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Conduct problems in children. Characteristics of families recruited for a clinical outcome trial as compared to families in an implementation study

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ABSTRACT

The implementation of empirically supported treatments (EST) is recommended as a way to transfer knowledge from research to clinical practice and to improve service quality. One area of concern has been client representativeness, that is to which degree participants in EST studies resembles the target group in usual care settings. For children with conduct problems the recommended ESTs have been parent training or parent mediated programs. The aim of this article is to explore and describe central parent and family characteristics of families with conduct disordered children recruited from ordinary clinical practice in connection with the evaluation of the Parent Management Training — Oregon (PMTO) model in Norway, and to see whether the families recruited to a randomized control trial (RCT) differ from families recruited to a large scale implementation study in routine practice. Data from 376 families indicated that there were few differences between the two samples and thus that the parent and family characteristics found in the RCT study were representative of help-seeking families with conduct disordered children in Norway.

Perhaps an even better treatment result could be achieved by tailoring PMTO to better suit the characteristics of Norwegian parents and families. Mothers (regardless of marital status) seem to be especially vulnerable to caregiver strain and suggested interventions should take this into consideration.

1. Introduction

Treatment research has addressed a wide range of social, emotional and behavioral problems in childhood and adolescence and many treatment interventions now meet the criteria for empirically supported (EST) or evidence-based treatment (EBT) (e.g. Hoagwood, Burns, Kiser, Ringeisen, & Schoenwald, 2001; Kazdin, 2008; Kazdin & Weisz, 2010). Based on this research it has been argued that EBTs, either directly or in an adapted form, should be taught or used in ordinary clinical practice, thereby establishing evidence based practice (EBP). The aim of this strategy has been to bridge health research and practice and to ensure that the regular services offered to children and their families are "(…) scientifically proven, state-of-the-art approaches to assessment, treatment and prevention" (Hawley & Weisz, 2002, p.225).

Despite the evidence, most EBTs have not made their way into standard clinical practice and therapist training programs (Nock, Goldman, Wang, & Albano, 2004; Weisz & Gray, 2008). This might reflect challenges in the transfer and implementation process itself (Fixsen, Blase, Duda, Naoom, & Van Dyke, 2010; Hoagwood et al., 2001; La Greca, Silverman, & Lochman, 2009; Schoenwald & Hoagwood, 2001), and also the fact that critics of EBP have questioned the relevance of EBTs to clinical practice (Kazdin, 2008; Weisz & Gray, 2008).

Both critics and advocates of EBPs have recognized that there are marked differences between key conditions and characteristics in efficacy trials and in ordinary clinical practice (e.g. therapists, clients, treatment settings, context) (Hoagwood et al., 2001; Kazdin, 2008; Schoenwald & Hoagwood, 2001; Weisz & Gray, 2008; Weisz, Jensen-Doss, & Hawley, 2006), and there also seems to be a difference in the aim of psychotherapy under the two conditions, "eliminating symptoms" versus "the process coping with life"(Kazdin, 2008, p.147). However it is not clear how the differences between the two conditions may influence treatment attendance and outcome. There seems to be poorer outcome in community-based effectiveness studies than in research-based efficacy studies in which the researcher has more control over the treatment variables (e.g. Baker-Ericzén, Hurlburt, Brookman-Frazee, Jenkins, & Hough, 2010; Hoagwood et al., 2001). Some studies show that difference in key variables (e.g. case severity, complexity, comorbidity) do not necessarily impede treatment outcome of EBTs (Doss & Weisz, 2006; Kazdin & Whitley, 2006).

One meta-analysis of studies that directly compared EBT with community clinic population or usual care (UC) (Weisz et al., 2006) showed that EBTs systematically outperformed UC. However, the overall effects were modest, and the authors argue that due to heterogeneity of the UC some forms of UC may work better than others and may outperform EBTs for certain target populations. Moreover, studies that showed UC outperforming EBTs did not specify what the effective UC procedures were, what kind of therapists provided them, or to what kind of youths.

