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WHAT WORKS TO PREVENT OR REDUCE INTERNALIZING PROBLEMS OR SOCIO-EMOTIONAL DIFFICULTIES IN ADOLESCENTS:
Lessons from Experimental Evaluations of Social Interventions

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OVERVIEW

Left untreated, internalizing problems, such as a depressive or anxious mood, negative self-perceptions, and emotional distress, can undermine one's ability to succeed in school, live a healthy lifestyle, form and maintain close relationships with others, and, in general, accomplish life goals. When internalizing problems are experienced daily for at least two weeks, a psychiatric disorder – such as a major depressive disorder or a generalized anxiety disorder – may be underlying these problems. Among 13- to 18-year-olds, the lifetime prevalence of anxiety disorders is about 32 percent and the lifetime prevalence of mood disorders is about 14 percent.[1] Among the population of U.S. adolescents aged 12 to 17, about 8 percent (about 2 million) had a major depressive episode (moderate to severe depression lasting at least two weeks) during the past year.[2] Half of all adult lifetime cases of mental disorders emerge by age 14 years.[3] Depression and other mood disorders increase risk for suicide, which is the third leading cause of death among U.S. adolescents aged 15 to 19.[4] Overall, the cost of mental health problems has been estimated at about 2.5 percent of our Gross National Product, [5] with $73.4 billion (1997 dollars) spent solely on the treatment of mental illness.[6]

This synthesis presents lessons learned from 37 random-assignment social intervention programs for adolescents that are designed to prevent or treat internalizing problems.[i] Programs were identified by searching LINKS (Lifecourse Interventions to Nurture Kids Successfully),[ii] Child Trends' online database of rigorously-evaluated social interventions for children and youth. All interventions included in LINKS are social interventions evaluated using random assignment, intent-to-treat evaluations. Note that although this synthesis reviews treatment approaches, it does not review biomedical studies as these studies are not included in LINKS.

Findings from this literature review suggest that social interventions to address internalizing problems are most effective when they teach adolescents how to cope with negative thoughts and emotions, solve problems, and interact effectively with others. Therapeutic approaches, such as family therapy, group therapy, individual therapy, and treatment-focused, school-based approaches appear to be effective.[iii] Mixed results were found for programs including activities to increase self-esteem and programs directed at non-clinical populations of youth. Among a handful of studies reviewed, programs with a mentoring

[i] If a program appears to be missing from the table at the end of this brief, you may submit evaluation studies via our website at www.childtrends.org/links/submission.

[ii] http://www.childtrends.org/links

[iii] Combining psychotherapy with antidepressant medications has been found to be more effective than therapy alone for the treatment of mood disorders – see Kennard et al. (2009). Assessment of safety and long-term outcomes of initial treatment with placebo in TADS. *American Journal of Psychiatry, 166*, 337–344.

component and programs targeting only females, although found to improve certain outcomes, were not found to ameliorate internalizing symptoms.

WHAT ARE INTERNALIZING PROBLEMS?

The term "internalizing problems" refers to problems or disorders of emotion or mood caused by difficulties regulating negative emotions.[7] Internalizing problems may manifest as shy or withdrawn behavior, frequent worrying, self-denigrating comments, and low self confidence. When difficulties last at least two weeks and begin to affect different realms of life, a psychiatric disorder may be present. In contrast to externalizing or acting-out behaviors, internalizing problems, unless severe, may not be apparent to others and can include exaggerated feelings of guilt, negative core beliefs such as believing one is a failure or perceiving that one is not loved, and experiencing other troubling emotions and thoughts.[8] Symptoms associated with depression and anxiety in adolescents are similar to those in adults – they include social withdrawal, changes in eating or sleeping habits, difficulty concentrating , irritability, and fatigue.[9] Internalizing problems are more commonly experienced by females and may be experienced differently by males and females.[10]

WHAT IMPACTS WERE FOUND?

Of the 37 programs reviewed, over half (a total of 24 social interventions) had positive impacts, three had mixed findings, and 10 were not proven to work for internalizing problems. Table 1 presents programs that impact specific internalizing behaviors, according to whether they were *found to work*, had *mixed findings*, or were *not proven to work*. The definitions for these categories are offered below:

- ***Found to Work.*** Programs in this category have *positive and statistically significant* impacts on a particular child or youth outcome.[iv]
- ***Mixed Findings.*** Programs in this category have *varied impacts* either on particular outcomes, at different times, or for varied subgroups. For example, a program that results in significant improvements in behavior problems at post-test but has no impact at a one-year follow-up would be rated as having "mixed findings". A program that works for one subgroup of participants but not for another subgroup (on a particular outcome) would also receive a "mixed findings" rating.
- ***Not Proven to Work.*** Programs in this category have *non-significant* or *marginally significant* impacts on a particular child or youth outcome.

