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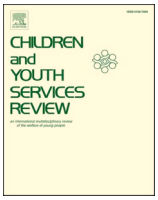

Parental empowerment as a buffer between parental stress and child behavioral problems after family treatment

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ABSTRACT

The present study examined the long-term treatment outcomes of the family-centered program Intensive Family Treatment (IFT) for families with multiple problems. We also tested the hypothesis that parental empowerment at the end of IFT constitutes a buffer between the negative influences of parental stress on their children's behavioral problems afterwards. We included 275 families with multiple problems. Information about parental empowerment and child behavioral problems was gathered at the start and end of IFT and at follow-up, on average 2.8 years (SD = 1.6) later. At follow-up, information was also collected about parental stress and professional support. Data were analyzed through latent regression analyses. Significant improvements in child behavioral problems (effect size 0.60) and parental empowerment (effect size 0.53) were observed during treatment. Improvements were sustainable for child behavioral problems after IFT. Nevertheless, child behavioral problems remained severe on average and might be a stressor for parents. Together with other environmental stressors after IFT, these problems can increase parental stress and subsequently increase child behavioral problems. However, taking into account that professional support after IFT often still is needed, the findings of our study showed that parental empowerment at the end of IFT constitutes a buffer; parental stress had a less negative influence on child behavioral problems at follow-up when parents had a higher level of parental empowerment at the end of IFT. This study stresses the importance of empowering parents during family treatment to successfully cope with environmental stressors after treatment, including the problematic behavior of the child.

1. Introduction

Parental empowerment is an important factor in family-centered treatment to achieve favorable long-term outcomes for families with multiple problems (Graves & Shelton, 2007; Henggeler & Schaeffer, 2016). Empirical studies on parental empowerment in these families, however, are scarce and only focused on short-term treatment results (Damen et al., 2019; Graves & Shelton, 2007). More insight into the role of parental empowerment in the long term is needed for a better understanding of the sustainability of treatment outcomes. Research showed that the situation of families with multiple problems after treatment often remains precarious and that parents still have to deal with the same environmental stressors which were present at the start of treatment, such as relationship issues, absence of financial resources or social support, poor family functioning, child behavioral problems, and the negative impact of previous life events (Cash & Berry, 2003; Van Assen, Knot-Dickscheit, Post, & Grietens, 2020). These environmental stressors cause parental stress (Ostberg & Hagekull, 2000), which easily lead to negative parenting behavior (Anthony et al., 2005) and subsequently has a negative impact on children's behavior (Braza et al., 2015; Gershoff, 2002). Being empowered at the end of family-centered treatment might constitute a buffer for parents between the negative influence of parental stress on children's behavior after treatment. This hypothesis is tested in the present study. In doing so, we will take into account the received professional support that is usually still needed for these families (Hair, 2005; Tausendfreund, Knot-Dickscheit, Schulze, Knorth, & Grietens, 2016).

Empowerment of individuals, such as that of parents, is

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conceptualized by Zimmerman (1995) as psychological empowerment. Psychological empowerment includes three components: interpersonal (e.g., perceptions of competence and self-efficacy), interactional (e.g., awareness, readiness and resolve to change undesirable situations, and the search for solutions and gain access to resources) and behavioral control (e.g., coping behavior to address problems and find solutions). Considering these components, parental empowerment is defined as "the outcomes of a process by which parents are strengthened in raising their child by increasing their feelings of personal control, their critical awareness of handling parenting issues within and in interaction with their environment, and their parental control over the child" (Damen et al., 2017, p. 425).

Families with multiple problems must face diverse and complex difficulties, such as maltreatment and abuse, child behavioral problems, parenting issues, relationship problems, psychiatric problems, absence of social resources, and frequent contact with social and judicial authorities (Tausendfreund et al., 2016). These problems are intertwined, often chronical and intergenerational, and hinder families' everyday functioning. Therefore, the situation of families with multiple problems is precarious and persistent, even more so because they usually have had a long history of professional support without sustainable changes being achieved. These circumstances make parents feel continuously stressed, helpless, and less confident in their ability to overcome problems by themselves.

