lead to depression by themselves (Garber, 2006). Rather, the accumulation of risk factors across multiple domains may be particularly problematic. The variety of risk factors suggests a variety of approaches to treating and preventing depression, including biomedical and psychosocial interventions that target individual, family, and/or community risk factors. Our research group has focused primarily on cognitive-behavioral approaches.

COGNITIVE-BEHAVIORAL APPROACHES

Cognitive-behavioral models of depression are among the most widely researched. These models propose that depression results from, or is exacerbated by, several cognitive factors, including negative self-schema or core beliefs, dysfunctional or perfectionistic standards, biased information processing, and pessimistic or hopeless cognitive styles (Abramson, Metalsky, & Alloy, 1989; Abramson, Seligman, & Teasdale, 1978; Beck, 1967, 1976; Ellis, 1962; Hankin & Abela, 2005). In addition, depression is linked to maladaptive coping and problem-solving strategies, including passive response styles, rumination, and aggression (Abela, Vanderbilt, & Rochon, 2004; Chaplin & Cole, 2005; Keenan & Hipwell, 2005; Nolen-Hoeksema, 1991; Spence, Sheffield, & Donovan, 2002). These cognitive and behavioral risk factors may exacerbate each other and lead to self-fulfilling prophecies or downward spirals. For example, negative core beliefs such as "I'm unlovable" and "Nobody cares about me" make it difficult to start conversations with others or act assertively. These behaviors, in turn, may result in isolation or the continuation of hurtful behavior by others, which may appear to support the original negative beliefs. In theory, these cognitive, coping, and problem-solving difficulties serve as diatheses that may develop earlier in life and set the stage for depression when individuals encounter stressful events or painful emotions. Stressful events include major adversities, such as the breakup of a relationship, as well as day-to-day hassles and challenges that may be particularly common during adolescence (Hankin & Abela, 2005). Recent research supports the diathesis–stress model, indicating that daily hassles increase depressive symptoms in children who have dysfunctional attitudes and low self-esteem (Abela & Skitch, 2007). Individuals who are depressed or who have maladaptive cognitive, coping, or problem-solving styles may also act in ways that precipitate negative events (Hammen, 1991).

In early childhood, depression may be more closely connected to life events such as trauma or separation from caregivers. During late childhood and adolescence, cognitive-behavioral models may become more relevant

(Bemporad, 1994; Garber & Flynn, 1998). For example, in a longitudinal study of children from third to eighth grade, explanatory style began to predict depressive symptoms in sixth grade (Nolen-Hoeksema, Girgus, & Seligman, 1992). In addition, there is some evidence that children's self-concepts and interpretive styles become more negative during adolescence (Gillham, Reivich, & Shatté, 2001; McCauley, Mitchell, Burke, & Moss, 1988; but for exceptions, see Garber, Weiss, & Shanley, 1993; Shapka & Keating, 2005).

Cognitive-behavioral therapy (CBT) targets the negative cognitive, coping, and problem-solving patterns that are associated with depression in adolescents and adults, thereby enabling individuals to manage difficult experiences both during and after therapy. Many studies have demonstrated CBT's effectiveness in treating depression in adults and adolescents (Compton et al., 2004; Hollon & DeRubeis, 2004; Rohde, Lewinsohn, Clarke, Hops, & Seeley, 2005; Stark et al., 2005). Moreover, CBT may prevent depression from recurring. Once therapy has ended, adults who have been treated with CBT are less likely than those treated with medication to experience a recurrence of depression (Hollon et al., 2005).

CBT uses cognitive restructuring techniques (i.e., evaluating the evidence for thoughts and generating alternative interpretations for situations) that rely heavily on metacognitive abilities, which strengthen during adolescence. Thus, although adolescence is a time of increased vulnerability to depression, it is also a period when cognitive abilities and emotional awareness increase and may be channeled toward learning effective coping strategies and skills for challenging maladaptive interpretive styles.

During the past 15 years, several interventions have been developed that use cognitive-behavioral techniques to prevent depression in children and adolescents (Garber, 2006; Horowitz & Garber, 2006; Merry, McDowell, Hetrick, Bir, & Muller, 2004; Spence & Shortt, 2007; Sutton, 2007). Most of these programs are group interventions that can be delivered in schools, clinics, or other community settings. Several have shown positive effects on depressive symptoms. Meta-analytic reviews of depression prevention studies indicate that, on average, programs that target children and adolescents who are at elevated risk for depression have small but significant effects on depressive symptoms (Horowitz & Garber, 2006; Merry et al., 2004; Stice, Shaw, Bohon, Marti, & Rohde, 2009). A few programs have large effects.

In contrast, however, several reviews have found no significant effects for programs that are delivered universally (e.g., to all students within a school) (Horowitz & Garber, 2006; Spence & Shortt, 2007). Stice and colleagues found no significant effects of universal programs at postassessments (conducted soon after the interventions ended). Although universal programs had significant effects at follow-up, effect sizes were considerably smaller than for targeted programs (Stice et al., 2009).

Research on universal interventions is particularly challenging. Participants' average risk for depression is lower than in targeted samples, which means that the average intervention effects will be smaller and more difficult to detect. In addition, universal interventions have often been evaluated under delivery conditions that are far from ideal. They are often delivered to large groups (entire classrooms) of adolescents and by teachers and other community providers who have little background in the intervention model and who receive minimal training (Gillham, 2007; Horowitz & Garber, 2006). Children's attendance is sometimes poor, and programs sometimes need to be shortened because of conflicts with school or afterschool activities (e.g., Quayle, Dziurawiec, Roberts, Kane, & Ebsworthy, 2001). If effective universal programs can be developed and disseminated, they could be quite important as part of a comprehensive depression prevention strategy. Schools are particularly promising locations for prevention efforts. Most children in this country attend school, and schools are already major providers of mental health services and programs designed to promote social and emotional well-being.

Research on depression prevention is quite new, and we do not yet know what is possible. Only 12 of the 30 studies included in the Horowitz and Garber (2006) meta-analysis followed participants for more than 6 months postintervention, and most of these suffered from high attrition during follow-up. Thus, it is difficult to determine whether these interventions can prevent depression over time. In addition, in most studies with significant effects, findings resemble treatment more than prevention. That is, depressive symptoms decrease in intervention participants and decrease less steeply or remain constant in controls. Only a few studies report the prevention of increased depressive symptoms over time (Horowitz & Garber, 2006). Most studies have not examined effects on depressive disorders. Of those that have, the Coping with Stress Course (Clarke & Lewinsohn, 1995) has demonstrated the strongest results to date. In three studies it has substantially prevented the onset of depressive disorders in 14- to 19-year-olds with high but subclinical levels of symptoms (Clarke et al., 1995; Clarke et al., 2001; Garber et al., 2009).

THE PENN RESILIENCY PROGRAM

The Penn Resiliency Program (PRP; Gillham, Reivich, & Jaycox, 2008b), developed by our research team, is a group cognitive-behavioral intervention for younger adolescents (ages 10–14). By teaching cognitive and problem-solving skills earlier in life, PRP aims to prevent the increase in depression that occurs in mid- to late adolescence. PRP includes about 18–24 hours of content and is typically delivered in 1- to 2-hour meetings

once weekly. PRP was designed for delivery by teachers, counselors, and clinicians who have received training in the cognitive-behavioral model and in PRP, specifically.

PRP consists of two major components. The first component focuses on cognitive skills. Students learn Albert Ellis's adversity–beliefs–consequences (ABC) model: that our beliefs and interpretations of events affect our feelings and behaviors (Ellis, 1962). Students learn to identify maladaptive thinking styles, including styles that fuel pessimistic and catastrophic thinking. Although this program has been found to reduce pessimism in several studies (e.g., Gillham & Reivich, 1999; Gillham, Reivich, Jaycox, & Seligman, 1995; Yu & Seligman, 2002), PRP emphasizes accurate and flexible thinking. Students learn to examine evidence for their beliefs and to consider alternative interpretations. Flexibility and accuracy will lead many students in the direction of optimism, but flexibility and accuracy will also lead some students (especially students who externalize problems) to realize their own contributions to the difficulties they encounter.

