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Bridging the implementation gap

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CHAPTER 1

General introduction

1.1 Introduction

Every year, a substantial number of children, young people, and their families come into contact with child and youth care organizations. The vast majority of this group is the population of children and young people with externalizing behavior problems, along with their families (Parhar, Wormith, Derkzen, & Beauregard, 2008). Multiple psychosocial interventions targeting this population have been developed over the years. Some of these interventions have demonstrated efficacy for youths with these types of problems, including oppositional, aggressive, and/or delinquent behavior (for a review, see: Brestan & Eyberg, 1998; Burns, Hoagwood, & Mrazek, 1995; Carr, 2000; Kazdin, & Weisz, 1998; Ollendick & King, 2000). Unfortunately, not all interventions have proven to be effective, and some have even led to adverse outcomes (Dishion, McCord, & Poulin, 1999; Farrington & Welsh, 2006). Leaving children and young people with externalizing behavior problems underserved or unserved may have serious negative consequences for both these youngsters and society. Some of these children, young people, and their families are confronted with out-of-home placements and imprisonment, and the larger society is confronted with substantial monetary costs, specifically when the behavior of these youngsters turns into chronic delinquent behavior (Cohen, Piquero, & Jennings, 2010).

There is pressure, and organizations have the responsibility, to provide high-quality services while making efficient and effective use of limited financial resources. Child and youth care organizations and their financers in the Netherlands and elsewhere, increasingly emphasize the effectiveness of interventions for this population in order to maximize therapeutic gains and reduce the nation's youth mental health costs (Boendermaker, 2011; Southam-Gerow & Prinstein, 2014).

The evidence concerning psychosocial interventions for children and young people with externalizing behavior problems has amassed at an impressive pace in recent years (Southam-Gerow & Prinstein, 2014). Interventions that have been proven effective are now considered the vehicles through which the knowledge of "what works" can be applied in practice. Outcomes for children, young people, and their families, however, have not improved in line with these advances in knowledge.[1] This deficit is known as the "implementation gap," that is, the difference between the knowledge of "what works" and the application of this knowledge in real-life practice (Fixsen, Naoom, Blasé, Friedman, & Wallace, 2005).

[1] A meta-analysis of RCTs that had tested youth evidence-based interventions in more clinically representative contexts, pitting them against usual care, showed a mean effect size of 0.29 for these interventions (Weisz et al., 2013a).

The implementation gap raises the following questions about the application of interventions:

1. What does it mean to apply interventions – as vehicles of the knowledge of "what works" – and how is this operationalized in outcome studies?
2. Does the application of these interventions make a real difference to the end-users of the services?
3. What types of support for professionals can strengthen implementation processes?

The aim of this dissertation is to answer these three questions and to present knowledge of factors that contribute to bridging the implementation gap. In answering these questions, the focus is on whether professionals are delivering the interventions as intended. In doing so, I hope to contribute to making "what works" work for children and young people with externalizing behavior problems and their families in the Netherlands and abroad.

1.1.1 Interventions

Child and youth care organizations in the Netherlands typically provide a wide range of advice, guidance, help, and care to an equally wide range of target groups. One broadly applied approach in the sector is the solution-oriented approach. Central to this approach is stimulating and activating clients to work on solutions themselves. In addition, many professionals also deliver specific training programs. For example, they may provide clients with a training in parenting skills, such as the Positive Parenting Program (Sanders, 2008), or provide young people with a training to strengthen their social, emotional, and cognitive skills, such as Tools4U (Albrecht & Spanjaard, 2007). These training programs differ from approaches such as the solution-oriented approach because they target the specific problem behavior of a specific target group, whereas the broadly applied approaches are directed at all clients, regardless of their problem behavior. Elements of an approach are often also used in specific training programs. Signs of Safety, for example, is a program with a solution-oriented approach for families where the safety of the child is a problem (Turnell & Edwards, 1999).

All training programs and approaches that focus on the specific behavior of a specific target group fall within the definition of an "intervention" as used in this dissertation. More specifically, the term "intervention" in this dissertation refers to programs, projects, training methods, courses, treatment and counseling forms, and sanctions that target the reduction or compensation of a risk or problem in the development of a child or young person, or are aimed at making the risk or problem more bearable. An intervention is guided by a theoretical and practically applicable, goal-centered, and systematic approach, aimed at the child or young person, his or her caretaker(s), and/or his or her educational environment. The

length of an intervention and the frequency of client contact is defined in the intervention manual (van Yperen, 2010).

Although there is a growing consensus in the youth care field that interventions should be evidence-based, the exact definition of evidence-based interventions is a contentious matter (De Swart et al., 2012; Weisz, Jensen-Doss, & Hawley, 2006). Definitions range from interventions that receive qualitative, theoretical, and/or clinical support, to interventions that have clear empirical support provided by at least two randomized controlled trials (Veerman & van Yperen, 2007). In this dissertation, evidence-based interventions refer to interventions that, minimally, are theoretically based, well-documented,[2] protocolled, structured, and manualized, and have gained empirical support in experimental or quasi-experimental research (Weisz, Jensen-Doss, & Hawley, 2006). For these interventions there are indications for their effectiveness and they have the potential to be disseminated. These interventions can be seen as the vehicles through which the knowledge of "what works" for a target population with a specific problem can be applied in practice.