Although this review examines what works for internalizing problems in general, it also identifies which programs work for more specific outcomes, as outlined in Table 1. Programs assessing the following outcome areas were reviewed for this synthesis.

- Depression/Depressive Symptoms (feelings of sadness, acting withdrawn, lacking enjoyment)
- Suicidal Thoughts or Behaviors (thoughts about committing suicide or plans and/or attempts to commit suicide)
- Anxiety/Anxious Symptoms (excessive worries or irrational fears or phobias; restlessness; compulsivity)

[iv] Where evaluations have assessed three or more measures of a particular construct or assessed a particular outcome three or more times, we have calculated the proportion of the potential impacts that are positive and statistically significant. For example, if four of seven or five of nine measures for an outcome are positive and statistically significant, this would be defined as a statistically significant impact on a particular outcome. The purpose is to avoid putting programs with multiple measures either at an advantage or at a disadvantage.

- Post-Traumatic Stress Disorder (PTSD)[v] or Traumatic Stress (a diagnosis of PTSD or symptoms associated with traumatic stress, such as a recurring thoughts and images about a traumatic event)
- Shy/Withdrawn Behaviors (lack of social interaction with others; social isolation)
- Low Self-Esteem/Negative Self-Concept (negative thoughts or beliefs about oneself and/or one's abilities)
- Emotional or Psychological Distress (feeling overwhelmed or distraught)

FOUND TO WORK

Therapeutic approaches (family, individual, group).

- **Conducting family therapy.** All four programs that engaged families in therapist-led sessions with their children (Functional Family Therapy, Project TALC, Trauma-Focused, Cognitive-Behavioral Therapy and Family Bereavement Program) were effective at reducing at least one internalizing problem.

- **Individual counseling or psychotherapy.** Programs that offered individual counseling or psychotherapy, most often conducted in outpatient clinical settings, were also effective for reducing internalizing problems. Six out of 8 programs utilizing this approach worked.[vi]

- **Group counseling or therapy.** Group counseling, the most commonly-used therapeutic approach, was effective for 9 out of 12 programs.[vii]

Skills-training approaches that promote an ability to cope with negative thoughts and feelings.

- **Building cognitive-behavioral skills.** Thirteen out of 16 programs that taught adolescents–on a group or individual basis –how to monitor feelings, identify triggers, avoid negative thought patterns, and reframe negative thoughts had positive impacts on at least one internalizing problem.

- **Building behavioral coping skills.** Six out of seven programs[viii] that taught behavioral coping skills, defined broadly to include behaviors such as relaxation skills, seeking help from others, and developing healthy responses to stress, had positive impacts on at least one internalizing problem.

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[v] PTSD is an anxiety disorder, but it was analyzed separately because at least four studies assessing this outcome were identified.

[vi] Care, Assess, Respond, Empower, Cognitive Behavior Therapy, Coping Cat, Eye Movement Desensitization and Processing, Seeking Safety, Trauma-Focused cognitive-Behavioral Therapy, and Yoga for Treatment of Eating Disorders

[vii] Adolescent Coping with Stress, Cognitive-Behavioral Intervention for Trauma in Schools, Cognitive-Relaxation Coping Skills, Coping and Support Training, Coping With Depression (CWD-A), Go GRRLS, Seeking Safety, SHAPEDOWN, and Skills for Academic and Social Success. Note that Seeking Safety offers both individual and group counseling.

[viii] Adolescent Coping with Stress, Care, Assess, Respond, Empower (CARE), Cognitive-Relaxation Coping Skills (CRCS), Coping and Support Training (CAST), Coping Cats, and Yoga for Treatment of Eating Disorders worked, whereas the Penn Prevention Program did not work to reduce internalizing problems.

Skills-training approaches that promote healthy relationships with others.

- **Building social skills and/or life skills.** Ten out of the 17 programs that taught social skills and/or life skills (such as social problem solving, decision-making, conflict-resolution, communication, and negotiation skills) had positive impacts on at least one internalizing problem.

- **Treatment-focused school-based approaches**. Six out of 8 treatment-focused school-based approaches (targeting symptomatic students) were found to reduce internalizing problems.

