

Take Care to Do No Harm: Harmful Interventions for Youth Problem Behavior

Dana M. Rhule
University of Washington

Youth conduct problems, delinquency, and substance abuse pose serious consequences for the youth themselves, their victims and families, and the broader society. The widespread impact of these problem behaviors highlights the importance of preventing and treating them effectively. Despite this need, an emerging literature has demonstrated that certain intervention programs for these problem behaviors, particularly those that have used group-delivery formats, have produced iatrogenic effects. The potential for intervention to produce negative outcomes raises several ethical implications and dilemmas. In this article, the author provides illustrative examples of iatrogenic effects of interventions that target youth conduct problems, delinquency, and substance abuse; discusses the relevant ethical implications raised by these outcomes; and suggests recommendations to prevent, detect, and respond to their occurrence.

Keywords: iatrogenic effects, youth interventions, youth problem behavior, harmful interventions

Youth conduct problems, delinquency, and substance abuse are serious problems that warrant societal attention. Each may be conceptualized as a form of problem behavior (Jessor & Jessor, 1977) that is associated with negative outcomes for the youth and for society. Unfortunately, these problem behaviors occur at alarmingly high rates in youth. Conduct problems are among the most commonly occurring child behavior disorders, with prevalence rates for conduct disorder ranging from 6%–16% for boys and 2%–9% for girls (American Psychiatric Association, 2000). The 2003 National Survey on Drug Use and Health (Substance Abuse and Mental Health Services Administration [SAMHSA], 2004) indicated that the rate of substance abuse or dependence was 8.9% for youth ages 12–17. According to self-report, 30% of high school seniors in the United States engaged in minor criminal activity, 12%–15% engaged in serious fighting or assault, and 9%–14% were involved in major theft or property damage in the past year (Johnston, Bachman, & O'Malley, 1997). In terms of substance use, 39% of high school seniors had used illicit drugs, 70% had consumed alcohol, and 48% had been drunk in the past year (Johnston, O'Malley, Bachman, & Schulenberg, 2004).

Problem behavior poses serious personal and economic costs for youth's victims and families, as well as for taxpayers. Conduct problems and substance abuse have been associated with widespread deficits and maladjustment in numerous domains including social and romantic relationships, educational and occupational attainment, and physical and mental health

(Essau, 2003; SAMHSA, 2004). Cohen (1998) has estimated external costs as high as \$1.3–\$1.5 million for the typical career criminal and \$370,000–\$970,000 for a heavy drug user. Clearly, the widespread impact of these problem behaviors underscores both the importance of preventing and treating them effectively and the high personal and societal cost of failing to do so. However, despite the need for adequate interventions, many treatments have not demonstrated impressive success, and several have inadvertently produced increases in problem behavior.

An emerging literature has demonstrated that certain prevention and treatment programs for youth problem behavior, particularly those that have used group-delivery formats, have produced iatrogenic effects. Some studies have documented increases in externalizing behaviors, delinquency, alcohol and drug use, and other undesirable outcomes, which may have resulted from the exposure to deviant peers afforded by these interventions. It is important to note that these interventions were not reckless in their development or implementation. Rather, they were developed with the worthy intentions of serving youth and reducing problem behavior. However, these programs did not fulfill their anticipated objectives and instead unintentionally promoted the very behaviors they were attempting to decrease.

The possibility for prevention and treatment programs to produce negative effects poses several ethical implications and dilemmas, which I highlight in this article. The Ethical Principles of Psychologists and Code of Conduct (American Psychological Association, 2002; herein referred to as *the ethics code*) refers to aspirations of beneficence and nonmaleficence, which are threatened by the potential or actual occurrence of harm resulting from interventions. With these aspirational goals in mind, the intervention community must consider what ability it has to foresee iatrogenic effects and what appropriate steps should be taken to prevent and respond to such outcomes. In this article, I explore the iatrogenic effects of several prevention and treatment programs for children and adolescents that target conduct problems, juvenile delinquency, and substance abuse, and the ethical implications

DANA M. RHULE received her MS in psychology from the University of Washington. She is currently a doctoral graduate student in child clinical psychology. Her research interests include the development, intergenerational transmission, prevention, and treatment of problem behavior.