The second component of PRP teaches problem-solving and coping skills. Students learn techniques for handling difficult emotions and uncontrollable stressors. These techniques include deep breathing, relaxation, distraction, and seeking social support. Students also learn a variety of skills for handling interpersonal and academic difficulties that are common during adolescence. For example, students learn assertiveness and negotiation techniques, strategies for overcoming procrastination and breaking a large project into manageable chunks, and a multistep approach to interpersonal problem solving that includes perspective taking, creative brainstorming, and decision making. Although the focus of the program becomes more behavioral in later sessions, the link between cognitive and behavioral skills is emphasized throughout. For example, in teaching skills to combat procrastination, group leaders help students identify and evaluate beliefs (e.g., "I'll never be able to do this"; "I do my best work under pressure") that fuel procrastination.

Research on PRP

PRP has been evaluated in at least 19 controlled studies, making it one of the most well-researched cognitive-behavioral prevention programs. Together, these studies have included approximately 2,500 children from a variety of demographic and socioeconomic backgrounds. Although several studies have evaluated PRP with suburban U.S. samples that are predominantly of European American descent (e.g., Jaycox, Reivich, Gillham, & Seligman, 1994; Gillham et al., 2006b), evaluations have also included inner-city African American and Latino samples (Cardemil, Reivich, & Seligman, 2002), as well as children in China (Yu & Seligman, 2002) and

Australia (Pattison & Lynd-Stevenson, 2001; Quayle et al., 2001; Roberts, Kane, Thomson, Bishop, & Hart, 2003).

PRP was originally developed for children at increased risk for depression. Specifically, PRP targeted children who had elevated depressive symptoms or who were experiencing high levels of family conflict. During the past 10 years, however, work on PRP has expanded to include children with few or no symptoms of depression at baseline. In several studies, PRP has been evaluated as a universal intervention, delivered to all children who enroll, regardless of initial symptom level (e.g., Chaplin et al., 2006; Gillham et al., 2007).

A meta-analysis of PRP studies found that the program significantly reduced depressive symptoms relative to control and that these effects endure for at least 12 months following the intervention (Brunwasser, Gillham, & Kim, 2009). In some studies, PRP's effects on depressive symptoms are large and long-lasting. For example, the first evaluation found that PRP participants were half as likely as controls to develop moderate to severe levels of depressive symptoms for 2 years after the program (Gillham et al., 1995). Recent studies suggest that PRP may have positive effects on behavioral problems and anxiety—difficulties that often co-occur with depression in youth. For example, in an evaluation of PRP in Australia, PRP participants reported fewer symptoms of anxiety than controls at postintervention and 6- and 30-month follow-ups, although no effect was found on anxiety at the 18-month follow-up. Parent reports suggested improvements in externalizing behaviors at post-intervention. Interestingly, PRP did not affect depressive symptoms in that study (Roberts et al., 2003; Roberts, Kane, Bishop, Matthews, & Thompson, 2004). In a recent pilot study, the combination of PRP and a cognitive-behavioral parent program prevented the onset of clinically relevant anxiety symptoms in children. Across the 12-month follow-up period, 5% of PRP participants reported clinically relevant levels of anxiety symptoms, as compared to 30% of controls (Gillham et al., 2006b).

An evaluation of PRP in a health maintenance organization (HMO) suggests that PRP may prevent depression- and anxiety-related disorders in children who have high levels of symptoms. Among children with high levels of baseline symptoms, 36% of PRP participants developed depression or anxiety-related disorders during the 2-year follow-up period, as compared with 56% of usual care controls. PRP did not prevent disorders among children with low levels of baseline symptoms (Gillham, Hamilton, Freres, Patton, & Gallop, 2006a).

Several studies have found positive effects on cognitions and cognitive styles related to depression, including explanatory style, hopelessness, and negative automatic thoughts (e.g., Cardemil et al., 2002; Gillham et al., 1995; Yu & Seligman, 2002). Changes in these types of cognitions partially

mediate PRP's effects on depressive symptoms in some studies (Gillham et al., 1995; Yu & Seligman, 2002). However, most studies have not evaluated whether PRP works by changing cognitions, problem-solving strategies, or coping behaviors. Important directions for future research are to identify the mechanisms by which PRP works when it is effective.

There is considerable variability in PRP's effects across, and sometimes within, studies. PRP's effects have sometimes varied by school or by participants' gender or ethnicity (e.g., Cardemil et al., 2002; Cardemil, Reivich, Beevers, Seligman, & James, 2007; Gillham et al., 2006a, 2007). However, these moderator effects appear to be inconsistent across studies. A few studies have not found benefits on depressive symptoms (e.g., Pattison & Lynd-Stevenson, 2001; Roberts et al., 2003, 2004). To some degree, differences in PRP's effectiveness across studies appear to reflect differences in group leaders' experience, training, and intervention adherence. For example, a recent evaluation of PRP in a managed care setting found reductions in depressive symptoms relative to control for PRP groups with high intervention fidelity. No benefits were found for groups with lower fidelity (Gillham et al., 2006a).

A recent review of PRP research suggests that effects are strongest when PRP groups are led by members of the PRP research team or by others closely supervised by the team. PRP is often ineffective when group leaders receive minimal training or supervision (Gillham, Brunwasser, & Freres, 2008a). Figure 11.1 summarizes PRP's effect sizes as a function of leader training. The drop-off in effectiveness is disappointing, but common, as psychosocial interventions progress from efficacy trials to community-based implementation. The Resourceful Adolescent Program showed a similar decline in effects when implemented by school staff rather than members of the research team (Harnett & Dadds, 2004; Shochet et al., 2001). Thus, a critical focus of current research is on the development of effective training and dissemination strategies.

Current PRP research aims to make the program's effects stronger and more consistent by including additional intervention components and adapting the program for use with specific populations. For example, current research includes booster sessions that remind students of the PRP skills and help them apply these skills to challenges that emerge later in adolescence. A parent version of PRP can be delivered alongside PRP to teach parents key skills and help them use these skills in their own lives. This training may help parents support their children's use of the PRP skills and model effective coping and problem solving for their children. A pilot study found that the combination of PRP and the parent group prevented symptoms of depression and anxiety through a 12-month follow-up period (Gillham et al., 2006b). A large randomized-controlled study is currently underway that tests these booster and parent intervention components. We

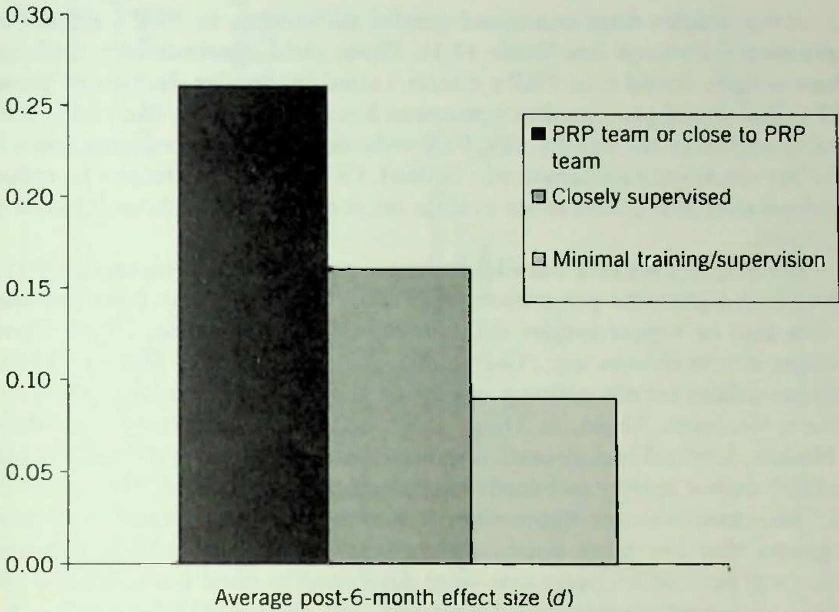

FIGURE 11.1. PRP's effect on depressive symptoms as a function of group leader training.

are also collaborating on a new intervention for depressed mothers and their children that blends family therapy and cognitive-behavioral skills from PRP (Boyd, Diamond, & Bourjolly, 2006).

