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Initiated by the National Institute on Drug Abuse, these two literature reviews—one on internalizing disorders and the other on externalizing disorders—were conducted to identify interventions for the treatment of childhood psychiatric disorders that have the potential to reduce the risk of subsequent substance abuse among children and adolescents. Promising outcome studies that also make follow-up research possible (i.e., due to design, sample size, etc.) on whether child subjects developed substance abuse problems at a later age were also identified. Both Compton et al. and Farmer et al. include a detailed table of the studies reviewed, and each article provides a rich source of information for researchers and clinicians concerned with reducing mental health problems in children.

In general, selection criteria included: (a) a sample in which all or most children were 6-12 years old, (b) a controlled design (e.g., randomized assignment, quasi-experimental, or experimental and control group) and (c) publication between 1985-2001 (most articles were published in peer reviewed journals). Sample sizes of articles on internalizing disorders ranged from 6-69 subjects, and most studies of externalizing disorders were selected if they had a sample size of 30 or more. Application of these criteria resulted in reviews of 33 studies on Anxiety Disorders; 18 on Depression Disorders; 21 on Disruptive Disorders; and 28 articles on Attention Deficit Hyperactive Disorder.

## *Internalizing Disorders*

### *Anxiety Disorders*

A wealth of scientifically rigorous and methodologically strong studies on this disorder suggest that cognitive-behavioral interventions are the most promising psychosocial intervention type for anxiety disorders. In particular, “systematic and desensitization and contingency management techniques are well-established treatments for childhood phobias,” and the cognitive-behavioral therapies pioneered by Kendall, Barrett, and colleagues (which combined cognitive-behavioral techniques with a family management program) “are probably efficacious” for the treatment of a range of childhood anxiety disorders (p. 1258). Of those studies that evaluated the potential of cognitive-behavioral interventions to treat Post Traumatic Stress Disorder (PTSD) for childhood sexual abuse, findings were positive, but research on childhood PTSD is at an early stage and lacks the methodological rigor characterized by research on childhood anxiety disorders in general.

While the evidence base on psychosocial interventions for Obsessive Compulsive Disorder (OCD) is also lacking, there is strong empirical evidence-base for the effectiveness of psychopharmacological treatments for this disorder. Specifically, the Selective Serotonin Reuptake Inhibitors (SSRI), fluoxetine (Prozac), sertraline (Zoloft), and fluvoxamine (Luvox) have been established as effective treatments for OCD (p. 1258.) A study by the RUPP Anxiety Group found that fluvoxamine (Luvox) is efficacious for the short-term psychopharmacological treatment of childhood anxiety disorder, generalized anxiety disorder, and social phobia, but its long-term efficacy is yet to be determined.

### *Depression*

Some cognitive-behavioral interventions for the reduction of depressive symptoms were promising, but the majority of the studies reviewed involved non-referred samples; therefore, results cannot be generalized to (referred) children who are severely depressed. In general, however, depressed children appear to “respond similarly to most active interventions, including cognitive-behavioral, attention-placebo, and nonspecific supportive interventions” (p. 1242-43).

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The benefits of psychopharmacological interventions for childhood depression were supported in one study of fluoxetine (Prozac), and this study included a one-year follow up. In keeping with previous studies, tricyclic antidepressants were further confirmed to be of “unlikely benefit, and should not be considered first-line medications for treatment of this disorder” (p. 1243).

Overall, the primary shortcomings of psychosocial and psychopharmacological studies for the treatment of childhood depression include: (a) the relatively small number of well-designed clinical trials, (b) the lack of sufficient follow up data, and (c) the fact that no study reviewed had undergone independent replication. Thus, in contrast to the rich and systematic body of research on childhood anxiety disorders, there is a dearth of research on childhood depression. Of the interventions reviewed, none met criteria for “efficacious” or “possibly efficacious” (p. 1243). Suggesting that research on childhood depression “is at an early stage” (p. 1242), the authors call for interventions that are geared toward improved functioning and involve clinic-referred children and their families.

### ***Externalizing Disorders***

#### ***Conduct Disorder (CD) and Oppositional Defiant Disorder (ODD)***

The evidence base suggests that there are a variety of interventions that may have positive outcomes for children with CD or ODD. Encouraging findings included a variety of approaches, including parent training, clinic-based treatments, and community-based treatments. Among treatments provided in specialty mental health clinics (e.g., psychoanalysis, day treatment, problem-solving skills training, and cognitive-behavioral treatment), interventions that include the family and involve real-life practice situations were the most effective (psychoanalytic treatments were the least effective). What is “most encouraging” (p. 1270) about these relatively short-term clinic-based interventions is that they appear to produce long-term treatment gains.

According to the authors, “well-conducted research on true community-based interventions...has begun to appear only recently” (p. 1270). Some case management and wraparound interventions showed promise, but results were of marginal statistical significance. Further, the long-term benefit of prevention programs is not yet clear, but these interventions “appear to be an important component in the continuum of services” (p. 1271).

Very few studies of psychopharmacological interventions for disruptive disorders were found, and each had brief follow-up periods and small samples; treatment with carbamazepine (Epitol, Tegretol) was not successful. Although the literature on disruptive disorders is promising, the authors call for more research on interventions that are developmentally appropriate for this age group.

#### ***Attention Deficit Hyperactive Disorder (ADHD)***

Because ADHD is a widely researched mental health problem among youth in the 6-12 year age range, the authors adjusted their selection criteria accordingly; a large net was cast to find studies on psychosocial interventions (e.g., allowing sample sizes of less than 30), and more stringent criteria were applied to pharmacological studies.

Psychosocial interventions that showed positive changes in comparison to a wait-list group included: cognitive-behavioral, parent training, EEG biofeedback, bibliotherapy, and social skills training. Oligoantigenic diet showed a negative effect size.

There was strong empirical support for the pharmacological treatment of the core symptoms of ADHD (hyperactivity, impulsivity, inattention) with methylphenidate (Ritalin).

#### ***Adjunctive Studies***

The effectiveness of combining psychosocial and pharmacological treatments into one intervention program has not yet been demonstrated, and most adjunctive interventions did not result in a reduction of core symptoms. For example, the Multimodal Treatment Study of Children with ADHD (MTA) found that the combination of a psychostimulant with a psychosocial intervention was not superior to psychostimulant alone. However, by using this adjunctive approach, researchers found that similar outcomes could be achieved with less medication (p. 1272).

In conclusion, the authors call for more studies with a long-term follow-up component—especially for childhood depression and disruptive disorders. These studies should be sensitive to the rapid developmental process characterized by this age group, and should be designed with the goal of successful transportation and implementation into real-world settings.