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CORRESPONDENCE CONCERNING THIS ARTICLE should be addressed to Dana M. Rhule, University of Washington, Department of Psychology, Box 351525, Seattle, WA 98195-1525. E-mail: drhule@u.washington.edu

raised by these outcomes. My goal in this article is to address these issues by providing several illustrative examples of iatrogenic effects of interventions and suggesting recommendations to prevent, detect, and respond to their occurrence.

Prevention and Treatment Programs for Problem Behavior

Over the past few decades, the field of prevention science has emerged and grown, partially in response to insufficient treatment efficacy for youth engaging in conduct problems, delinquency, and substance abuse. Prevention programs aim to prevent problems before they occur or to diminish less severe forms of conduct problems before they progress to full-blown disorders or delinquency. The nature and specific content of these programs vary, but certain components are common, such as parent-training groups, case management and home visits, classroom curricula, teacher management strategies, and child social, problem-solving, or cognitive-skills training groups. Treatments for children and adolescents who are already demonstrating significant behavior problems use several of these same components but have also used group residential care and individual psychotherapy.

Overall, several programs have demonstrated efficacy in preventing and/or reducing delinquency, substance abuse, and conduct problems. These include parent training (e.g., McMahon & Forehand, 2003; Patterson, 1975; Webster-Stratton, 2000), cognitive skills training (Lochman, Burch, Curry, & Lampron, 1984), Functional Family Therapy (FFT; Alexander & Parsons, 1982), Multisystemic Therapy (MST; Henggeler, Schoenwald, Borduin, Rowland, & Cunningham, 1998), and Multidimensional Treatment Foster Care (MTFC; Chamberlain, 1994), among others. Additionally, certain prevention programs have shown impressive success in reducing and preventing problem behavior, including the Life Skills Training Program (Botvin & Kantor, 2000), the Montreal Prevention Experiment (Tremblay, Pagani-Kurtz, Masse, Vitaro, & Pihl, 1995), the Seattle Social Development Project (SSDP; Hawkins et al., 1992), and the Fast Track Program (Conduct Problems Prevention Research Group, 1992). Although these, and several other, intervention and prevention programs have proven to be helpful and have contributed greatly to this field, an unfortunate number of other programs have proven harmful. To illustrate, I discuss certain programs incorporating group delivery and their apparent iatrogenic effects below. The point is not to question or deny the efficacy or worth of all prevention and treatment programs but instead to acknowledge that they can, and sometimes do, pose harm to their recipients, despite well-intentioned objectives. Ultimately, the goal of such unflinching self-appraisal is to move our field closer to the aspirational goals of doing good and not doing harm.

Overview of Iatrogenic Effects

In his 1992 meta-analysis, Lipsey (1992) concluded that approximately 29% of controlled interventions focusing on youth problem behavior produced iatrogenic outcomes. Many of these negative effects have occurred for interventions using peer-group delivery, such as group counseling, residential treatment, and school-based intervention programs (Arnold & Hughes, 1999; McCord, 2003). Likewise, a more recent meta-analysis of school prevention programs (Wilson, Gottfredson, & Najaka, 2001) dem-

onstrated that certain interventions, including non-cognitive-behavioral counseling and social work approaches, have produced negative outcomes. However, despite the lack of evidence for their efficacy, many of these interventions, including group interventions in schools and clinics, continue to be administered.