MIXED FINDINGS

- **Preventive approaches.** Overall, 10 out of 19 prevention-focused approaches (those implementing programs with a universal population) were found to have positive impacts on at least one internalizing problem.
- **Implementing activities to increase self-esteem.** Eleven out of 21 programs that explicitly incorporate activities designed to increase self-esteem had positive impacts on at least one internalizing problem.

NOT PROVEN TO WORK

- **Gender-specific programs for females.** Although based on a limited number of evaluations, only two out of five programs targeting an all female population were found to reduce internalizing problems in females (Seeking Safety and Go Grrls). No programs specifically targeting males were identified.

- **Programs including a mentoring component did not generally impact self-esteem.** All evaluations of programs incorporating mentoring (in this review) assessed impacts on self-esteem but not on other internalizing problems. Two out of five programs with a mentoring component (Study of Mentoring in the Learning Environment and the Woodrock Youth Development Project) improved self-esteem. The other programs[ix] were not found to improve self-esteem, although they did improve social and academic outcomes. A caveat should be made to note that these programs were primarily designed to produce positive impacts on other outcomes and only sought to improve self-esteem in a secondary way.

NEEDED RESEARCH

The results of this review reveal several areas where further research into social interventions for adolescents' internalizing problems is especially needed.

- **Suicide-prevention programs.** Suicide is the third-leading cause of death among adolescents ages 15 to 19, yet only five experimentally-evaluated programs designed to prevent suicide were identified in this review; all of these were school-based programs targeting youth identified as being high risk for suicide.[x] One reason for this lack is that interventions designed to address suicide (and mental health issues, more generally) are more likely to target clinically-referred populations, or populations who have expressed suicidal thoughts. Evaluations of these programs tend to be smaller-scale and non-randomized.

[ix] Big Brothers/Big Sisters, Cross Age Mentoring Program (CAMP), and Twelve Together.

[x] Care, Assess, Respond, Empower (CARE), Coping and Support Training, Reconnecting Youth, Signs of Suicide Prevention Program,, and Untitled School Based Suicide-Prevention Program.

- **Programs to improve adolescents' ability to cope with chronic and acute stress.** Few programs with a normative focus on stress management were identified. These interventions may be particularly helpful to adolescents who are exposed to neighborhood violence and/or who experience problems at home.

- **Social interventions for shy and withdrawn behavior.** Although few, if any, studies have examined whether shy and withdrawn behavior is associated with negative long-term outcomes, adolescents who consistently exhibit shy and withdrawn behavior are more likely to be disliked by peers, feel awkward in social situations, and have fewer friends –all of which may increase risk for anxiety and low self-esteem. It is possible that marked shy/withdrawn behavior is a symptom of a social anxiety disorder.

- **Interventions adapted for different populations.** Few programs were designed for specific populations, such as girls, boys, low-income adolescents, immigrant adolescents, or African American adolescents. Research suggests that boys and girls may experience conditions like depression differently; however, only five gender-specific programs were identified, all for girls (and only two worked). Low-income adolescents may have different stressors than high-income adolescents, such as financial worries at home. Ethnic minority and immigrant populations may face stressors such as racial discrimination and acculturation. For these reasons, culturally-adapted and gender-specific programs are needed**.**

- **Interventions for adolescents with co-occurring conditions.** Treatment and prevention programs often enroll participants based on the severity of a single internalizing problem (such as depression or anxiety) but, in reality, there is substantial co-occurrence with other internalizing problems and also with other conditions such as substance use disorders[11] and oppositional defiant disorder.[12] Often, program effects are not analyzed by subgroup to assess whether teens with co-occuring issues are experiencing similar improvements to teens without co-occurring issues (usually due to the fact that clinical studies tend to include samples that are too small to conduct these analyses). As a result, little is known about whether programs are equally effective for both subgroups or about whether/how co-occurring conditions moderate treatment outcomes.[13]

- **Measuring positive indicators of mental health and well-being.** Aside from interventions that assessed self-esteem or self-concept, few interventions assessed indicators of an individual's positive mental health. Examples include things like hope, optimism, sense of purpose, motivation, life satisfaction, and spirituality.