To relieve this problematic situation, there has long been a tradition to place children from families with multiple problems out-of-home in residential or foster care (Lee et al., 2014; Strijbosch, Huijs, Stams, Wissink, van der Helm, de Swart, & van der Veen, 2015). Since the 1980s, however, there is a growing awareness of the need to address multiple problems of families in their context, and to support families with preservations services focusing on preventing out-of-home placement of children. Several programs are adopting this focus; for example, Functional Family Therapy (FFT), Multi-Systemic Treatment (MST) and Families First (Lee et al., 2014; Lee, Aos, & Miller, 2008; Nelson, Walters, Schweitzer, Blythe, & Pecora, 2009; Van Assen et al., 2020). In these family-centered programs, empowerment of parents is seen as a central element to achieve favorable treatment effects (Dunst, Trivette, & Hamby, 2007; Graves & Shelton, 2007; Henggeler & Schaeffer, 2016). Interventions are carried out in the family environment because this is not only seen as the natural context in which child behavioral problems occur (Henggeler, Melton, Smith, Schoenwald, & Hanley, 1993) but also as a main source of strength and support for ameliorating these problems (MacKean, Thurston, & Scott, 2005). In order to realize this shift, professionals build a collaborative relationship with parents and recognize them as experts regarding their children's needs (Dunst, Boyd, Trivette, & Hamby, 2002; Law et al., 2003). In particular, parents are supported to acquire effective parental skills and coping strategies and to use family support networks in order to overcome obstacles that hinder their own and their family's functioning (Dunst et al., 2007; Graves & Shelton, 2007; Lee et al., 2014). In their meta-analysis of family-centered programs, MacLeod and Nelson (2000) showed that intensive family preservation programs with high levels of participant involvement, an empowerment and strengths-based approach, and a component of social support had higher impacts on different outcomes, such as maltreatment, out-of-home placement and parent attitude and behavior, than programs without those elements.

Several meta-analyses on family-centered programs reported favorable child behavioral treatment outcomes (Curtis, Ronan, & Borduin, 2004; Dunst et al., 2007; Hartnett, Carr, Hamilton, & O'Reilly, 2017). Only a few studies, however, examined the role of parental empowerment in achieving these child outcomes. The studies of Damen et al. (2019) and Graves and Shelton (2007) suggested that increased parental empowerment mediated the effect of family-centeredness on decreasing child behavioral problems during treatment. The study of Deković, Asscher, Manders, Prins and Van-der-Laan (2012) revealed a comparable mediation effect: improved parental sense of competence, which is a concept related to empowerment, was associated with more positive discipline in parenting and subsequently led to decreased externalizing child behavioral problems at the end of treatment. The findings from these studies support the value of empowering parents as agents of change to reduce their children's problem behavior during family-centered treatment. However, due to a lack of follow-up research it is unknown whether empowerment of parents ensures that parents also have become agents of sustainable change for their children after family-centered treatment. Research on the long-term outcomes of family-centered treatment is needed to better understand the potential of empowering parents in handling their children's behavioral problems within their family context.

Despite beneficial changes that are made during treatment, it is likely that families with multiple problems must still address persistent problems afterwards and that professional support remains necessary (Hair, 2005; Tausendfreund et al., 2016). Research showed, for example, that on average, children still demonstrate behavioral problems at the end of treatment (Asscher, Deković, Manders, Van der Laan, & Prins, 2013; Van Assen et al., 2020; Veerman & De Meyer, 2015). Moreover, relationship issues, poor family functioning, absence of financial resources or social support, and the negative impact of previous life events can persist after treatment (Cash & Berry, 2003; Van Assen et al., 2020). These problems in the family context can be seen as environmental stressors that present continuing threats and challenges for parents and might cause parental stress if parents are unable to deal with these stressors properly (Grant et al., 2003). Research revealed that more parental stress is associated with more negative parenting behavior (Anthony et al., 2005), which then leads to more child behavioral problems (Gershoff, 2002). Therefore, it is important that parents of families with multiple problems can manage their stress in the complex circumstances after treatment so that it does not have that much impact on their children's behavioral problems.