According to research and theory, the peer group serves a major role in the initiation, maintenance, and escalation of youth problem behavior, including substance use, self-reported delinquency, and self- and police-reported violent behavior. Association with deviant peers is both an outcome of earlier social failures and a predictor of continued and increasing involvement with antisocial peers and problem behavior (Dishion, McCord, & Poulin, 1999). Furthermore, the presence of many aggressive peers together in a group has been shown to contribute to a shifting of social norms, including a higher level of social acceptability and reinforcement for aggression (e.g., Stormshak et al., 1999). Considering these developmental findings, intervention researchers have questioned the appropriateness of aggregating adolescents with problem behavior (Arnold & Hughes, 1999; Dishion et al., 1999). The need for caution against peer-group delivery of youth interventions becomes all the more apparent in considering past occurrences of iatrogenic effects. Although a comprehensive review of such programs would exceed the space limitations of this article, several illustrative examples are discussed below.

One of the most widely cited examples of intervention programs reporting negative effects is the Cambridge-Somerville Study, a longitudinal prevention program implemented in the 1940s. As described by McCord (1992, 2003), boys from diverse backgrounds with differing levels of risk were randomly assigned to intervention or control conditions. Intervention boys were assigned a social worker who worked to foster a close personal relationship with, and to facilitate individualized services for, the boy and his family. Intervention services lasted for an average of 5.5 years (from age 10.5 to 16) and included counseling, referrals, summer camps, tutoring, and recreational activities. The intervention participants have now been followed into their 40s and 50s. Contrary to expectations (and intentions), more boys in the intervention group demonstrated undesirable outcomes, such as being convicted of a crime, dying before age 35, or receiving a diagnosis of alcoholism (see McCord, 1992, for a review). Furthermore, these effects were dose-dependent in that boys with higher levels of participation and cooperation with the program demonstrated poorer adjustment than those who were not as involved (McCord, 2003). Analyses exploring possible mechanisms for these iatrogenic effects have suggested that the summer camps, in particular, may have had an adverse effect by providing high-risk boys a greater opportunity to aggregate and negatively influence each other (Dishion et al., 1999).

The Adolescent Transition Program (ATP; Dishion & Andrews, 1995) was a preventive intervention trial that systematically evaluated the effects of parent- and teen-focus intervention components on 119 high-risk youth, ages 11–14, and their families. The parent-focus component included parenting skills training, whereas the teen-focus component, delivered in group format, emphasized the development of prosocial goals and self-regulation. Initial evaluations following 12 weeks of intervention demonstrated positive effects of both conditions, including acquisition of program material and reductions in observed negative family interactions. However, analyses at a 1-year follow-up pro-

vided a different picture. Compared with participants in the parent condition or control group, participants in the teen program demonstrated greater increases in tobacco use and teacher-reported externalizing behavior (Dishion & Andrews, 1995). Furthermore, these iatrogenic effects were evident 3 years later (Poulin, Dishion, & Burraston, 2001). The authors attributed these effects to a process labeled *deviancy training* in which rule-breaking discussions and deviant talk are reinforced by contingent positive reactions. Notably, this reinforcement occurs more frequently in delinquent dyads and predicts increases in substance use initiation, delinquency, and violent behavior (Dishion et al., 1999).

Catterall (1987) evaluated the efficacy of a 4-day, intensive group counseling workshop for low-achieving students at risk of dropping out of high school. The workshop focused on cognitive-behavioral approaches to school success, such as promoting teamwork, building self-esteem and confidence, and increasing personal responsibility. As a second component of the intervention, all workshop participants were assigned to the same homeroom for 10 weeks, which allowed intervention staff to provide advice and monitoring. Despite reporting high engagement and satisfaction with the program, intervention youth achieved lower grades than did the control group and demonstrated a trend toward a greater likelihood of dropping out. Although participants reported greater social bonding to other students in the intervention, they also reported greater isolation from school. Catterall posited that these iatrogenic effects might have resulted from the formation of a cohesive peer group composed entirely of low-achieving students. This group bonding might have exacerbated the students' dissatisfaction with, and estrangement from, school.