For child and youth care organizations, evidence-based interventions seem to be the way to provide justifiable, effective care (Southam-Gerow & Prinstein, 2014; Weisburd, 2003). One of the main difficulties with evidence-based interventions is the disappointing treatment outcomes outside the research setting. According to Gendreau, Goggin, and Smith (1999), even the most state-of-the-art intervention will not produce the desired outcomes in actual practice settings, unless the organization pays attention to the process of implementing the intervention.

1.1.2 Implementation of interventions

For the purpose of this dissertation, "implementation" is defined as a set of planned, intentional activities[3] that are performed to put into practice interventions in real-world organizations. The goal of effective implementation is to benefit the end-users of services, namely children, youth, adults, families, and communities (Fixsen et al., 2005). Information about the implementation of interventions is needed to determine whether an intervention failed due to the

[2] "Well-documented" includes the documentation of clinical expertise and patient values with regard to the intervention, as evidence-based practice is the integration of best research evidence with clinical expertise and patient values (Sackett, Straus, Richardson, Rosenberg, & Haynes, 2000, p 1).

[3] As also pointed out by Fixsen et al. (2005), it is important to distinguish implementation-related "interventions" with community leaders, agency directors, supervisors, practitioners, policymakers, and funders, from the treatment and/or prevention programs that are commonly (and in this dissertation) defined as "interventions." For clarification purposes, I use the term "implementation efforts" to mean efforts to incorporate a program or practice at the community, agency, or practitioner level.

failure of the intervention or components thereof, or due to its insufficient or inadequate application (Schoenwald et al., 2011). As Dobson and Cook (1980) stated decades ago, we have to avoid making a "type III" error, that is, evaluating an intervention that was described but not implemented. This means that it is necessary to discriminate between implementation outcomes (whether the intervention is implemented as intended) and effectiveness outcomes (whether the intervention is implemented as intended, and is/is not resulting in good outcomes) (Fixsen et al., 2005).

Many factors can hinder or facilitate the effective implementation of interventions. Factors related to the delivery of an intervention as intended are assumed to be important in this respect (Fixsen et al., 2005). "Delivery of interventions as intended" in its broad sense means delivery of the intervention with the intended content, duration, frequency, and scope. This is referred to as program integrity (Carroll et al., 2007). There is an increased awareness that what is delivered (the content) is in fact the intervention. In implementation literature, delivering the content of the intended intervention is referred to as treatment integrity (Perepletchikova, Treat, & Kazdin, 2007). Many authors share the opinion that treatment integrity must be measured to identify what the moderators are in the outcome effects. Measuring treatment integrity is essential in understanding what adaptations can be made to the intervention without sacrificing its effectiveness (Dane & Schneider, 1998; Durlak & DuPre, 2008; Moncher & Prinz, 1991; Perepletchikova & Kazdin, 2005; Sanetti, Gritter, & Dobey, 2011; Tennyson, 2009; Weissberg, Kumfer, & Seligman, 2003).

According to Fixen and Ogden (2014), implementation research is rapidly becoming an integral part of outcome studies of evidence-based interventions. Researchers also frequently conclude that low treatment integrity could be the cause of disappointing results (Schoenwald, Chapman, Sheidow, & Carter, 2009a; Sexton, & Turner, 2010; Tennyson, 2009). Despite this attention to treatment integrity, there has been no overview available of the operationalization of treatment integrity procedures for outcome studies of interventions that target juveniles with externalizing behavior problems. It was unclear how treatment integrity was operationalized in these studies, and unclear whether the operationalization was comprehensive enough to be able to judge delivery of the intervention content as intended. The first objective of the research underlying this dissertation was to examine the operationalization of treatment integrity procedures in this type of study. The resultant overview provides information about the adequacy of treatment integrity procedures that are implemented in primary studies. It also provides knowledge of how to interpret the association between treatment integrity and client outcomes found in these individual studies.

Previous research has produced somewhat inconsistent findings on the association between treatment integrity and client outcomes. A meta-analysis should provide insight into the overall effect of treatment integrity. Previous meta-analyses have suggested that delivering an intervention with a high level of integrity is associated with positive client outcomes (see Lipsey, 2009; Tennyson, 2009). However, these meta-analyses did not take into account the quality of treatment integrity procedures of the included studies. The validity of treatment integrity procedures probably has consequences for the interpretation of findings. The second objective of the research underlying this dissertation was to meta-analytically examine, in a multilevel model, the effect of treatment integrity on client outcomes. The focus was on evidence-based interventions for juveniles exhibiting antisocial behavior. Only studies that, to a certain level, adequately implemented treatment integrity procedures were included. This inclusion criterion enabled the possibility to draw firmer conclusions on the moderating effect of level of treatment integrity on client outcomes compared to previous meta-analyses on this subject.