Parents who have been encouraged in their own context to learn and use new skills and who have been stimulated to expand and use their support networks will develop adequate coping behavior and strategies to address problems and find solutions to help them deal with stressors. This will strengthen their perceptions of competence and self-efficacy (intrapersonal component of empowerment) (Sandler, Schoenfelder, Wolchik, & MacKinnon, 2011). Moreover, parent's alertness and willingness to handle other parental issues (interactional component of empowerment) will increase, for instance to make use of social and further professional support, if this is still necessary. Parents will also have more control over the undesirable behavior of their children, which is reflected in the behavioral control component of empowerment (Damen et al., 2019). These empowerment outcomes will strengthen parents in their belief that they can resist future stressful situations and ensure that they will be more tenacious and consistent in their behavior toward the child after treatment (Deković et al., 2012; Sandler et al., 2011).

The aim of the present study was to examine the long-term treatment outcomes of the Dutch family-centered program Intensive Family Treatment (IFT, Van der Steege, Ligtermoet, Lekkerkerker, & Van der Vliet, 2013) and to test the hypothesis that parental empowerment at the end of treatment constitutes a buffer between the negative influences of parental stress on their children's behavioral problems afterwards, taking into account the amount of professional support received after the treatment of IFT.

2. Method

2.1. Participants

This study was conducted at a Dutch youth care organization that offers family support, family preservation services, residential care, and foster care to children and adolescents (0–23 years old) and their families. In our study, we included 275 families that were supported by

Intensive Family Treatment (IFT, Van der Steege et al., 2013), any time between January 2011 and March 2017. The procedure section further explains how the included group of 275 families was selected.

IFT is a long-term family-centered preservation service for families with multiple problems and children aged between 0 and 23 years and was offered in 2019 by more than 20 major youth care providers in the Netherlands. The principles and techniques of IFT are described in a manual (Van der Steege, Ligtermoet, Lekkerkerker, & Van der Vliet, 2013). This family-centered service is included in the 'Dutch Database of Effective Youth Interventions' and is recognized regarding its 'first indications for effectiveness' (https://www.nji.nl/nl/Databank/Databank-Effectieve-Jeugdinterventies/Intensieve-Ambulante-Gezinsbehandeling-(IAG)).

The treatment IFT is explicitly focused on empowering parents to achieve favorable long-term changes for families and children. Therefore, interventions are strength-based, offered in the family context, and focused on the parental role as active participants and experts in treatment and decision making with regard to their children's need (Van der Steege et al., 2013). Parents are stimulated by professionals to acquire new parental competencies, expand and activate their social support network, and manage the problems that hinder their actual and future functioning. To empower parents, professionals providing IFT take an open, non-judgmental and positive attitude toward them. They focus on building good relationships with the families and connecting with their wishes, experiences, and perceptions. By standing next to the family, professionals support the family members in influencing factors that bother them, activating their self-resolving capacities and in learning to change the complex situation by themselves. IFT aims to reduce risk factors that hinder the family situation and to strengthen positive, protective factors, such as improving parental skills and strategies and improving the social support network of families. The intended duration of IFT is between six and nine months and the treatment includes three phases. The starting phase focuses on building the working relationship with the family members, analyzing strengths and family problems and setting goals. In this starting phase, the professional visits the family two times a week for 1½–2 h per visit. In the phase of change, the family members work on realizing the set goals and the professional is often in the family (two times a week for 2–4 h in total), especially at the beginning of this phase. The closing phase is focused on retaining what has been learned and the visits of the professional are gradually reduced. IFT is comparable with programs such as Functional Family Therapy (FFT), Multi-Systemic Treatment (MST) and Families First (FF). These preservation programs all support families with multiple problems in preventing out-of-home placement of children; are based on similar integrated theoretical approaches (e.g. ecological system theory and cognitive learning theory) that assume that protective and risk factors in the family environment must be addressed to bring about beneficial changes; emphasize the role of parents in this, and; allow professionals to choose those interventions that are necessary given the family needs (Henggeler & Schaeffer, 2016; Henggeler et al., 1993; MacKean et al., 2005; Nelson et al., 2009; Van der Steege et al., 2013).

For 236 of the 275 families included in the study, their family structure was known: 134 families were two-parent families with two biological parents (n = 103; 44%) or a biological and step-parent (n = 31; 13%), and 91 were single-parent families. For 163 families (59%), the referred child was a boy and for 166 families (60%) the child was aged 12 years or older. The 275 families were supported by IFT for 264 days (SD = 135.91) on average.