One area of special concern is client representativeness, and it has been claimed that EBT populations are less clinically severe and complex when compared to community

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clients (Kazdin, 2008; Weisz & Gray, 2008; Weisz & Kazdin, 2010). The reason for this could be that the process of recruitment, selection and enrollment in clinical trials (both in efficacy and effectiveness trials) is quite different from the process leading people to regular clinical services.

EBP is based on the assumption that there is a similarity between the participants in efficacy trials and the children and families met in ordinary clinical practice, but there is only limited evidence for this assumed similarity (Baker-Ericzén et al., 2010). There are few studies that compare the characteristics of samples from efficacy trials directly with the characteristics of community clinical or UC populations (Baker-Ericzén et al., 2010). The studies that have been conducted, do show that there are significant differences between the characteristics of samples in efficacy trials and samples of usual care, for children with anxiety disorder (more child comorbidity, symptom severity and lower family income in the usual care sample) (Southam-Gerow, Weisz, & Kendall, 2003), depression (more child comorbidity and racial/ethnic diversity in the usual care sample) (Weersing & Weisz, 2002), and a range of other disorders (Baker-Ericzén et al., 2010).

In their meta-analysis, Baker-Ericzén et al. (2010) compared data from 34 research trials on five ESTs with one large sample of UC for children with disruptive behavior disorders. They found a large variation in participants' characteristics within and across efficacy studies. They also found that, for most studies, parent and family characteristics were not reported. Comparison of UC and EST samples showed that although child demographics and symptom severity were similar, most parent and family characteristics were different, with higher rates of problems in the UC sample.

Baker-Ericzén et al. (2010) found that parents in the UC sample had lower socioeconomic status, were less educated and were more likely to belong to single parent households than parents in EST samples. A larger proportion of the parents in the UC sample also reported lower levels of social support and experience of increased domestic violence. But according to the authors the comparison was difficult because very few EST studies reported such information. Baker-Ericzén's UC sample did not give information on marital discord but among the parents in the EST samples 50–60% reported that they had experienced marital discord. When it came to psychopathology the findings were mixed. Some EST samples had higher and some lower percentages than the UC samples, but parents in the UC samples reported more parents with depressive symptoms. On the other hand, the parents in the EST samples reported more strain/stress than the UC sample, although the reason for this is not clear.

Baker-Ericzén et al. (2010) concluded that the concern about client representativeness was strengthened for parents of conduct-disordered children. They argued that it is unlikely that implementation of EST in regular practice will be successful if child, parent and family characteristics are not reported or if they turn out to be qualitatively different from the community treatment population. In their opinion, if EST samples differ significantly from UC samples the interventions have to be modified in order to be more effective or they have to be more carefully targeted at families like those treated in efficacy trials. They further argued that this is a particular problem for empirically supported parent-mediated treatments for disruptive behavior disorders, in which child, parent and family factors have been shown to predict and moderate treatment attendance and outcome. The above arguments may also apply when EBTs are moved from effectiveness studies to large scale implementation studies, as demonstrated in the present study.

During the past decade the Norwegian authorities have initiated and funded the national implementation of the Parent Management Training — Oregon Model (PMTO) for young children (4–12 years of age) with conduct problems and their families (Ogden, Forgatch, Askeland, Patterson, & Bullock, 2005). Six generations of Norwegian PMTO-therapists have completed their training during this period. As part of the implementation a randomized treatment effectiveness study was conducted with participants recruited through existing child service agencies (Child Welfare Services and Child and Adolescent Mental Health agencies). A Norwegian clinical trial demonstrated e treatment effectiveness in ordinary clinical practice, although effect sizes were small to moderate (Ogden & Hagen, 2008). These clinical outcomes indicate that PMTO is a relatively robust treatment intervention and that some of the implementation challenges were successfully met.

The participants in the present study came from two different studies on PMTO in Norway: the above mentioned randomized controlled effectiveness study (Ogden & Hagen, 2008) and one large scale implementation study in routine practice (Forgatch & DeGarmo, 2011). In this article these studies will be referred to as the "RCT study" and the "LSI study" respectively. The recruitment of families for the RCT study was restricted to the regular Child and Youth Mental Health Services (CYMHS) and Child Welfare Services (CWS) in the county municipalities while the LSI study also recruited families from various private and primary care services in the municipalities (MPCS). Because both studies were effectiveness studies, one would assume that the samples were more representative of clients in usual care settings than samples from an efficacy study, but the research design and procedures could still influence the selection of participants. In the RCT study, the parents had to accept the randomization procedure which implied that they had a 50% chance of being assigned to treatment as usual. This may have kept reluctant parents and practitioners from volunteering to participate in the study. In the non-randomized study on the other hand, all participants received PMTO. This may have had an effect on the composition of the parent groups participating in the two studies.