Treatment and prevention programs may also produce negative effects when transported from the setting of initial evaluation and efficacy and implemented in different environments. For example, although interventions for delinquent youth based on the guided group interaction model (Bixby & McCorkle, 1951) showed improvement over incarceration and probation when implemented in community treatment programs (Gottfredson & Gottfredson, 1992), a more recent derivative of this model, the peer culture development [PCD] intervention, has demonstrated iatrogenic outcomes. PCD has been implemented as a school-based prevention program involving daily group counseling meetings in which high school students share personal histories and engage in problem-solving discussions. Group development is facilitated by several students with previous group experience and focuses on confronting and examining antisocial behavior and beliefs using conventional role models. Unfortunately, in school-based evaluations, PCD has not generated empirical support of efficacy but instead has produced negative outcomes, including increased delinquency, suspensions, and drug involvement (Gottfredson & Gottfredson, 1992).

Certain intervention programs targeting youth substance use have shown similar iatrogenic effects. In their review of alcohol and drug prevention programs, Werch and Owen (2002) listed 17 studies responsible for 43 negative outcomes. The overall results indicated that iatrogenic effects were greater for drug prevention programs than for alcohol prevention programs but that the majority of negative outcomes involved increases in alcohol consumption. Additionally, outcomes were worst for programs that emphasized social influence-based resistance education without

also including normative education about peer acceptability and prevalence of drug use.

The Drug Abuse Resistance Education (DARE) prevention program has relied on such a model and, in terms of measures of actual alcohol and drug use (vs. attitudes and knowledge), DARE has repeatedly demonstrated a lack of effectiveness (Ennett, Tobler, Ringwalt, & Flewelling, 1994; Lynam et al., 1999). Furthermore, a few studies have suggested that participation in the DARE program has resulted in negative effects, including increases in alcohol and drug use and a heightened and inaccurate perception of alcohol use by peers (see Werch & Owen, 2002). Werch and Owen (2002) posited that addressing multiple drugs in the same intervention may have produced iatrogenic outcomes. Specifically, the multiple drug use messages may have diluted or offset one another and the use of less severe substances (e.g., cigarettes, alcohol) may have been normalized or perceived to be less risky in comparison to illicit drugs. Negative effects may also have resulted from the inadequate tailoring of programs to community differences and from the exposure of high-risk youth to other high-risk peers.

These studies are far from an exhaustive list of programs showing iatrogenic effects but instead represent illustrative examples. They highlight the potential for group-delivered interventions with delinquent or at-risk youth to produce negative outcomes as a result of

reinforcement of deviant values, affiliation with peers who model antisocial behavior and values, increased opportunities for criminal activity, stronger identification with a delinquent subculture, as well as enhanced self-efficacy for, increased acceptance of, and skewed beliefs about the prevalence of delinquent behaviors. (Arnold & Hughes, 1999, p. 112)

However, this brief review is not meant to chastise those programs responsible for negative outcomes. On the contrary, these researchers should be applauded for making their research available and publicized, given that awareness represents a fundamental step toward avoiding iatrogenic effects.

Opposing Viewpoints and Additional Considerations

It is also important to recognize that the iatrogenic potential of group-based interventions is controversial and remains disputed. Handwerk, Field, and Friman (2000) have challenged the assertion that group interventions for problem behaviors are dangerous and harmful, maintaining that this is a premature conclusion. Despite acknowledging the occurrence of iatrogenic effects, these researchers point to the efficacy of several programs using a group format and highlight the relative inefficacy of many other programs not using a group format. These objections are of merit and emphasize the risk of "throwing the baby out with the bathwater." It may be that certain forms of group delivery are not harmful and represent a potentially cost-effective method of delivery. For example, in their recent group-based intervention, Mager, Milich, Harris, and Howard (2005) found that adolescents with conduct problems were productively engaged in the intervention process and achieved positive outcomes at posttest. Additionally, family style residential treatments incorporating the following elements have shown positive outcomes: individualized, behavioral, and skills-based techniques; intensive training; and continual evalua-

tion and monitoring of progress that inform treatment planning (Handwerk et al., 2000). It may be that this higher quality of implementation leads to greater success and prevents negative outcomes. Furthermore, Dishion et al. (1999) have asserted that group interventions may remain cost-effective and safe if there is a sufficient and overriding focus on parents and a minimization of aggregating antisocial youth together. Thus, group interventions might remain justifiable if implemented with appropriate caution, taking steps to prevent peer aggregation (see *Treatment Structure and Focus* and *Participant Supervision and Parental Involvement* sections below) or to closely monitor group processes in order to detect and respond to iatrogenic effects at the first sign of any problems.