2.2. Procedure

The data for this study were obtained from the system of Routine Outcome Monitoring (ROM) that was gradually developed and implemented through the organization since 2011 to gather data about children's behavioral problems and the empowerment of parents. The information was gathered via two questionnaires (SDQ and EMPO, see the next section for further information) that were completed by one of the parents at the start (T1) and end (T2) of treatment. At the first family contact, parents were informed by social workers about the content of both questionnaires, the data collection procedure and the use of the questionnaires for treatment evaluation. Parents were told that they could decide at any time whether they would complete the questionnaires or not. Moreover, the parents were informed that the data could be used for research purposes, and if they were, that these data were processed anonymously and confidentially. In the early period of ROM implementation, the questionnaires were handed to the parents by social workers at the first family contact with the request to complete and return these within two weeks. From 2015, after the first family contact, parents received a link by email to both questionnaires. This email was sent via BergOp, a database for ROM that is used by many youth care organizations in The Netherlands (https://www.bergop.info). In cases in which no response on the questionnaires was received within two weeks, the social worker called the parents or sent them an email reminder. Thereafter, no further contact was made insisting on filling in the questionnaires.

Between January 2011 and March 2017, questionnaire information from 750 families that were supported by IFT, was collected via BergOp. For 676 families information was gathered on *both* questionnaires on at least one measurement moment. For 447 of these 676 families, the youth care organization had access to a valid email address. To collect research data about the long-term outcomes, the 447 families were contacted in May 2018 by email and invited to participate in a follow-up survey (T3) by completing the two questionnaires, again about child behavioral problems and parental empowerment. Parents were also asked to fill out a short questionnaire about the stress they experienced as a parent during the period since completing IFT. Moreover, they were asked whether or not they or their children have received professional support in the past year because of parenting problems or child behavioral problems. In addition to answering this question with yes or no, parents could further describe the type of professional support their family received. No other information has been collected, such as about the duration, intensity and current status of the support received. The parents of 93 families responded to the follow-up request which, on average, was completed 2.8 years (SD = 1.6) after they ended IFT.

Eventually, for 275 (62%) of the 447 families that were invited to take the follow-up survey, information on both ROM questionnaires was collected at two out of three measurement moments at least. These 275 families were included in the present study. For 251 (91%) of these 275 families, the questionnaires were filled out by mothers. For the other 24 families (9%) the questionnaires were responded by fathers. The 275 included families did not differ from the excluded group of 172 families the on child's gender and age, treatment duration, parental empowerment problems, and children's behavioral problems at T1.

2.3. Measures

Children's behavioral problems. Children's behavioral problems were measured using the Strengths and Difficulties Questionnaire (SDQ, Dutch version; Goedhart, Treffers, & Van Widenfelt, 2003; Goodman, 1997). The SDQ consists of 25 items that are partly formulated negatively and partly positively. The 25 items, which are scored on a 3-point scale (false, partly true, definitely true), constitute together five subscales, with five items each: emotional problems, peer relationship problems, conduct problems, hyperactivity/inattention, and prosocial behavior. Moreover, a total problem score is determined by adding up the scores of the four problem scales. We used this total problem score in the present study. Parenting mothers and fathers filled in the SDQ version for children from 4 to 17 years old. According to Stone et al. (2015), the Dutch version of the SDQ showed sufficient to good ($\alpha \geq 0.77$) internal consistency at three consecutive measurement moments, as well as a good test–retest reliability (r = 0.79). The reliability of the SDQ in this study was sufficient to good (T1: α = 0.78; T2: α = 0.85; T3:

$\alpha = 0.73$).

Parental empowerment. Parental empowerment in raising children was measured using the EMPO (Damen et al., 2017), a 12-item questionnaire. Items are expressed as statements to which mothers and fathers respond using a 5-point scale (disagree completely, disagree, don't disagree or agree, agree, agree completely). The EMPO is based on the three components of psychological empowerment by Zimmerman (1995). The intrapersonal component is measured using four statements, and the interactional and behavioral control component uses respectively five and three statements. The sum of the scores on all 12 items yields a total empowerment score for the parents. For the present study, we used this total empowerment score. Damen et al. (2017) showed a good internal consistency of the EMPO (Cronbach's $\alpha = 0.86$ for the non-clinical group and $\alpha = 0.82$ for the clinical group) as well as a good test–retest reliability ($r = 0.70$). The reliability of the EMPO in the present study was good (T1: $\alpha = 0.81$; T2: $\alpha = 0.86$; T3: $\alpha = 0.81$).