PRP's Effects for Girls

Given the gender difference in depression, a crucial direction of our current research is the evaluation of PRP's effectiveness in preventing depression in girls. Several researchers and clinicians have suggested that the focus on rationality that underlies cognitive-behavioral interventions, including PRP, may be more appealing to, and more effective with, males. In contrast, interventions that focus on interpersonal relationships, such as interpersonal psychotherapy, may be more appealing to, and effective with, females. In general, however, cognitive-behavioral therapy is an effective treatment for depression in both men and women, and a recent prevention trial found that the effects of cognitive-behavioral and interpersonal prevention programs did not vary by participants' gender (Horowitz, Garber, Ciesla, Young, & Mufson, 2007).

Seven studies have examined gender differences in PRP's effects on depressive symptoms (see Table 11.1). These yield contradictory findings. Three studies found that PRP's effects varied by gender. In two of these, PRP reduced and prevented symptoms in boys but not girls (Reivich, 1996; Shatté, 1997). In the third study, PRP reduced and prevented symptoms in girls but not boys (Gillham et al., 2006a). PRP was also effective in reducing depressive symptoms in an evaluation at an all girls' school (Quayle et al., 2001).

The findings for PRP parallel findings across the literature on cognitive-behavioral depression prevention programs (Garber, 2006). Many studies do not find or report gender differences. Of those that do, a few report stronger effects in boys (e.g., Clarke, Hawkins, Murphy, & Sheeber, 1993), whereas others report stronger effects in girls and women (e.g., Petersen, Leffert, Graham, Alwin, & Ding, 1997; Seligman, Schulman, DeRubeis, & Hollon, 1999). Thus, overall, cognitive-behavioral interventions, including PRP, do not appear to benefit boys more than girls. Nevertheless, given girls' increased risk for depression, it is important to develop prevention programs that are more consistently effective for them. Most cognitive-behavioral prevention programs were developed as coed interventions and do not specifically target gender-related risk factors (Garber, 2006; Le, Muñoz, Ippen, & Stoddard, 2003). Given girls' increased vulnerability to depression, identifying and targeting these risk factors is critical for prevention efforts.

RISK FACTORS FOR DEPRESSION IN GIRLS

Several factors appear to increase risk for depression in girls. There is some evidence that pessimistic cognitive styles and emotion regulation, coping, and problem-solving difficulties that are linked to depression are more common in girls than in boys. Many of these risk factors appear to be more common in girls during childhood, long before the sex difference emerges in adolescence (Nolen-Hoeksema & Girgus, 1994). These risk factors may lead to depression in girls as stressors and contextual challenges increase during adolescence.

Cognitive Styles, Emotion Regulation, and Coping

There is some evidence that girls may have more pessimistic cognitive styles than boys. Most research on explanatory style has not found gender differences (for review, see Gladstone & Kaslow, 1995). However, some studies suggest that girls may explain events more pessimistically than do boys. Some studies have found that girls are more likely than boys to attribute

TABLE 11.1. Penn Resiliency Program Studies That Have Examined Gender Effects

Evaluation	Sample	Conditions and follow-up	Overall effect on depressive symptoms?	Difference in effects for girls versus boys?
Initial evaluation (Gillham et al., 1995; Reivich 1996; Gillham & Reivich, 1999; Jaycox et al., 1994)	143 children (66 girls, 77 boys) in fifth and sixth grades. Ages 10–13 years.	• PRP (3 versions) vs. control • 36-month follow-up	Yes (through 24 months).	Yes; significant effect in boys, not girls.
Effectiveness and specificity study (Reivich, 1996; Shatté, 1997)	152 children (71 girls, 81 boys) in sixth–eighth grades. Mean age 12.7 years.	• PRP vs. alternate intervention vs. control • 12-month follow-up	Yes (through 8 months).	Yes; significant effect in boys, not girls.
First Australian study (Pattison & Lynd-Stevenson, 2001)	66 children (34 girls, 32 boys) in fifth and sixth grades. Ages 9–12 years.	• PRP vs. reverse PRP vs. attention control vs. control • 8-month follow-up	No.	No.
Inner-city study (Cardemil et al., 2002, 2007)	168 children (84 girls, 84 boys) in fifth and sixth grades. Mean age 11.1 years.	• PRP vs. control • 24-month follow-up	Yes (through 24 months) for Latino sample; no for African American sample.	No.
All girls and co-ed PRP study (Chaplin et al., 2006)	208 children (103 girls, 105 boys) in sixth through eighth grades. Ages 11–14 years.	• PRP vs. control (boys randomized to coed PRP vs. control; girls randomized to co-ed PRP vs. all-girls PRP vs. control) • Post	Yes (to post).	No.
HMO study (Gillham, Hamilton, et al., 2006a)	271 children (144 girls, 127 boys). Ages 11–12 years.	• PRP vs. usual care control • 24-month follow-up	No.	Yes; significant effects for girls, not boys.
Effectiveness and specificity study (Gillham et al., 2007)[a]	697 children (321 girls, 376 boys) in grades 6–8. Mean age 12.1 years.	• PRP vs. usual care control • 24-month follow-up	No; moderation by school; yes (through 30 months) in two schools; no for third school.	No.

[a]Analyses of gender differences are not reported in the article. Information in this table is based on recently completed analyses conducted by Jane E. Gillham.

failure on math or spatial relations tests (male sex-typed tasks) to internal/stable factors (lack of ability), with no gender differences found in explanations for verbal test performance (Gitelson, Petersen, & Tobin-Richards, 1982; Stipek, 1984). Further, a study utilizing a new adolescent-specific measure of explanatory style found that adolescent girls showed a more pessimistic explanatory style overall (for all types of events) than boys (Hankin & Abramson, 2002). Overall, it appears that interventions for girls would benefit from addressing inaccurate explanations for events, with an eye toward events that girls may perceive as being easier for boys, such as math and science.

The ways in which children and adolescents experience, express, and regulate their emotional arousal also have important consequences for the development of depression (for reviews, see Chaplin & Cole, 2005; Cole, Michel, & Teti, 1994; Davidson, Scherer, & Goldsmith, 2003; Garber & Dodge, 1991). Depression may be related to patterns of emotion regulation, including ruminating on sad emotion (Fivush & Buckner, 2000; Nolen-Hoeksema & Girgus, 1994), minimizing anger or lacking assertiveness (Chaplin & Cole, 2005; Izard, 1972; Gross & John, 2003), and experiencing excessive empathy and guilt (Zahn-Waxler, Cole, & Barrett, 1991). Depression may also be related to difficulty in up-regulating positive emotions (Clark & Watson, 1991; Davidson, 2000). Interestingly, girls may be at greater risk for showing all of these patterns of emotion, with the exception of decreased positive emotion.

Rumination is a form of emotion regulation that involves thinking over and over again about one's sadness and problems to the exclusion of making active attempts to remedy the situation. This process of focusing on sadness amplifies it and predicts increases in depressive symptoms in adolescence (Abela, Brozina, & Haigh, 2002; Nolen-Hoeksema, Stice, Wade, & Bohon, 2007; Schwartz & Koenig, 1996). Rumination may also lead youth to neglect more active coping strategies, such as problem solving, that might improve the situation. Thus rumination may lead to more passivity and potentially worse depression (Youngren & Lewinsohn, 1980). Girls tend to ruminate more than do boys, perhaps because sadness tends to be more acceptable for girls than for boys (Brody & Hall, 2000). As young as preschool age, girls are more likely than boys to report feeling sadness and fear (Brody, 1984; Zahn-Waxler, Cole, Welsh, & Fox, 1995) and to express sadness (Chaplin, Cole, & Zahn-Waxler, 2005). In adolescence, girls are more likely than boys to report using rumination as an emotion regulation strategy (Broderick, 1998; Nolen-Hoeksema & Girgus, 1994). In addition, some adolescents co-ruminate—that is, discuss their problems and distressing emotions over and over with a friend. In one study, co-rumination predicted increases in depressive and anxiety symptoms 6 months later for girls, but not for boys. Interestingly, co-rumination also predicted higher

perceived quality of friendships, suggesting that it may be important to help girls find alternative ways of responding to stress that can also strengthen their connections to others (Rose, Carlson, & Waller, 2007).