Furthermore, as demonstrated by the PCD intervention, certain youth, sample, or setting characteristics may moderate the occurrence of negative outcomes, and individual differences may exist within a particular sample of intervention participants. The examples of iatrogenic effects discussed above present mean-level (vs. individual-level) analyses. Accordingly, some intervention recipients may benefit from a given intervention, despite its overall iatrogenic effect. On the other hand, certain subgroups may be inadvertently harmed by an intervention, despite treatment efficacy for the sample as a whole. Gender and ethnicity may influence outcome in that several prevention and treatment studies have shown more positive and less negative results for boys than girls, particularly White boys (Chamberlain & Reid, 1994; Kellam, Rebok, Ialongo & Mayer, 1994). Thus, the presence of iatrogenic effects of an intervention may not be universal or uniform but may differ according to specific characteristics of those receiving the intervention. This potential for individual and subgroup differences emphasizes the need for clinical researchers who develop and evaluate interventions to conduct analyses that identify variation in outcome within and across samples, which would provide a basis to target interventions accordingly.

A meaningful discussion of iatrogenic effects must consider these sources of variation (e.g., implementation quality, program focus and strategies, sample and subgroup differences) in the youths' responses to intervention. Yet, despite these important caveats, the central ethical issue remains: Iatrogenic effects are possible, whether for all participants or for only a select subgroup. This risk should not be ignored. Rather, it should be cause for concern and should motivate psychologists to take action to effectively prevent future occurrences, as well as respond to previous occurrences, of iatrogenic effects.

Recommendations to Prevent, Detect, and Respond to Iatrogenic Effects

The possibility for interventions to produce negative outcomes engenders several ethical implications and dilemmas. Principle A of the ethics code (American Psychological Association, 2002), entitled *Beneficence and Nonmaleficence*, states that, "Psychologists strive to benefit those with whom they work and take care to do no harm" (p. 1062). However, the occurrence of iatrogenic effects resulting from intervention undermines this pursuit. In a similar vein, psychologists must "take reasonable steps to avoid harming their clients/patients. . . research participants, organizational clients, and others with whom they work, and to minimize harm where it is foreseeable and unavoidable" (American Psycho-

logical Association, 2002, Standard 3.04, p. 1065).¹ Considering the existing evidence of iatrogenic outcomes of programs that have grouped antisocial youth together, can the continued use of group delivery be justified? Although the available research does not provide enough evidence to abandon group interventions altogether, Standard 3.04 suggests that this format must be used with care, incorporating several modifications and precautions (discussed below) to prevent and respond to potential iatrogenic effects.

It is important to recognize that the ethical responsibilities of clinical researchers who develop and evaluate interventions differ from those of practitioners delivering services. The majority of the 200+ treatments for children and adolescents have not been subject to empirical scrutiny (Kazdin, 1988) and many psychologists, particularly those in clinical settings, do not objectively measure treatment progress or outcomes. Even when evaluations are conducted, clients and participants are often not followed long enough after termination, and comparison groups are not available to assess whether the interventions themselves were harmful over time. With limited funding and resources, many practitioners are ill-equipped to adequately detect, prevent, and respond to iatrogenic effects. Accordingly, in the recommendations that follow, a distinction is made, where appropriate, between the steps applicable to clinical researchers versus those applicable to service providers. However, although practitioners typically do not have the resources or funding to implement several of the strategies discussed below, the responsibility to be mindful of the potential for iatrogenic effects and aware of pertinent research findings remains equally applicable for all psychologists, in order to provide intervention in an ethical and effective manner.