Parental stress. Parental stress was measured with a retrospective 4-item questionnaire that was derived from several Dutch questionnaires on family and parenting, such as the Parenting Stress Questionnaire (Vermulst, Kroes, De Meyer, Nguyen, & Veerman, 2015). The four items asked the parents to look back at post-treatment developments in four different areas in the family context and on the impact these developments had had on their feelings of stress, expressed on a 7-point scale ranging from extremely positive influence to extremely negative influence). These four areas are (1) major life events in the family context, such as illness, loss of employment, child-birth, divorce and marriage; (2) children's well-being; (3) family functioning; and (4) social support of relatives and friends. The sum of the scores on the 4 items yields a total parental stress score which was used in this study. The reliability of the 4-item questionnaire was good (T3: $\alpha = 0.92$).

Professional support. The professional support that families received after IFT was measured at follow-up upon asking parents if they or their children had received professional support during the past year because of parenting problems or child behavioral problems. The scale for the degree of professional support consists of three categories: (1) no professional support was received, (2) the referred child received professional support, and (3) the referred child as well as the parents received professional support. If families received professional support, parents were asked to provide a description of this support.

2.4. Analyses

Pre-post-effect sizes (Cohen's *d*) were calculated to measure the changes in total behavioral problems of children (SDQ) and total empowerment of parents (EMPO) and between the three measurement moments. Child behavioral problems and parental empowerment problems in the studied families were seen as problematic if the total sum score belonged to the highest 10% of a representative non-referred Dutch norm groups from studies by Goedhart et al. (2003) on child behavioral problems measured with the SDQ and by Damen et al. (2017) on parental empowerment measured with the EMPO. Regression analyses in Mplus 7.2 (Muthén & Muthén, 1998–2013) were applied to test changes in parental empowerment and child behavioral problems during and after IFT and to examine the regression models with and without the moderation effect of parental empowerment. A negative moderation effect of parental empowerment means that the empowerment of parents constitutes a buffer between parental stress and child behavioral problems. In the first model, without the moderation variable, we used parental empowerment at T2 and parental stress at T3 as predictors of child behavioral problems at T3. Moreover, we controlled for the time elapsed between T2 and T3 because of the existing differences between families during the period between the end of IFT and follow-up. We also controlled for the professional support that families received at T3. In the second model, we included the interaction term between parental empowerment T2 and parental stress T3 as a predictor for child behavioral problems.

To address the missing data in this study, the Full Information Maximum Likelihood (FIML) was used. FIML is preferred over Multiple Imputation (MI) approaches to handle incomplete data in longitudinal research, (Grim, Ram, & Estabrook, 2017). In contrast to MI, FIML does not replace the missing values. Instead, FIML uses only the available raw data and takes into account missing information when estimating the model parameters and standard errors (Ferro, 2014). This means that the contribution of a respondent to the estimation of the model parameters depends on the available information she or he has provided (Grim et al., 2017). Of the 275 families, 274 families (99%) completed both the SDQ and EMPO at T1, 234 families (85%) filled in the two questionnaires at T2, and 93 families (34%) at T3. Additional analyses showed no significant differences in the background characteristics between families with complete and incomplete information, suggesting that the missing values can be understood as missing at random. This is a minimal basic assumption for using the FIML estimator (Grim et al., 2017).

Parcels were created as indicators of the latent constructs of child behavioral problems and parental empowerment. A parcel represents the sum score or mean of a subset of the items of a variable. Parcels are valuable to avoid estimation problems (Sass & Smith, 2006) and to reduce the number of parameters to be estimated in the cross-lagged model (Yang, Nay, & Hoyle, 2010). We constructed three parcels to measure parental empowerment; each parcel contained four items. We also constructed three parcels for child behavioral problems, two parcels with seven items each and one with six items. The items of the EMPO and SDQ were assigned to parcels in line with the item-to-construct balance method (Little, Cunningham, Shahar, & Widaman, 2002). We used the single-factor solution of the EMPO and SDQ at T1 and allocated the item with the highest factor loading to parcel one, the item with the second-highest loading to the parcel two, and the item with the third-highest loading to parcel three. The next three items were allocated to parcels in reverse order, etc. In this way, each parcel reflected the factor structure of the latent variable in an equivalent way. The same items with the corresponding parcels were used at T2 and T3. After assigning the items to the parcels, we determined the sum score per parcel. The parcel sum scores were input for the latent regression analysis to measure the latent variables for parental empowerment and children's behavioral problems. Since parental stress was measured with four items, these items were used as indicators of this latent construct.