In addition to rumination, girls may be more likely than boys to minimize anger, leading to increased risk for depression. All emotions, even anger, are functional (Barrett & Campos, 1986). In certain contexts, it is appropriate for youth to harness anger in order to push through obstacles, to achieve goals, and perhaps even to resist peer pressure (Izard & Ackerman, 2000). However, some children may develop a tendency to suppress anger displays. Self-reports of "emotional suppression" (including anger suppression) have been associated with depressive symptoms among adults (Cautin, Overholser, & Goetz, 2001; Gross & John, 2003; Riley, Treiber, & Woods, 1989), and observational studies have found that lower anger expression is associated with higher depressive symptoms in adolescents (Chaplin, 2006; Davis, Sheeber, Hops, & Tildesley, 2000). In addition, difficulty expressing anger may inhibit assertive behavior, which may increase depression in children and adolescence (Allen, Hauser, Eickholt, Bell, & O'Connor, 1994). Difficulties with assertiveness and anger expression may be more prevalent for girls than for boys, perhaps because anger is more acceptable for males than females in mainstream U.S. culture (Brody & Hall, 2000). An over-controlled, unassertive presentation at age 7 has been found to predict adolescent depression in girls, whereas an aggressive, undercontrolled presentation predicted depressive symptoms for boys (Block, Gjerde, & Block, 1991).

Excessive empathy or concern for others is another emotional pattern that has been linked to depression and may be more common for girls. Concern for others' distress is part of prosocial development and can be a protective factor for youth (Hoffman, 1982; Kochanska, DeVet, Goldman, Murray, & Putnam, 1994). However, feeling excessive empathy for others, to the exclusion of caring for one's own needs, can create risk for depression and other internalizing disorders (Keenan & Hipwell, 2005; Zahn-Waxler, 2001; Zahn-Waxler, Cole, & Barrett, 1991). An exaggerated sense of responsibility for others can lead to inappropriate feelings of guilt (tied to others' transgressions) and may interfere with the development of a strong sense of self and self-esteem, which may, in turn, contribute to depression.

Girls may be more likely than boys to show excessive empathy and concern for others (Keenan & Hipwell, 2005), perhaps due to girls' theorized orientation toward interpersonal relationships (Cyranowski, Frank, Young, & Shear, 2000; Gilligan, 1982; Jordan, Kaplan, Miller, Stiver, & Surrey, 1991). Starting in early childhood, girls are more likely than boys to show empathic responding to those who are hurt, such as in paradigms in which their mothers feign an injury (Hastings, Zahn-Waxler, Robinson, Usher, &

Bridges, 2000). On teacher and parent reports, girls are rated as being more concerned for others than are boys (e.g., Denham, McKinley, Couchoud, & Holt, 1990; for review, see Zahn-Waxler, 2001). We recently found that higher feelings of worry and oversensitivity (including worry about others) predicted increases in depressive symptoms 1 year later for early adolescent girls, but not for boys (Chaplin, Gillham, & Seligman, 2009). Thus, overconcern for others may be more common for, and possibly more detrimental for, girls than for boys in terms of risk for depression.

Depression prevention programs for early adolescent girls would benefit from addressing potential patterns of emotion regulation related to depression, including ruminating on sad feelings, minimizing angry feelings to the exclusion of appropriate (assertive) expressions of anger, and experiencing excessive concern for others that may lead to a high level of worry or guilt. Intervention leaders will need to take care to understand the complex cultural systems and gender roles that reinforce these patterns in girls.

Social and Contextual Changes

As they enter adolescence, youth, and particularly girls, face several new stressors and challenges. Changes occur in the structure of school classrooms and in peer interactions. As compared to elementary school, middle school classrooms are less positive and more competitive (Eccles et al., 1993). This change is disruptive for both boys and girls, but may be particularly difficult for girls for several reasons. First, the competitive atmosphere is at odds with socialized gender roles for females to emphasize cooperation over competition (Gilligan, 1982; Jordan et al., 1991). Second, girls are more likely than boys to transition to middle school at the same time as the onset of puberty, creating an accumulation of risk (Simmons & Blythe, 1987).

The middle school transition also brings an increase in the adolescents' social sphere, with youth beginning to spend more time with peers and less with parents (Csikszentmihalyi & Larson, 1984). Friendships become more intimate and salient (Berndt, 1987). Yet, at the same time that adolescents begin to value their friends more, the change to middle school disrupts peer networks. This disruption may be especially challenging for girls, who tend to have more intimate friendships than boys (Rose & Rudolph, 2006). In addition, middle school and junior high school peer culture often emphasizes popularity rather than close friendships (LeCroy & Daley, 2001). This emphasis may contribute to relational aggression—a type of aggression that is more common in girls than in boys and that increases in adolescence (Rose, Swenson, & Waller, 2004). Several studies suggest that children who perceive or experience rejection and victimization by others

are at increased risk for depression (La Greca & Harrison, 2005; Nolan, Flynn, & Garber, 2003).

As they enter adolescence, youth also become increasingly aware of the larger society, and girls may begin to attend to cultural messages about their possible roles in society (Hill & Lynch, 1983). Although opportunities for girls and women have increased dramatically in this country in the past 50 years, even today, girls are bombarded with images that convey limited career options for women or show women in stereotypical roles. Limitations to their future aspirations may lead to feelings of depression (Nolen-Hoeksema, 2001).

At the same time that these contextual stressors occur during early adolescence, girls experience the onset of puberty. With pubertal development, early adolescent girls may begin to wrestle with emerging sexuality. Interest in romantic relationships increases, and many girls begin dating. Although there are many positive aspects to romantic interests and relationships, they are a new area of anxiety and stress for many adolescents. For example, breakups of romantic relationships are predictive of first onset of depressive disorders during adolescence (Monroe, Rohde, Seeley, & Lewinsohn, 1999). Moreover, recent research suggests that dating itself may increase risk for depression in adolescents, particularly for girls (Joyner & Udry, 2000; La Greca & Harrison, 2005). Girls who have difficulties with emotion regulation or assertiveness, or who are overly concerned about the feelings of others, may be particularly vulnerable to the ups and downs of romantic relationships in adolescence (Davila, Steinberg, Kachadourian, Cobb, & Fincham, 2004; Rizzo, Daley, & Gunderson, 2006). In addition, girls are at least two to three times more likely as boys to be the victims of sexual abuse, and sexual abuse rates increase for girls in adolescence, making the development of sexuality and romantic relationships a highly complex and emotional process for some girls (Nolen-Hoeksema & Girgus, 1994).

The physiological aspects of puberty may also contribute to depression. Some research suggests that increases in estrogen (and testosterone) levels in girls that occur during puberty may be related to depression (Angold, Costello, Erklani, & Worthman, 1999), although other work suggests that this relationship may be accounted for, at least in part, by the associated morphological changes of puberty (e.g., increase in body fat) and associated increases in stress for girls (Angold, Costello, & Worthman, 1998; Brooks-Gunn & Warren, 1989).

Interventions for early adolescent girls must address the complex simultaneous contextual and biological stressors, providing a safe environment in which girls may open up about these many life changes and find coping skills. Interpersonal relationships, especially romantic relationships, appear to be a crucial focus for prevention efforts.

Body Image

Physical changes associated with puberty may also lead to disruptions in adolescents' body image, particularly for girls, as the changes to girls' bodies (increases in body fat, larger hips) bring them further from the thin body shape that is the ideal in American culture (at least for European Americans), whereas the changes to boys' bodies (increases in muscle, deeper voice, growing taller) bring them closer to the cultural ideal for a man. Indeed, adolescent girls view their changing bodies more negatively than do boys (Petersen, Sarigiani, & Kennedy, 1991). These changes in body image, combined with increasing self-consciousness during adolescence, can lead to low self-image and potentially to feelings of depression (Stice & Bearman, 2001). Body image concerns, then, may be another reason the transition to puberty is more closely linked to depression in girls than boys (Ge, Conger, & Elder, 2001; Petersen et al., 1991).