Recognition of the Possibility of Iatrogenic Effects and Awareness of Prior Research

First and foremost, an effective response from the psychology community requires an appreciation of the possibility for negative effects to result from intervention programs for problem behavior despite the psychologist's honorable intentions to help others. Acknowledging the possibility for harm may contradict our basic notion of the goals and motivations of psychologists. However, "to assume (as opposed to demonstrate) that preventive strategies will have only positive, or worse, neutral consequences represents a naive and irresponsible position" (Lorion, 1983; as cited in Lorion, 1987, p. 245). Our interventions attempt to modify human behavior and, as such, have the power to bring about unintended, harmful consequences. These risks are a reality and cannot be effectively addressed without admitting and appreciating their existence.

Progress toward this understanding could begin in graduate school by building coverage of iatrogenic effects into the graduate school curriculum (Walsh, 1988). Basic treatment and ethics courses could introduce the concept of iatrogenic effects and

¹ According to the ethics code (*Introduction and Applicability*; American Psychological Association, 2002, p. 1061), the term *reasonable* is defined as "the prevailing professional judgment of psychologists engaged in similar activities in similar circumstances, given the knowledge the psychologist had or should have had at the time."

present an overview of their occurrence. More specialized treatment courses could provide training in empirically supported treatments, thereby conveying the field of psychology's investment in evidence-based practice. These courses could also educate emerging clinicians about specific techniques or treatments that have produced adverse effects and review possible reasons underlying these outcomes. Similar information could be made available for practicing clinicians via continuing education courses. Additionally, before service providers implement an intervention, they should consider potential iatrogenic effects in the context of a thorough working knowledge of relevant research. For clinical researchers, peer review of the nature of possible risks and the acceptability of their occurrence (Lorion, 1987), similar to that of an institutional review board, should be viewed as a valuable means of establishing criteria for intervention implementation.

Commitment to Evidence-Based Treatment

A strengthened commitment to implementing evidence-based treatments would promote the prevention and reduction of iatrogenic effects. Such a commitment would emphasize the importance of testing intervention programs, both for potential harm and potential benefit, before widespread dissemination in schools or juvenile justice settings. Furthermore, continued use of programs that have failed empirical scrutiny should be considered unethical and, consequently, avoided. As soon as negative outcomes or processes are empirically detected, ongoing interventions should be modified to prevent further harm. If modifications cannot be made to sufficiently correct these effects, services should be terminated, at least for those groups of intervention recipients demonstrating a negative response to the intervention.

Integration of Research With Clinical Practice

An increased dedication to empirically supported interventions would also require a greater focus on integrating research with clinical practice. Research findings should inform and be incorporated into prevention and treatment decisions. Accordingly, successful intervention programs for youth problem behavior clearly demonstrate the importance of addressing empirically demonstrated risk factors (e.g., Henggeler & Sheidow, 2003). At the same time, clinical impressions and needs, such as the need to identify moderators of intervention outcomes, should direct research pursuits.

Publication and Dissemination of Information to Research and Treatment Communities

McCord (2003) has suggested that the results of evaluations of intervention processes and outcomes be made available through a centralized data bank. Similarly, as discussed by Nock (2003), periodic progress reviews of the status of interventions for problem behavior could serve as a vehicle for disseminating information regarding the outcomes of evaluated programs to decision makers, clinicians, and intervention programmers within schools, communities, and the justice system, thereby guiding treatment decisions and the development of subsequent intervention programs. This enhanced communication would be further strengthened by efforts to reduce biases of journals that favor publication of programs with

positive outcomes. McCord (2003) noted a strong resistance in the field of psychology to reveal, report, or receive information about adverse effects of interventions. This publication bias, as well as the reluctance of psychologists to publish studies without positive results (otherwise known as the file drawer problem; Rosenthal, 1979), prevents critical information from reaching public awareness and scrutiny. Instead, the research and clinical community should commend those who share the negative results of their own interventions, recognizing such a disclosure as a service to the field.