3. Results

At the start (T1) of IFT, the child behavior was problematic in 71% of the families (Table 1). Parental empowerment problems were present in 46% of the families. During treatment (T1 – T2), significant improvements emerged, on average, in child behavioral problems ($z = -9.41$, $p \leq 0.000$) and parental empowerment ($z = 8.13$, $p \leq 0.000$). The effect sizes for child behavioral problems (ES = 0.60) and parental empowerment (ES = 0.53) were medium. At the end of IFT (T2), 45% of the families had problems with the children's behavior and 24% experienced parental empowerment problems. During the period after treatment (T2 – T3), treatment improvements in child behavioral problems were maintained ($z = 0.45$, $p = .650$). There was, however, a small but significant decrease in parental empowerment ($z = -2.29$, $p = .022$). The effect sizes for both child behavioral problems (ES = −0.15) and parental empowerment (ES = −0.22) were small. At T3, which was conducted on average 2.8 years (SD = 1.6) after the end of IFT, 53% of the families had problems with their children's behavior and 29% experienced parental empowerment problems.

At T3, the perceived parental stress in the 93 families with known information was 3.64 on a 7-point scale (SD = 1.12). Of these 93 families, it was known whether parents or children had received any professional support in the past year because of child behavioral problems or parental empowerment problems. Of these 93 families, 5 of the families (5%) received no professional support; in 57 families (61%),

Table 1
Child Behavioral Problems and Parental Empowerment at the Start (T1), End (T2) and Follow-up (T3) of IFT and Changes During and After IFT.

		Child behavioral problems	*Parental empowerment*
T1	*N*	275	274
	Mean	17.21	40.80
	SD	6.51	5.53
	Problematic	196 (71%)	127 (46%)
T2	*N*	235	236
	Mean	13.32	43.71
	SD	6.93	5.58
	Problematic	106 (45%)	56 (24%)
T3	*N*	93	93
	Mean	14.35	42.51
	SD	5.50	6.31
	Problematic	49 (53%)	27 (29%)
Changes			
T1-T2	*Effect size*	0.60	0.53
	z-score	−9.41	8.13
	p-value	0.000	0.000
T2-T3	*Effect size*	−0.15	−0.22
	z-score	0.45	−2.29
	p-value	0.650	0.022

Note: Child behavioral problems and parental empowerment were based on sum scores of EMPO and SDQ. Problematic scores on each scale are scores belonging to the highest 10% (z-score ≥ 1.29) of representative non-referred Dutch norm groups from studies of Goedhart et al. (2003) and Damen et al. (2017). Effect size = Cohen's *d*; *z*-scores and *p*-values were based on *z*-tests in Mplus. Additional analyses showed no significant effects of treatment duration on the short and long term outcomes for parental empowerment (respectively $B = 0.76$, $p = .533$, and $B = 0.56$, $p = .956$) and child behavioral problems (respectively $B = 1.13$, $p = .258$, and $B = -0.22$, $p = .824$).

professional support was given to the referred child; and in 31 families (33%), both the parent and the referred child received professional support. Inspection of the reasons for support, as described by the parents, revealed that the professional support for children after IFT was received mainly regarding psychiatric problems of the child, such as Attention Deficit Hyperactivity Disorder (ADHD) and Autism Spectrum Disorder (ASD), or for child behavioral problems in a different context, especially at school. The professional support that parents received after IFT was generally focused on improving their knowledge and skills about the complex problem behavior of their child, such as psychoeducation, or practical guidance for parents in dealing with their children's addiction behavior.