Exposure to messages and images that emphasize physical attractiveness also increases in early adolescence. Girls' reading of teen magazines increases. Many of these magazines (and some television shows and advertisements) emphasize physical appearance and unrealistic standards of attractiveness, as well as traditional roles for women (LeCroy & Daley, 2001; Fredrickson & Roberts, 1997; Malkin, Wornian, & Chrisler, 1999; Smith, 1994). This emphasis may contribute to body dissatisfaction and hopelessness about future goals (Stice, Hayward, Cameron, Killen, & Taylor, 2000; Stice, Spangler, & Agras, 2001). Media images also may lead to "objectification," wherein girls view themselves increasingly from the observer's perspective and become overly concerned with their appearance (Fredrickson & Roberts, 1997). Perhaps because the thin ideal is more often presented as an ideal for European Americans, body image concerns do not appear to be as severe for African American girls as for European American girls, and this may help to buffer them from depressive symptoms (Parker, Nichter, Nichter, & Vuckovic, 1995). However, even among African American girls, body image concerns are on the rise, with one study finding half of African American girls reporting a desire to lose weight (Grant et al., 1999). In this study, low body image was associated with greater depression, suggesting that body image is an important target for depression prevention programs for African American girls, as it likely is for girls of other ethnic groups.

Family Factors

Within the family system are several factors that may contribute to the development of depression in youth, including parental depression and parental conflict (Downey & Coyne, 1990). Some of these factors may affect girls more than boys.

The transition to adolescence can be a difficult time for families. Conflict between adolescents and their parents increases (Saab, 2004), and many parents feel challenged as they struggle to balance their adolescents' increasing need for autonomy with their own concerns about safety or the need for appropriate rules and limits. Despite the increased conflict between parents and adolescents, most adolescents also report valuing what their parents think of them (Saab, 2004).

The Health Behaviour of School-Aged Children (HBSC) study of 6th- through 10th-grade students in Canada documents several changes in parent–child relationships that occur during adolescence (Boyce, 2004). For example, younger children were more likely than older children to report that their parents are easy to talk to. Similarly, younger children were more likely to report feeling understood by their parents. Interestingly, findings on several indices suggest that girls are more likely than boys to report strained relationships with their parents during this developmental phase. For example, across all grades, girls were less likely than boys to report that their fathers were easy to talk to, and girls were less likely to report feeling understood by their parents. In grades 8–10, girls tended to report having more arguments than boys with their parents, and they were more likely to report that they considered leaving home at times (Saab, 2004).

Girls also may be more affected by parental depression than boys. Mothers are more likely than fathers to be depressed, as a function of the gender difference in depression, and mothers may be more likely to pass on depression to their adolescent daughters (Sheeber, Davis, & Hops, 2002). Several studies find that maternal depression is more strongly linked to depressive symptoms in adolescent daughters than in sons (Fergusson, Horwood, & Lynskey, 1995; Hops, 1996; but for an exception, see Ge, Conger, Lorenz, Shanahan, & Elder, 1995). Daughters are more likely than sons to imitate their mothers' depressive behaviors. Research has found greater synchrony of negative emotional displays (e.g., crying) between mother–daughter pairs than mother–son pairs starting in early childhood (Radke-Yarrow, Nottelmann, Belmont, & Welsh, 1993). In addition, mothers may have the role of socializing girls to adopt female gender roles (Sheeber et al., 2002), some of which promote a passive style that may increase girls' vulnerability to depression (Gilligan, 1982). Research suggests that parental depression is a particularly challenging stressor for children who have limited coping skills and ruminative response styles (Compas et al., 2002).

Interventions that treat parental depression, help parents and children cope more effectively, and strengthen attachments within the family may be especially helpful for preventing depression in girls. At a minimum, educating parents about the content of programs in which their children par-

ticipate may help them to support the positive changes their children are making.

GIRLS' PRP AND THE GIRLS IN TRANSITION PROGRAM

After we found greater benefits for boys than for girls in the initial PRP study, our research team began to explore possible explanations and methods for improving PRP's effects with girls. We became concerned about possible limits to the coed format that is typically used for the intervention. In the period of early adolescence, girls experience different challenges than boys. As a result, girls may have different topics to discuss in PRP groups. At the same time, they may feel particularly hesitant to discuss these concerns in a coed environment. Although body image concerns are common in early adolescence, in the coed groups these concerns were mentioned rarely, if at all.

Another reason that girls may benefit from an all-girls format is that boys often receive more attention than girls in coed group settings, including classrooms (Bailey, 1993; Jones, 1989; Krupnick, 1985). There are likely several reasons for this imbalance. Boys may be more comfortable expressing their opinions in groups, and they are more likely than girls to call out in class (Altermatt, Jovanovic, & Perry, 1998). Further, boys are more likely than girls to have aggressive and disruptive behavior problems (Achenbach, 1991), which may lead them to act out in group situations. Over the years, many of our PRP group leaders have noted this difference in attentional and behavioral difficulties in boys. These leaders often report that they work harder to engage the boys in their groups and direct more attention to boys so that their groups can stay on task and cover the intervention content. Some leaders worry that girls, who are generally more cooperative and compliant, receive less attention as a result.

Girls' PRP

There is some empirical evidence that girls may benefit more from delivery in an all-girls format. An evaluation of PRP in a girls' school in Australia found significant and substantial reductions in depressive symptoms 6 months after the intervention ended (Quayle et al., 2001). The effect size at the 6-month follow-up (d = 0.60) is among the largest in the literature on PRP, especially when samples have not been selected on the basis of elevated symptoms. PRP also tended to prevent mild to moderate symptoms. At the 6-month follow-up, 5% of PRP participants and 31% of controls

reported symptoms that were at least mild to moderate in intensity. These findings should be interpreted cautiously, however, given the small sample size ($N = 47$).

A recent study compared PRP's effectiveness for girls when delivered in an all-girls versus coed format (Chaplin et al., 2006). Girls were randomly assigned to coed PRP groups, all-girls PRP groups, or a usual care control. The content of the intervention was the same in the girls and coed groups; both groups participated in PRP. The only difference was whether the setting was single sex or coed. Findings showed that both all-girls and coed PRP prevented depressive symptoms from pre- to postintervention. However, girls in the all-girls groups had better attendance and showed greater improvements in hopelessness than those in the coed groups. The transition to an all-girls format was a relatively small change. A further step would be to design an intervention that not only is in an all-girls setting but that also contains *content* that explicitly addresses gender-specific concerns.

Targeting Gender-Related Risk Factors: The Girls in Transition Program

Educators, clinicians, and researchers have expressed the need for school curricula and interventions that help girls address the social–contextual risk factors that may undermine their self-esteem, achievement, and emotional well-being (e.g., Denmark, 1999; Garber, 2006; Hawkins, Catalano, Kosterman, Abbott, & Hill, 1999; Le et al., 2003; LeCroy & Daley, 2001; Machoian, 2005). Although several community-based interventions (e.g., Girls Incorporated, Girls on the Run International) are designed to promote girls' development, the effect of these interventions on psychological well-being has rarely been evaluated empirically. In contrast, most of the existing depression prevention programs are coed group interventions that are not specifically designed for girls and do not target gender-related risk factors. One exception is a cognitive-behavioral intervention targeting body dissatisfaction in undergraduate women that was evaluated by Bearman and colleagues. This intervention reduced body dissatisfaction and symptoms of depression and bulimia through a 3-month follow-up period (Bearman, Stice, & Chase, 2003). Another promising intervention is the Go Grrrls program (LeCroy & Daley, 2001). Although not specifically designed to prevent depression, this program strives to enhance well-being in early adolescent girls by helping them reflect on societal messages, develop positive self-images, set goals, and establish and maintain friendships. An evaluation found that, relative to control, the Go Grrrls curriculum improved girls' scores on measures of body image satisfaction, assertiveness, self-efficacy, self-liking, and competence. The program also

tended ($p < .10$) to improve hopelessness, which is closely linked to depression (LeCroy, 2004).

