# Critical Analysis of Interventional Research Designs to Promote Coping in Pediatric Patients

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## ABSTRACT

**Purpose**: The purpose of this article is to analyze the strengths and limitations of research designs of studies implementing coping based training interventions in adolescents.

**Methods**: Quantitative and mixed methods studies were selected and reviewed for critical analysis of strengths, limitations, and validity concerns.

**Results**: Methodological strengths and weaknesses were assessed. The major limitation to the studies reviewed is selection bias in both quasi-experimental studies and randomized controlled trials.

**Practice implications**: Improved coping strategies and skills were found in participants of coping skill training intervention programs. Decreased depressive symptoms and less impact of individual disease burden was found in the treatment intervention groups. J Pediatr Health Care. (2016) *30*, 424-434.

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## KEY WORDS

Adolescent, pediatric, coping, coping skills training, behavioral health, stress management, interventional research designs, interventional research

The ability to cope with stressors and risk factors provides an integral foundation to pediatric development and the ability to achieve a resilient personality as an adult. Adaptive coping (sometimes called "resilient coping" in the literature) refers to the management of a problem causing distress, regulation of a response to that stress, and rising from that situation more successful (Blount et al., 2008). Therefore, interventions to promote coping in pediatrics often involve teaching the child to cope and manage stress. Children who are not able to cope with childhood stressors, chronic illness, or other pediatric risk factors are at increased risk for mental illness and poor developmental outcomes. In the United States, one in five children have a serious mental illness resulting in serious functional impairment, interfering with major life activities, and meeting the DSM-IV diagnostic criteria. Anxiety and depression are the most common mental illnesses experienced by children (National Institute of Mental Health, 2012). The ability to

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cope and manage stress is essential for decreased incidence of mental health outcomes, such as further distress, decreased quality of life, worsening symptoms, decreased social functioning, violence, and suicide.

## COPING SKILL TRAINING INTERVENTION STUDIES

Researchers have hypothesized that augmenting traditional cognitive-based or behavioral therapy (CBT) techniques with targeted education of coping skills and strategies will improve both short- and long-term outcomes in youth (Davidson, Boland, & Grey, 1997; Gil et al., 2001; Grey, 2011; Grey et al., 1998; Grey et al., 2009). The basis of most coping skills training (CST) is to increase individual competence and skill mastery while providing training to discontinue use of nonconstructive coping styles and adopt more adaptive and functional strategies (Grey et al., 2009). Formal CST programs have been offered in a variety of settings, including schools, school-based health centers, outpatient specialty centers, and inpatient units. CST programs include lesson plans to teach adaptive coping strategies, which are based on years of traditional psychological and social work–based cognitive-behavioral treatment plans. Although some programs follow a specific copyrighted format such as Teaching Kids to Cope from the University of Pittsburgh (Puskar, Grabiak, Bernardo, & Ren, 2009), others follow a group-specific format based on CBT techniques and educational practices. Table 1 provides an overview of the major components of most CST programs.

## METHODOLOGY

### Purpose

No consensus currently exists on the best practice or executed format for formal CST programs. Evaluations of CST interventions are currently rare, especially within pediatrics. Most psychoeducational interventions, such as CST, are often limited by feasibility and rigor in design methods. The aim of this article is to analyze the strengths and limitations of research designs of studies implementing coping-based training interventions in youths and adolescents. This article presents strategies to address these potential limitations in terms of internal and external validity and highlights the importance of critical analyses in execution of clinical research.

### Search Strategy

A comprehensive database search of accessible library databases was conducted, including PubMed, Psych INFO, Cochrane Database of Systematic Reviews, Google Scholar, and CINAHL. The main search terms used were "resilient coping interventions," "coping skills training," "promotion of pediatric resilience," "pediatric coping interventions," and "coping interventions." Secondary search terms included "adolescent" and versions of "pediatrics." In PubMed, medical subject headings (MeSH) terms were used with Boolean operators. Citation searching of journals that were found in the primary search was also reviewed for additional references. Expert recommendations were sought through e-mail inquiries to primary pediatric coping researchers in the field, including primary authors of known CST guidelines in the literature. A limitation to the literature search was the various use and definitions of the terms "adaptive coping" and "resilient coping" across different disciplines.

### Inclusion and Exclusion Criteria

The main inclusion criterion was experimental and quasi-experimental designs utilizing CST interventions to evaluate causal inference and threats to internal and external validity when critiquing available literature. Other inclusion criteria were as follows: the subjects of the study were adolescents (ages 11-18 years);

**TABLE 1. Components of coping skills training programs**

| Coping skills | Definition |
|---|---|
| Social problem solving | Examining the steps to reaching a decision about the best way to solve a problem (e.g., dealing with peer aggression)<br>Steps: identify the problem, determine goals, generate alternative solutions, examine consequences, choose the solution, evaluate the outcome |
| Communication skills | Help individuals express themselves clearly, appropriately, and constructively: social skills and assertiveness (e.g., asking a parent to try a new recipe for dinner) |
| Cognitive behavioral modification | Understanding thoughts and feelings such as recognition of thoughts and feelings, problem solving, and cognitive reframing<br>Moving from negative self-talk to a positive internal message (e.g., "I can do this")<br>Sometimes referred to as "cognitive reframing" or "cognitive restructuring" |
| Stress management | Positive techniques and approaches to manage stress through stress reduction, including communication of stressors, problem solving, relaxation techniques, and guided imagery (e.g., deep breathing, reading, and journal writing) |
| Conflict resolution | Addressing a negative situation in a constructive way (e.g., role playing and modeling) |

Note. *Data from Forman, 1993; Grey, 2011; and Jefferson et al., 2011.*