It could further be argued that the recruitment of therapists and sites to the RCT study was more controlled than in the LSI study because of a more rigorous selection of therapists (first and second generations of PMTO therapists only) and because the number of therapists and number and kinds of sites were limited. In addition the access to PMTO in Norway was quite limited at the time when the RCT study started and this may have resulted in the recruitment of especially motivated and resourceful parents. On this background the LSI study was more of a "going to scale" study and possibly more representative of the population of regular service users.

In line with the recommendations of Baker-Ericzén et al. (2010), the aim of this article is to explore and describe central parent and family characteristics of families with conduct disordered children recruited from ordinary clinical practice in connection with the implementation of an EBT in Norway.

2. Method

2.1. Participants

The participants were 376 families (children and their parents/caretakers) who were recruited from two different but interconnected effectiveness studies on PMTO in Norway (Ogden et al., 2005). The first was a randomized controlled effectiveness study of PMTO versus regular services (N = 112) (Ogden & Hagen, 2008), and the second was an implementation study investigating treatment adherence over time and across sites (N = 264) (Forgatch & DeGarmo, 2011).

The participating families in both studies came from all five health regions in Norway. The number of families from each health region corresponded to the population distribution, but the two largest regions were slightly underrepresented. The families had contacted or been referred to regular child and adolescent service agencies, either at primary or specialist level, because of their child's behavior problems. Of these, 146 were recruited from the CWS, 176 from the CYMHS and 53 from the MPCS. Inclusion in the studies was not based on formal diagnostic procedures, but rather on the clinical judgment of therapists at the actual site. Children were not included if they (a) were diagnosed with autism, (b) had been exposed to documented sexual assault, (c) were intellectually disabled or (d) had parents with severe psychopathology or who were intellectually disabled.

The children in the RCT study ranged in age from 3.5 to approximately 13 years (M = 8.40, SD = 2.11), and 22 (19.6%) were girls. The age range in the LSI study was from 3 to nearly 13 years (M = 8.64, SD = 2.19) and 74 (28%) were girls. The majority of the children in both studies were Caucasian (RCT study = 95.4%, LSI study = 98%) and ethnic Norwegian (RCT study = 89.9%, LSI study = 97%). There was no significant difference between the two samples on ethnicity. According to Statistics Norway (Dugstad, 2006) 8.3% (defined as both parents being born abroad) or 13.5% (defined as at least one parent born abroad) of the population of Norway have an immigrant background. These numbers show that there was an underrepresentation of families from other countries and ethnic groups in this study.

The level of child conduct problems was measured at intake using the externalizing scores of the Child Behavior Checklist (CBCL) and Teacher Report Form (TRF). For girls the mean externalizing raw scores on the CBCL were 24.80 (SD = 13.54) and 22.02 (SD = 7.75) for the RCT study and LSI study respectively. For boys the scores were 26.57 (SD = 11.6) and 23.75 (SD = 9.42). On the TRF the mean externalizing scores for girls in the RCT study were 15.07 (SD = 11.46) and in the LSI study 10.47 (SD = 10.95). The scores for boys were 28.74 (SD = 14.06) and 24.33 (SD = 15.58). An independent *t*-test showed no significant differences between the girls in the RCT and LSI studies regarding externalizing CBCL scores ($t = -0.77$, $df = 16.32$, $p = .455$) and externalizing TRF scores ($t = -1.40$, $df = 60$, $p = .295$). The corresponding result for the boys was CBCL ($t = -1.92$, $df = 224$, $p = .057$) and TRF ($t = -1.83$, $df = 185$, $p = .068$).

2.2. Procedure

The recruitment periods for the studies were partly overlapping and lasted from January 2001 to April 2005. Except for the