DISCUSSION

This brief set out to examine social interventions designed to prevent or treat internalizing problems in adolescents, which have been evaluated using random assignment, intent-to-treat study designs. Sometimes social interventions are sufficient to treat certain disorders, especially if symptoms are mild or moderate, and other times, interventions must address biological or physiological aspects of disorders, using medication. Using both approaches simultaneously is an important option. The decision to use psychotropic medication in young people is an important decision that should be made carefully in conjunction with a physician who has expertise in adolescent mental health/mental disorders and the use

of antidepressants. For the treatment of mild to moderate depression, therapy or a social/behavioral intervention is often considered before committing to medication. When medication is considered, the potential benefits are weighed against the potential costs, like side effects, and risks (for example, we currently lack information concerning the consistent and long-term use of antidepressants from adolescence into adulthood). For more severe cases of depression, antidepressants may be sought out to provide faster relief, while a relationship is established with a therapist.

This review focuses on social interventions to reduce internalizing problems and finds that a number of social intervention approaches can be helpful. The majority of interventions (24 out of 37) had positive impacts on at least one internalizing problem. Positive impacts were found on depression or depressive symptoms (15 out of 21 programs), suicidal thoughts and behaviors (4 out of 5 programs), and anxiety disorders or symptoms (9 out of 14 programs). Social interventions can also decrease symptoms of PTSD and traumatic stress (4 out of 4 programs). Impacts on adolescent self-esteem were less frequent, with only 7 out 18 programs improving this outcome.

Although the use of medication is often a critical component in the treatment of mental disorders, this review focused solely on interventions that seek to prevent or reduce internalizing problems using social, cognitive, and/or behavioral strategies. This synthesis focused on prevention programs designed to prevent adolescents (all students or those at risk for developing the disorder) from developing internalizing problems. The review also included treatment programs, or programs designed to reduce internalizing problems among clinically-referred populations or among adolescents already experiencing internalizing symptoms. The findings suggest that these programs are most effective when they build cognitive behavioral skills such as redirecting negative or self defeating thoughts; build behavioral coping skills for developing healthy responses to stress; and teach social skills for improving interpersonal relationships and self-efficacy. Appropriate therapeutic approaches include family, group, and individual therapy. Implementing interventions in school settings may also be beneficial. Mixed findings were obtained for programs implementing activities to increase self-esteem and for programs that do not specifically target adolescents experiencing internalizing symptoms. Finally, among the handful of studies reviewed, programs with mentoring components were not effective for self-esteem, and programs targeting all females –although effective for other outcomes – were not found to be effective in preventing or reducing internalizing problems.

Table 1. What Works: Lessons for Experimental Evaluations of Social Interventions to Reduce Internalizing Problems or Social and Emotional Difficulties[14].

OUTCOME	NOT PROVEN TO WORK FOR INTERNALIZING PROBLEMS	MIXED FINDINGS	FOUND TO WORK FOR INTERNALIZING PROBLEMS
Depression/ Depressive Symptoms	***Treatment/Secondary Prevention*** FRIENDS Program Skills for Academic and Social Success ***Prevention*** Athletes Targeting Healthy Exercise and Nutrition (ATHENA) Cognitive-Behavioral Intervention for Trauma in Schools Three Generations Project	***Treatment/Secondary Prevention*** Penn Prevention Program (PPP) (worked for low-depression group at posttest; impacts were not sustained at follow-up)	***Treatment/Secondary Prevention*** Care, Assess, Respond, Empower (CARE) Cognitive Behavior Therapy Cognitive-Relaxation Coping Skills (CRCS) Coping and Support Training (CAST) Coping Cat Coping With Depression (CWD-A) Eye Movement Desensitization and Processing (EMDR) Trauma-Focused cognitive-Behavioral Therapy (TF-CBT) Untitled School Based Suicide-Prevention Program Yoga for Treatment of Eating Disorders ***Prevention*** Adolescents Coping with Stress Moving to Opportunity Problem Solving for Life SHAPEDOWN Signs of Suicide