The Girls in Transition (GT) program is a new intervention for early adolescent girls. GT includes key cognitive-behavioral concepts and skills from PRP, but focuses more on emotion regulation, interpersonal relationships and conflicts, and contextual risk factors. New activities target rumination, body image concerns, media messages, and relational aggression, as well as other risk factors that may be particularly relevant to depression in girls. Like PRP, GT is designed to be delivered in twelve, 90- to 120-minute lessons, but can easily be divided into shorter sessions to fit with school schedules. A GT leader's manual contains lesson plans and in-class activities. The student workbook contains summaries of the main points as well as activities designed to help students apply the concepts and skills to their day-to-day lives. In addition to the girls' program, the GT program offers two 90-minute parent sessions, which share information on girls' development in early adolescence and on skills taught in the program so that they can be reinforced at home. The GT program is designed to be delivered by teachers or school counselors.

GT is divided into four units (summaries of individual lessons are included in Appendix 11.1). The first unit, "Thinking Skills," is based on CBT for depression (Beck, 1967; Beck, Rush, Shaw, & Emery, 1979; Ellis, 1962) and adapted, in part, from the PRP (Gillham, Reivich, & Jaycox, 1998). It teaches many of the cognitive and problem-solving skills in PRP described above, but applies these skills to problems that are common for early adolescent girls, such as unrealistic negative thoughts about one's appearance (negative body image) and changing relationships/conflicts with peers. The second component, "Problem Solving and Coping," includes several problem-solving and assertiveness skills that can be particularly beneficial in day-to-day interactions with peers and friends and for dealing with relational aggression problems (Crick & Grotpeter, 1995). In this unit, we include a discussion of difficulties that some girls may experience with acting assertively as well as gender roles around assertiveness. The unit also includes several strategies for managing sadness, anxiety, and anger, and for breaking the cycle of rumination. Girls are taught, for example, to identify situations in which they ruminate and to brainstorm short-term strategies for distraction (e.g., "I can play with my dog") so that they can calm down and later regroup to solve the problem. They list the distraction strategies on a worksheet labeled "Changing the Channel," to which they can refer when they experience strong negative emotions or uncontrollable stressors in the future. The third unit, "Challenging Media Messages; Identifying Strengths and Goals," encourages girls to think critically about societal and media messages that place limits on women's abilities

or place great importance on popularity or unrealistic ideals for physical appearance. Girls are encouraged to put these messages in perspective by thinking about the qualities that are important in their lives, particularly in their close relationships (e.g., Wilgosh, 2002). GT helps girls identify their strengths, work toward their aspirations, and identify positive role models (e.g., Wilgosh, 2002). The fourth unit reviews the major concepts and skills and helps girls anticipate situations in which the skills may be helpful.

There is considerable overlap between units because the cognitive, problem-solving, coping, and social factors are conceptualized as interacting with, and influencing, each other. For example, social factors can influence the development of negative cognitive styles and beliefs about assertiveness. Conversely, cognitive restructuring skills can be used to critique media messages about physical attractiveness in girls and women. As in PRP, skits and hypothetical examples are included to illustrate a wide variety of problems and concerns that are typical in this age group. The GT girls' group also includes examples related to concerns about body image, popularity and cliques, relational aggression, and other issues that may be particularly relevant to girls during the middle and early high school years. The cognitive, problem-solving, coping, and goal-setting skills are applied to these experiences.

We are piloting a slightly condensed (10-session) version of the GT intervention as an optional after-school program with groups of sixth-, seventh-, and eighth-grade girls. The project is open to all girls who enroll (participants are not screened into the groups based on elevated depressive symptoms or other risk factors). The project is using a wait-list controlled design. About half of the girls participate in GT groups during their first year in the project, and the remainder will participate in the groups at the end of the study. This study is ongoing and will include several cohorts of participants. We recently completed the intervention groups with first cohort of participants.

Our impressions as group leaders are that the all-girls format influenced the topics that group members discussed and enabled girls to focus on gender-related challenges that occur during early adolescence. This was apparent from the first session. When asked about problems that are common during the middle school years, many girls brought up concerns about physical attractiveness, including concerns about aspects of their appearance or clothing. Several sixth-grade girls discussed feeling pressure to wear clothing that was more revealing or "more sexy."

A study examining transcripts from the initial sessions supports these impressions (Adams-Deutsch, 2006). Most girls seemed to feel that they experience different stressors than boys during middle school. A quote from one of the sixth-grade girls illustrates this nicely.

> "Like guys, they just put on whatever's on top in their drawers and make sure it's not like orange and red pants. And we spend hours trying to figure out what to wear. . . . So we always have to kind of deal with that and how our hair looks, and my hair's a mess right now because I just came back from gym." (inAdams-Deutsch, 2006, p. 4)

Whether or not the girls' impressions about this gender difference is correct, it was clear that many of them worried about their appearance, and some felt that others judged their appearance negatively. Even girls who were aware that their physical development was within normal ranges reported these kinds of concerns. One sixth-grade girl reported being teased because her breasts hadn't developed yet. Other girls worked hard to control their weight or limited their interactions and achievements.

> "People last year, they would always say, 'Put some cream on those mosquito bites,' because I'm pretty much flat. Another girl said, 'Is your head on backwards?' and another person called me 'the walking board.'" (in Adams-Deutsch, 2006, p. 5)

> "I've been called fat a lot . . . I mean, I know I'm not skinny, and I've worked on that really hard, and I've never thought about being anorexic or bulimic, or whatever. But it really is hard because you think to yourself, 'Oh I wish I could be skinny, maybe I could feel more confident about myself!'" (in Adams-Deutsch, 2006, pp. 6–7)

> "I'm not a confident person. I won't go in front of the class because kids will laugh at me. I'm not skinny, but I'm not obese, you know, in the middle, *normal*. It's really hard. People are always like, 'You're fat,' and I can't tolerate it." (in Adams-Deutsch, 2006, p. 9)

Given the close connection between body dissatisfaction, eating disorders, and depression, programs that target body image concerns could be particularly important for preventing depression in girls. Conversations with the girls in our groups indicated that concerns about physical appearance are already quite common by sixth grade. Although we did not formally examine other types of concerns, our impressions are that interpersonal conflicts, particularly handling transgressions and rejection by friends, were also common themes across the sessions. Interventions such as GT can provide a safe place for these kinds of discussions and teach skills for dealing with the challenges that are particularly relevant to girls during the transition to adolescence.

Girls' and mothers' attendance and feedback support the feasibility of the program. Due to conflicts that emerged with other after-school activi-

ties, 3 of the 17 girls assigned to the program did not attend any sessions. The 14 other girls attended 8 of the 10 sessions, on average. Twelve of their mothers attended at least one of the two parent meetings. Feedback at the end of the program indicated that girls enjoyed the program and believed it was helpful. Girls' average likert scale ratings fell between "very true" and "mostly true" for items assessing their general impressions ("I liked the program a lot"; "I learned a lot from GT that will help me solve problems"; "I learned a lot from GT that will help me feel happier in my life"; "I would recommend the program to other girls"). Girls also reported that they were using many of the GT skills, particularly attending to self-talk, analyzing problems to figure out why they are upset, and using relaxation techniques when upset. An important next step for future research is to evaluate whether GT improves coping, reduces body image concerns, and prevents symptoms of depression.

OTHER ROUTES TO PREVENTION FOR GIRLS

Research on girls' development suggests many routes to depression prevention. GT focuses on only a few of these and only one age group. There are many exciting directions for future work in this area. For example, interventions with a stronger interpersonal focus (Young, Mufson, & Davies, 2006) or that blend cognitive-behavioral and interpersonal approaches may be particularly helpful for girls as they navigate interactions with peers, close friends, romantic partners, and family members that may become increasingly complex and stressful.