1.1.3 Stimulating quality of delivery of interventions

Research suggests that providing professionals with frequent and targeted support is an effective way to establish and maintain treatment integrity (Kerby, 2006; Mikolajczak, Stals, Fleuren, Wilde & Paulussen, 2009; Schoenwald et al., 2009b). Most evidence-based interventions therefore incorporate specific demands concerning the support for the professionals who carry out the interventions. The support systems of these evidence-based interventions, however, differ from each other. There was no specific knowledge of what the content of the support system should be, or of the standard minimum rules for effective support. As Beidas and Kendall (2010) conclude in their review on the training of professionals in using evidence-based interventions, which is often referred to as evidence-based practice (EBP): “Despite the importance of EBP, we know less than preferred regarding how to best train therapists in EBP” (p. 26). The third objective of the present research was to extend the knowledge of how best to support professionals in establishing and maintaining treatment integrity in planned interventions.

Various instruments are used to measure levels of treatment integrity in outcome studies of evidence-based interventions (Schoenwald & Garland, 2013). But as Schoenwald and Garland (2013, p. 154) conclude in their review of treatment adherence measurement methods, “there is a gap that warrants bridging between adherence measurement methods devised for use primarily as independent variable checks in efficacy studies and those that can be used in diverse practice contexts.” Little is known about the feasibility of the use of treatment integrity

measurements in child and youth care organizations as part of quality assurance procedures, or as a tool to provide performance feedback to therapists. Details about the resources required for the implementation of integrity measurement methods are also rarely reported (Schoenwald & Garland, 2013). The fourth objective of this research was to ascertain whether and, if so, how treatment integrity measurements are used within child and youth care organizations. That knowledge provides information about the conditions that seem necessary to successfully implement this type of measurement in organizations.

Merely providing knowledge of the ideal conditions of support for professionals in establishing and maintaining treatment integrity in planned interventions is not sufficient to change practice. It will not bridge the gap between the ideal conditions and the actual conditions within child and youth care organizations. One of the major difficulties with the provision of support systems to professionals is that child and youth care organizations have limited time and capability to provide such systems. The last objective of this research was to devise a potential way to organize support systems for professionals that take into account these organizations' capacities and incapacities.

1.2 Structure of this dissertation

As a first step toward a better understanding of the implementation gap, it is necessary to understand how "delivery as intended" is operationalized in this context. Chapter 2 describes the systematic review of the operationalization of treatment integrity procedures in outcome studies of interventions that target juveniles with externalizing behavior problems. The moderating effect of level of treatment integrity on the reduction of youth antisocial behavior after an intervention is meta-analytically examined in a three-level model, which is described in Chapter 3.

Most interventions are provided by youth care professionals. They have an important role in the delivery of the intervention as it is intended. Chapter 4 describes the systematic review on effective support for youth care professionals in order to enable them to deliver the intended intervention with treatment integrity. Essential elements of support systems for professionals are discussed in this chapter.

Instruments that have the potential to be used to support professionals are treatment integrity instruments. These instruments provide information about the delivery of interventions as intended. Chapter 5 describes the qualitative study of the experiences and use of treatment integrity instruments of 12 interventions for children and young people with externalizing behavior problems provided in the Netherlands. The conditions under which these instruments can

be successfully implemented in child and youth care organizations are discussed in this chapter.

The question that remained was how child and youth care organizations can organize support for professionals in an effective and efficient way to secure quality of delivery. Chapter 6 presents a potential way to integrate support systems for professionals around overlapping factors of interventions. Lastly, in Chapter 7, the findings of this dissertation are summarized and limitations and practical implications are discussed. In addition, recommendations for future research and concluding remarks are made. An overview of the research questions, objectives, and corresponding chapters is presented in Table 1.1.

Table 1.1

Overview of research questions, objectives, and corresponding chapters

Research question	Objective	Corresponding chapter
1. What does it mean to apply interventions – as vehicles of the knowledge of "what works" – and how is this operationalized in outcome studies?	To examine the adequacy of the implementation of treatment integrity procedures in outcome studies of interventions targeting externalizing behavior problems of youth.	Chapter 2
2. Does the application of these interventions make a real difference to the end-users of the services?	To meta-analytically examine the moderating effect of level of treatment integrity on the reduction of youth antisocial behavior after an intervention.	Chapter 3
3. What types of support for professionals can strengthen implementation processes?	To examine the essential ingredients of support for youth care professionals to enable them to deliver the intended intervention with treatment integrity.	Chapter 4
	To examine the experiences and use of treatment integrity instruments within child and youth care organizations.	Chapter 5
	To devise a potential way to integrate support systems for professionals around overlapping factors of interventions.	Chapter 6