OUTCOME	NOT PROVEN TO WORK FOR INTERN-ALIZING PROBLEMS	MIXED FINDINGS	FOUND TO WORK FOR INTERNALIZING PROBLEMS
Anxiety/ Anxious Symptoms		***Treatment/Secondary Prevention*** Coping Cat (improvement on self-report and parent-report measures but not on therapist-report measures) FRIENDS Program (worked for 6th graders but not 9th graders; worked for girls on some measures but not for boys) Penn Prevention Program (PPP) (worked for low-depression group and high-anxiety group at posttest; impacts were not sustained at follow-up) Skills for Academic and Social Success (improvement on observer-rated but not self-rated measures) ***Prevention*** Project TALC (worked at posttest, but impacts were not sustained at follow-up)	Care, Assess, Respond, Empower (CARE) Cognitive Behavior Therapy Cognitive-Relaxation Coping Skills (CRCS) Eye Movement Desensitization and Processing (EMDR) Functional Family Therapy Seeking Safety Trauma-Focused Cognitive-Behavioral Therapy (TF-CBT) Yoga for Treatment of Eating Disorders ***Prevention*** Moving to Opportunity
Suicidal Thoughts or Behaviors	***Treatment/Secondary Prevention*** Reconnecting Youth		***Treatment/Secondary Prevention*** Care, Assess, Respond, Empower (CARE) Coping and Support Training (CAST) Untitled School Based Suicide-Prevention Program ***Prevention*** Signs of Suicide Prevention Program

OUTCOME	NOT PROVEN TO WORK FOR INTERN-ALIZING PROBLEMS	MIXED FINDINGS	FOUND TO WORK FOR INTERNALIZING PROBLEMS
PTSD or Traumatic			***Treatment/Secondary Prevention***

Stress			Eye Movement Desensitization and Processing (EMDR) Seeking Safety Trauma-Focused cognitive-Behavioral Therapy (TF-CBT) ***Prevention*** Cognitive-Behavioral Intervention for Trauma in Schools
Internalizing Problems (General)		***Treatment/Secondary Prevention*** Penn Prevention Program (PPP) (worked at posttest but impacts were not sustained at follow-up)	***Treatment/Secondary Prevention*** Family Bereavement Program
Shy/ Withdrawn Behaviors			***Treatment/Secondary Prevention*** Cognitive Behavior Therapy Cognitive-Relaxation Coping Skills (CRCS)
Emotional or Psycholog-ical Distress		***Treatment/Secondary Prevention*** Coping and Support Training (CAST) – worked for females but not males. ***Prevention*** Project TALC (worked at posttest but impacts were not sustained at follow-up)	***Treatment/Secondary Prevention*** Skills for Academic and Social Success

OUTCOME	NOT PROVEN TO WORK FOR INTERN-ALIZING PROBLEMS	MIXED FINDINGS	FOUND TO WORK FOR INTERNALIZING PROBLEMS
Low Self-Esteem/ Negative Self Concept	***Treatment/Secondary Prevention*** Cognitive-Relaxation Coping Skills (CRCS) Eye Movement Desensitization and Processing (EMDR) Family Bereavement Program ***Prevention*** Accelerated Academics Academy Athletes Targeting Healthy Exercise and Nutrition (ATHENA) Big Brothers/Big Sisters Children of Divorce Intervention Program Go Girls Griffin-Spalding Middle School Academy Project ACCEL Twelve Together		***Treatment/Secondary Prevention*** Coping With Depression (CWD-A) ***Prevention*** Go GRRLS Project TALC SHAPEDOWN Social Skills Training Program for Children's Social Functioning Study of Mentoring in the Learning Environment (SMILE) Woodrock Youth Development Project

ENDNOTES

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[14] **Treatment/Secondary Prevention Programs (17):** Care, Assess, Respond, and Empower (CARE), Cognitive Behavior Therapy, Cognitive-Relaxation Coping Skills (CRCS), Coping and Support Training (CAST), Coping Cats, Coping With Depression (CWD-A), Eye Movement Desensitization and Processing (EMDR), Family Bereavement Program, FRIENDS Program, Functional Family Therapy, Penn Prevention Program (PPP), Reconnecting Youth, Seeking Safety, Skills for Academic and Social Success, Trauma-Focused cognitive-Behavioral Therapy (TF-CBT), Untitled School Based Suicide-Prevention Program, and Yoga for Treatment of Eating Disorders. **Prevention Programs (20):** Accelerated Academics Academy, Adolescents Coping with Stress, Athletes Targeting Healthy Exercise and Nutrition (ATHENA), Big Brothers/Big Sisters, Cognitive-Behavioral Intervention for Trauma in Schools, Cross Age Mentoring Program (CAMP), Go Girls, Go GRRLS, Griffin-Spalding Middle School Academy, Moving to Opportunity, Problem Solving for Life, Project ACCEL, Project TALC, SHAPEDOWN, Signs of Suicide Prevention Program, Social Skills Training Program for Children's Social Functioning, Study of Mentoring in the Learning Environment (SMILE), Three Generations Project, Twelve Together, and the Woodrock Youth Development Project.

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