The variety of risk factors and high prevalence of depression in girls suggest a multileveled approach to intervention that includes both targeted and universal interventions (Garber, 2006). Psychosocial interventions that teach cognitive, coping, and problem-solving skills may be helpful for most children and could begin long before adolescence. Interventions that normalize body image concerns or help girls become more comfortable expressing themselves in interpersonal relationships might be beneficial to most girls during adolescence. Such programs could also encourage girls to reflect on the costs and benefits of gender-related responses to stress in interpersonal relationships, especially at their extremes. Interventions could help girls identify unhelpful emotional and behavioral patterns, such as extreme empathy, overconcern for others, and co-rumination, and help girls interact in ways that preserve the best aspects of their capacity for connections without harming themselves in the process.

Currently, some of the most promising interventions target youth who have high levels of symptoms or who are affected by parental depression,

parental divorce, or bereavement (e.g., Beardslee, 2002; Clarke et al., 2001; Sandler et al., 2003; Wolchik et al., 2000). Targeted programs could be helpful for adolescents who are experiencing other kinds of stressful interpersonal experiences. For example, programs might be helpful for girls who are dating or who have experienced the breakup of a relationship recently. Programs that help peers or friends support each other through such stressors could be particularly helpful. Given the close relationship between depression in mothers and daughters, interventions that target this dyad could be especially important for interrupting the intergenerational transmission of depression. Although harder to evaluate, community- or societal-level interventions that counteract negative media messages, prevent discrimination or abuse, promote positive images, and increase opportunities for girls and women could have a large impact on girls' vulnerability to depression.

CONCLUSION

In conclusion, there appear to be several promising routes to preventing the increase in depression that occurs among early adolescent girls. We have incorporated the cognitive, emotional, interpersonal, and contextual risk factors that are common among girls in early adolescence into our existing cognitive-behavioral prevention program in order to tailor it for girls at this age. By doing this, we use knowledge gathered through basic developmental science on girls' cognitive, emotional and social development to inform the development of our prevention program. We hope that through developmentally informed intervention delivered within a caring environment, we will be able to attenuate the trajectory toward depression and other internalizing disorders among adolescent girls.

APPENDIX 11.1. SUMMARY OF GIRLS GROUP LESSONS

Unit 1. Thinking Skills

The thinking skills component teaches girls to identify negative interpretations and negative or pessimistic thinking styles and to challenge these beliefs by examining evidence and considering more realistic alternatives. These complex skills are simplified to be appropriate to the developmental level of early adolescence. The program uses cartoons, skits, videos, and stories to make concepts such as pessimistic thinking more concrete and understandable. The program encourages girls to think flexibly about day-to-day problems that are common in the middle school years. The thinking skills are introduced in Lessons 1 through 4 and are reviewed and practiced throughout the remainder of the program.

Lesson 1. Introduction

Major goals are to:

- Introduce group members to the GT program.
- Build group rapport and create an environment that encourages girls to discuss their thoughts, feelings, goals, and day-to-day problems they may be experiencing.
- Introduce the elements of the cognitive model (events, interpretations, and emotions).

Overview: The group leaders discuss the goals of the GT program and engage the group members in activities designed to introduce them to each other and increase their comfort in talking about day-to-day experiences in the group setting. Logistical issues such as the group schedule, group rules, and confidentiality are discussed. In addition, leaders engage the group in discussions and activities that cover the elements of the cognitive model. For example, one discussion focuses on problems and challenges that are common during middle school, including challenges that may be particularly relevant to girls. Typically, this focus leads to discussions about peer acceptance, popularity, and experiences of rejection. In addition, girls often discuss the pressures they feel to achieve, be popular, and conform to certain standards of attractiveness (e.g., wear certain types of clothes). Group members also discuss emotional experiences, including the quality and intensity of different emotions. Finally, the notion of self-talk (or automatic thoughts) is introduced. For homework, girls pay attention to their emotions and self-talk during the following week.

Lesson 2. Cognitive Model

Major goals are to:

- Introduce the cognitive model.
- Practice identifying beliefs and interpretations.

Overview: Leaders introduce the cognitive model—the theory that when events occur, our emotional and behavioral reactions are determined, to a large extent, by our beliefs and interpretations. Girls practice identifying interpretations using both hypothetical and real-life examples, and they also practice generating alternative beliefs and interpretations. Leaders facilitate a discussion about how alternative interpretations can dramatically change our emotional and behavioral responses following an event. For homework, girls apply the cognitive model to events in their own lives and try to note any times in which they feel sad, worried, or angry and the kinds of beliefs that seem to be involved.

Lesson 3. Thinking Styles

Major goals are to:

- Teach girls about thinking styles, particularly pessimistic thinking styles that are linked to depression, anxiety, and behavioral problems.
- Help girls recognize the effects of thinking styles.
- Help girls identify their own thinking styles, especially pessimistic thinking styles that may lead to distress and make it difficult to achieve their goals.

Overview: Leaders use skits, role plays, and videos to illustrate different thinking styles and to launch a discussion of the consequences of these styles. For example, some of the characters in skits display pessimistic styles that lead to hopelessness or hostile styles that lead them to unrealistically blame others for the setbacks they encounter. Leaders discusses Aaron Beck's concept of self-fulfilling prophecy—the idea that negative beliefs (e.g., "No one likes me") can lead to behaviors (e.g., withdrawing from friends) that create events (e.g., no one calls) that seem to confirm the initial negative beliefs. These self-fulfilling prophecies operate in achievement contexts as well. Negative beliefs (e.g., "I can't do math") lead to behaviors (e.g., stop studying) that create events (e.g., do poorly on exam) that seem to confirm the initial negative beliefs. The group discusses the ways in which self-fulfilling prophecies can affect a variety of life domains. Girls consider experiences in their own lives, identify situations in which they may be vulnerable to these kinds of negative thoughts, and generate alternative interpretations that are more realistic. For homework, girls attend to the interpretations they make and practice generating more realistic alternatives to any unrealistic negative interpretations they identify.

Lesson 4. Identifying and Challenging Negative Assumptions

Major goals are to:

- Teach girls about unrealistic assumptions and standards (e.g., perfectionism) and help them recognize how these standards may be operating in their own lives.
- Continue to encourage girls to challenge negative beliefs by examining evidence and considering alternatives.

Overview: Leaders facilitate a discussion about unrealistic standards and assumptions and their consequences. Examples of these standards/assumptions include: "If I'm not good at everything, I'm a failure"; "I have to be liked by everyone"; "In order to be happy, I need to be very popular." Leaders facilitate a discussion about these beliefs, especially beliefs about physical attractiveness or self-expression that may be more common in girls than boys. Leaders point out that some of these beliefs are tied to important values but create problems because they are too rigid or conflict with other important goals and values. The group discusses the con-

sequences of these beliefs. Leaders help students identify any of these beliefs that may be operating in their lives. The group engages in several activities designed to help students dispute unrealistic beliefs by examining evidence and by generating more realistic alternatives. Group members coach each other on the use of these disputation techniques. For homework, girls try to identify unrealistic standards and assumptions that may be operating in their own lives and practice applying disputation skills.

Unit 2. Problem Solving and Coping

This section of the curriculum teaches girls several strategies for solving day-to-day problems in their lives. Group members share the strategies they use for solving problems and coping with stress. The group leaders teach assertiveness, problem-solving, and decision-making strategies. The group also discusses strategies for coping with uncontrollable stressors and strong negative emotions. Group leaders teach several strategies that may help students feel better when they have little control over the events in their lives. These skills are presented in Lessons 5, 6, and 7, and are reviewed and practiced throughout the remainder of the program.

Lesson 5. Assertiveness

Major goals are to:

- Discuss a variety of effective techniques the group members are already using for solving interpersonal problems in their lives.
- Teach girls a strategy for assertiveness.