Participant Supervision and Parental Involvement

In regard to program implementation, follow-up research exploring the iatrogenic effects associated with ATP indicated that deviant peer processes, illustrated by reinforcement for rule-breaking talk during the group meetings, predicted an increase in smoking and delinquency (Dishion, Bullock, & Granic, 2002; Poulin et al., 2001). Videotaped footage revealed that this deviant peer process occurred primarily before and after the formal treatment as well as during breaks. However, iatrogenic growth in problem behavior was attenuated by the youths' connectedness to intervention peer counselors. Furthermore, subsequent efforts to increase parental monitoring were related to decreases in deviant peer affiliation. Similarly, many of the successful programs for youth problem behavior (e.g., parent training, MST, MTFC, FFT, SSDP, the Fast Track Program) involve parents in the intervention process. These findings emphasize the importance of encouraging consistent parental monitoring at home and closely supervising youth participating in group interventions before, during, and after sessions.

Treatment Structure and Focus

Related to the need for close supervision of participants, group programs that have demonstrated positive outcomes are characterized by a high level of structure (e.g., Handwerk et al., 2000). Additionally, many of the efficacious programs for youth problem behavior, including those listed earlier, are cognitive-behavioral or behavioral in orientation with a clear specification of intervention protocols, targets, and desired outcomes. On the basis of fundamental learning principles, successful programs, such as MTFC, devote particular attention to increasing reinforcement for positive youth behavior, while decreasing opportunities and peer reinforcement for problem behavior (Chamberlain, 1994; Wilson et al., 2001).

Consultation, Training, and Supervision for Program Staff

Intervention programs should conduct continual training, supervision, and evaluation of the staff actually implementing the intervention as well as provide them with easily accessible consultation and support. Effective treatment programs for youth problem behavior, including MST, MTFC, and FFT, highlight the importance of quality assurance systems to ensure that intervention providers adhere to validated treatment protocols and receive the necessary clinical support (both personal support and clinical advice) to work with challenging youth (Henggeler & Sheidow, 2003). For those practitioners in private practices, regular consul-

tation with colleagues and more formalized supervision groups would provide necessary checks and balances as well as a resource for advice, feedback, and outside opinions. Consistent supervision and assistance (whether formal or informal) would establish an environment of both support and accountability.

Monitoring of Intervention Progress and Outcomes

Continual monitoring of intervention implementation and the youths' progress in relation to a control group would improve psychologists' ability to ensure effective intervention delivery and to detect the beginnings of any iatrogenic effects when they may still be attenuated or prevented. This evaluation requires collecting objective measures of both negative and positive outcomes. Additionally, longer term follow-ups after treatment should be administered to assess outcomes beyond the termination of services. Longer term outcomes seem especially important given that negative results may surface on follow-up objective measures even though posttest results show no differences and participants indicate positive responses to, and evaluations of, the intervention (e.g., Catterall, 1987; McCord, 2003). Although no specific duration of time is fail-safe, conducting a follow-up at least 1 year after the intervention appears justified, given that prior occurrences of iatrogenic effects have been evident at that time (e.g., Dishion & Andrews, 1995). Subgroup analyses should also be used to ascertain which child and treatment characteristics (e.g., sex, risk-status, level of delinquency), if any, moderate intervention response. This examination would help identify subgroups of youth who would be more likely to benefit, or suffer, from the intervention. Of course, this analysis requires a comparison of the outcomes of youth receiving treatment to a control group of youth receiving an alternative or no treatment condition. Without this comparison, it would be impossible to conclude whether any potential decline in functioning of a youth receiving treatment indicated that the treatment had iatrogenic effects or, instead, that the treatment was insufficient for that youth. The treatment might have even tempered an otherwise worse decline in functioning, which would be evident only in comparison with a control group. Thus, this recommendation applies primarily to clinical researchers, who are more likely to have the resources to conduct controlled evaluations of intervention outcomes. However, the practitioner's responsibility is to remain informed of findings from such outcome evaluations.

Participant Feedback and Involvement

Intervention programs, particularly experimental programs undergoing evaluation, would profit greatly in soliciting feedback from participants, clients, and members of their environments regarding their response to, and experience of, the intervention. For example, in school-based treatment and prevention programs, feedback sessions or questionnaires with students, parents (particularly for younger children), and teachers would greatly enhance practitioners' or program developers' awareness of behaviors, information, and reactions, including those indicating declines in functioning that are typically beyond their field of vision. The use of valid and reliable qualitative methods of outcome evaluation would bridge the gap between intervention providers on one end and participants or clients on the other, increasing an otherwise

limited informational exchange. Additionally, obtaining this feedback would communicate appreciation for participants' opinions and well-being and emphasize that participants' reactions to, and subjective experience of, the intervention are valued (Walsh, 1988).

Evaluation of Reasons for Iatrogenic Effects

Following the occurrence of negative outcomes, clinical researchers should conduct appropriate investigative analyses to uncover the basis for such iatrogenic effects. Such analysis would include a reexamination of the program content, implementation, and underlying theory to identify particular conditions, processes, or flaws responsible for negative results (Werch & Owen, 2002). Furthermore, individual differences in the youths' responses to the intervention, including characteristics that exacerbated or buffered any negative effect, should be explored.

Acknowledgment to Participants of, and Accountability for, Iatrogenic Effects

Program developers should then acknowledge iatrogenic outcomes and processes and make them known to the intervention community. It is a complicated issue, but informing participants or clients of negative outcomes that are reasonably related to the intervention should also be considered. On one hand, acknowledging the occurrence of adverse effects might create expectancies for problem behavior that become self-fulfilling prophecies. Additionally, youth and their parents may lose trust in the field of psychology and be wary of further treatment. On the other hand, participants and clients have a right to know about the intervention's outcomes and to seek additional services in response to iatrogenic effects. Failing to be informed of negative effects may perpetuate a family's belief that the youth already received intervention services and thus does not require further assistance. In the case in which problem behaviors are still readily apparent, the child or family may assume that the child is untreatable or resistant to therapy. Furthermore, distrust of psychological services would be that much greater should a family or school learn that iatrogenic effects had occurred but that intervention providers had not originally disclosed their occurrence. Although the specific circumstances of each situation must be considered using a cost-benefit approach, the risks of not informing a family, school, or youth about iatrogenic effects often outweigh the risks of providing this information. Thus, in most cases, such a disclosure may be the more ethical response. If participants had not been fully informed of possible risks associated with the intervention, then appropriate services or referrals could be made available. Although informing participants and suggesting (or even providing) remediation services may contaminate future research involvement with these participants, the rights of, and humane consideration for, a person's well-being and mental health should supersede any research pursuits.

Policy Changes

Clearly, the recommendations suggested in this article will necessitate corresponding changes in the policies that affect interventions for youth problem behavior. Policies promoting the de-

velopment and use of evidence-based treatment will greatly serve psychologists' attempts to effectively serve their clients. Further, financial and personnel resources are needed to support attempts to prevent, detect, and respond to iatrogenic effects (e.g., long-term follow-ups of participant outcomes, supervision and consultation for treatment providers). Thus, funding agencies must consider their ethical responsibility to fund these types of efforts because clinical researchers are typically unable to do so independently. Additionally, although policy changes are often beyond the immediate control of individual practitioners, organizations such as the American Psychological Association can disseminate research findings regarding iatrogenic effects to help inform policymakers and to encourage the development of policies that promote and fund scientific evaluations of intervention processes and outcomes. However, psychologists must first consider such changes in clinical practice and policy a high priority.

In following these proposed recommendations, psychologists can minimize the possibility of harming the very same youth they are trying to help. Given the high personal and societal costs of youth problem behaviors, their effective prevention and treatment are clearly warranted. Yet, such efforts must proceed with caution and accountability. Conducting interventions ethically and effectively benefits not only the youth themselves but the greater society as well.

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