Overview: The lesson begins with videotaped scenarios and role plays in which one eighth-grade girl does something that upsets a second girl. Leaders encourage group members to discuss the scenarios and how they might respond if these situations happened to them. Through this discussion, the group considers the pros and cons of a variety of interpersonal responses, including those that are aggressive, passive, and assertive. Leaders encourage girls to reflect on their own beliefs about these different styles of responding, especially beliefs that may make it hard to respond assertively. The group examines and critiques negative beliefs about what it means for girls to be assertive ("Girls who are assertive are bossy"; "It's not nice to be assertive"). Leaders encourage girls to apply the disputation skills to these beliefs (to think of alternatives and evidence) and to consider positive examples of assertiveness that they have observed in others. Following this discussion, leaders present a structured technique for assertiveness that includes (1) describing the problem objectively, (2) expressing how one feels, and (3) asking for a change. Using role plays, group members practice applying this technique to hypothetical situations and then to situations in their own lives. For homework, girls try out the assertiveness technique if an appropriate situation emerges during the week.

Lesson 6. Interpersonal Problem-Solving

Major goals are to:

- Provide girls with more practice and coaching in the assertiveness technique.
- Introduce a four-step approach to problem solving.

Overview: In the first part of the lesson, girls discuss their experiences using the assertiveness technique. Leaders encourage girls to describe what they did as well as what happened and any obstacles they faced. Leaders provide coaching and help students refine their use of the assertiveness skill. The remainder of the lesson presents a four-step approach to interpersonal problem solving that includes goal setting, creative brainstorming, decision making, and enacting and evaluating the solution. The group applies this approach to a few hypothetical and real-life examples and generates a list of solutions (e.g., assertiveness, seeking support or advice) that may be helpful to consider across a variety of situations. For homework, girls apply problem-solving steps to challenges in their own lives. Girls also keep a journal about their responses to negative emotions in preparation for the next session.

Lesson 7. Coping with Strong Emotions

Major goals are to:

- Help girls identify the strategies they use to help themselves feel better.
- Teach girls specific strategies for relaxation, distraction, and engaging in pleasant events.

Overview: Leaders facilitate a discussion about the ways in which group members cope when they are feeling very sad, worried, or angry, or when something upsetting happens that they can't control. Leaders encourage girls to talk about responses that help them feel better as well as responses that don't seem to help. Group members work together to make a list of things that they can do to feel better. During this discussion, leaders introduce the concept of rumination (i.e., repeatedly dwelling on negative emotional experiences in a way that prolongs and amplifies the negative emotion). Leaders encourage girls to reflect on times when they may have ruminated (either alone or with a friend) and to describe what happened. The group discusses some of the beliefs that may fuel rumination ("There's nothing I can do to feel better"; "This helps me get in touch with my emotions"). The group discusses the negative consequences of rumination, including the amplification of negative emotion. Leaders help group members generate a variety of strategies for coping with negative emotion. Leaders also walk members through two relaxation procedures (progressive muscle relaxation and relaxation using imagery). These relaxation exercises are practiced again in later lessons. For homework, girls develop an individualized list of strategies that they can use to cope with difficult emotions or experiences. Leaders encourage girls to practice these strategies during the week.

Unit 3. Challenging Media Messages; Identifying Strengths, and Goals

Leaders introduce a conceptual framework to help girls apply the skills they have learned. Throughout the remainder of the program, girls engage in several activities and discussions designed to consolidate these skills. Group members also consider media and other cultural messages to which they are increasingly exposed as they enter adolescence, particularly messages about the characteristics and roles of girls and women and the importance of popularity as opposed to close friendships. Leaders encourage group members to think critically about negative messages and to reflect on their goals and the personal qualities that are most important in their lives.

Lesson 8. Skills Consolidation and Social Context

Major goals are to:

- Help girls consolidate the skills they have learned.
- Begin a discussion of cultural images and messages, particularly messages related to gender, that students may have internalized.

Overview: The first half of the lesson is devoted to practicing the skills that have been covered so far in the program. Leaders present a conceptual framework that emphasizes the "thinking," "doing," and "feeling" skills and help girls determine when each type of skill may be most useful. Leaders encourage girls to discuss difficult situations they are facing, or situations they anticipate facing in the near future. The group members practice applying the different skills to these situations. In the second half of the lesson, leaders introduce the idea that our negative beliefs and interpretations are sometimes internalized from the messages we receive from others around us and from cultural products such as books, television shows, websites, advertisements, etc. Although we often don't question these messages, they can convey harmful beliefs and unrealistic standards. Group members reflect on messages and unrealistic standards they have noticed, particularly standards for girls and women. For homework, girls record positive and negative images of women they observe in the media over the week.

Lesson 9. Critiquing Media Messages, Identifying Strengths and Goals

Major goals are to:

- Help girls become aware of media images and messages that may be harmful to their self-image.
- Help girls counter concerns about body image.
- Help girls identify the personal qualities that are related to their most important relationships and goals.

Overview: Leaders facilitate a discussion about the images group members observed during the past week. Leaders ask group members for their observations about positive and negative images of girls and women, and about the standards or expectations these messages convey. Leaders discuss the emphasis in the media on physical attractiveness and the unrealistic models of attractiveness. Through discussion and activities, leaders encourage girls to reflect on the personal qualities that are more important in friendships and other significant relationships, and for achieving their goals. Leaders discuss the concept of personality strengths, emphasizing that we each have a unique pattern of strengths. For homework, group members engage in activities designed to help them identify their own personal strengths. Girls also reflect on positive role models, including women they admire in their family or community. Girls interview their mothers or other women in their families about their role models and goals.

Lesson 10. Positive Role Models and Goals

Major goals are to:

- Help girls identify positive female role models.
- Help girls reflect on their goals and develop strategies for achieving these goals.

Overview: Group members talk about their personal strengths and develop plans for using their strengths on a daily basis. Group members also talk about the positive female role models they have identified, and the qualities that they most admire in these women. If possible, the group leaders arrange for two or three women in the community to come to this lesson and talk about their work, their goals, and their thoughts about the qualities that are most important in life, including their work and relationships. A particular effort is made to include at least one woman whose profession is in the sciences. If it is not possible for community members to attend, the leaders present videos and written excerpts from interviews, articles, and biographies about women who are prominent in their fields or whose work is having a beneficial impact in the community. Girls then participate in an activity that encourages them to identify short- and long-term goals and to apply the problem-solving skills (particularly creative brainstorming and enacting solutions) to these goals. For homework, girls take a step (or steps) toward one of their goals. They also try to identify and address any roadblocks, including negative beliefs that may make it difficult to reach their goals at times.

Unit 4. Planning Ahead and Review

During the final unit of the program, group members review the concepts and skills from the program and anticipate situations in the future when these skills may be particularly useful.

Lessons 11. Goals, Review, and Future Use of Skills

Major goals are to:

- Help girls develop strategies for achieving goals.
- Encourage girls to consider how the skills they have learned in the program will help them achieve their goals.

Overview: Girls discuss the goals on which they worked for homework, including the steps they took and any obstacles they encountered. Leaders encourage the girls to consider all of the skills they have learned in the program that can help them achieve goals and deal with any obstacles that they may encounter along the way. Following this discussion, leaders encourage girls to think about their future aspirations and longer-term goals. Girls discuss the skills that may be helpful in achieving these goals. The one-step-at-a-time technique is reviewed as a strategy for breaking large projects and/or long-term goals into smaller, manageable steps. In the last part of the session, leaders begin a review of the GT program. For homework, girls make a list of the skills and activities that they found most helpful in the program, in preparation for a more detailed program review in lesson 12. If they choose, girls can develop activities (e.g., skits) that will help them to review concepts and skills in the final lesson.

Lesson 12. Review, Future Use of Skills, and Celebration

Major goals are to:

- Review the skills from the program.
- Help girls anticipate future situations in which the use of skills may be helpful.
- Acknowledge and celebrate the accomplishments of the group and say goodbye.

Overview: In this lesson, leaders encourage girls to think about their aspirations and some of the difficult situations they may encounter in the future, particularly during the next few months. Girls share the lists of skills they generated for homework. They then work together to create a list of take-home messages and reminders—what they found most helpful about the program and what might be most helpful to take with them for the future. Girls complete a brief (anonymous) feedback survey about their experiences in the program. The last part of the lesson is devoted to celebrating the completion of the group and to saying goodbye.

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