Table 2 shows the results of the latent regression analyses. The fit of Model 1 was good ($n = 275$, χ^2 [49] = 88.171, $p < .001$, CFI = 0.952, RMSEA = 0.054). Model 1 shows that children's behavioral problems at T3 were predicted by the stress of parents between T2 and T3 ($B = 1.07$, $p < .000$) and by the extent of professional support families received between T2 and T3 ($B = 1.05$, $p < .05$). In Model 2, the interaction term between parental stress and parental empowerment was included as a predictor for child behavioral problems at T3. Model 2 shows that this interaction term was negative and significant ($B = -0.53$, $p < .05$). This means that more parental empowerment at T2 reduced the negative effect from parental stress on child behavioral at T3. In Fig. 1, this buffer function of parental empowerment is visualized; parental stress had a less negative influence on child behavioral problems at T3 when parents had a high level of parental empowerment at T2 than when they had an average or low level of parental empowerment at T2.

Table 2
Parental Empowerment at the End of IFT (T2) as a Buffer Between Parental Stress and Child Behavioral Problems at Follow Up (T3).

	Child behavioral problems at T3 *B*
Model 1	
Professional support at T3	1.05*
Time between T2-T3	−0.02
Parental empowerment at T2	−0.18
Parental stress at T3	1.07***
Model 2	
Professional support at T3	1.12*
Time between T2-T3	−0.02
Parental empowerment at T2	−0.29
Parental stress at T3	0.98**
Parental empowerment at T2 × Parental stress at T3	−0.53*

Note: Latent regression model. Unstandardized coefficients. Controlled for time between end of treatment and follow up and for professional support between T2 and T3. Parental empowerment, child behavioral problems and parental stress; total scales. Fit model 1 ($n = 275$, χ^2 (49) = 88.171, $p < .001$, CFI = 0.952, RMSEA = 0.054). *** $p < .001$. ** $p < .01$. * $p < .05$.

4. Discussion

The aim of the present study was to examine the long-term treatment outcomes of the family-centered program Intensive Family Treatment (IFT) for families with multiple problems and to test the hypothesis that parental empowerment at the end of IFT constitutes a buffer between the negative influences of parental stress on their children's behavioral problems afterwards.

The families in our study started IFT with substantial child behavioral and parental empowerment problems. In both areas, on average, significant improvements were made during IFT, which corresponds to the findings of other studies (Curtis et al., 2004; Damen et al., 2017; Dunst et al., 2007; Graves & Shelton, 2007; Hartnett et al., 2017). The treatment improvements were sustainable regarding child behavioral problems after IFT, however, there was a small but significant decrease in parental empowerment at follow-up. Despite these favorable treatment outcomes, on average, substantial child behavioral problems still existed at the end of IFT that, moreover, persisted in the subsequent period. This is consistent with the findings of other studies (Asscher et al., 2013; Van Assen et al., 2020; Veerman & De Meyer, 2015). The behavioral problems of children in vulnerable families could be a stressor for parents after treatment. Parents of families with multiple problems mostly also face other persistent stressors in their after-treatment environment, such as relationship problems and poor family functioning (Cash & Berry, 2003; Van Assen et al., 2020). Together, these environmental stressors might cause parental stress, which can subsequently lead to negative parenting behavior and an increase in child behavioral problems after IFT (Anthony et al., 2005; Gershoff, 2002; Grant et al., 2003). In our study, the relationship between more parental stress and further child behavioral problems was also found at follow-up of IFT.

The findings in our study, however, showed that parental empowerment at the end of IFT constituted a buffer for this negative effect: the negative influence of parental stress on child behavioral problems at follow-up was smaller when parents were more empowered at the end of IFT. This finding confirmed the buffer hypothesis of our study. In family-centered programs, such as IFT, empowerment of parents is seen as an important factor in achieving positive long-term outcomes (Graves & Shelton, 2007; Henggeler & Schaeffer, 2016). Therefore, interventions are carried out in the family-context, since this is considered not only as the natural environment in which child behavioral problems occur, but also as a main source of strength and support to deal with these problems (Henggeler et al., 1993; MacKean et al., 2005). We think that the family-centered approach of IFT has ensured a buffering effect of empowerment after treatment. During IFT, because parents were encouraged to deal with environmental stressors in their own context, they developed more coping behaviors and strategies to address problems. This might have strengthened their feelings of competence and self-efficacy, which resulted in increased parental empowerment outcomes at the end of IFT. This finding is in line with Zimmerman (1995) intrapersonal and behavior control empowerment components, which both could have contributed to the decreased child behavioral problems at that moment

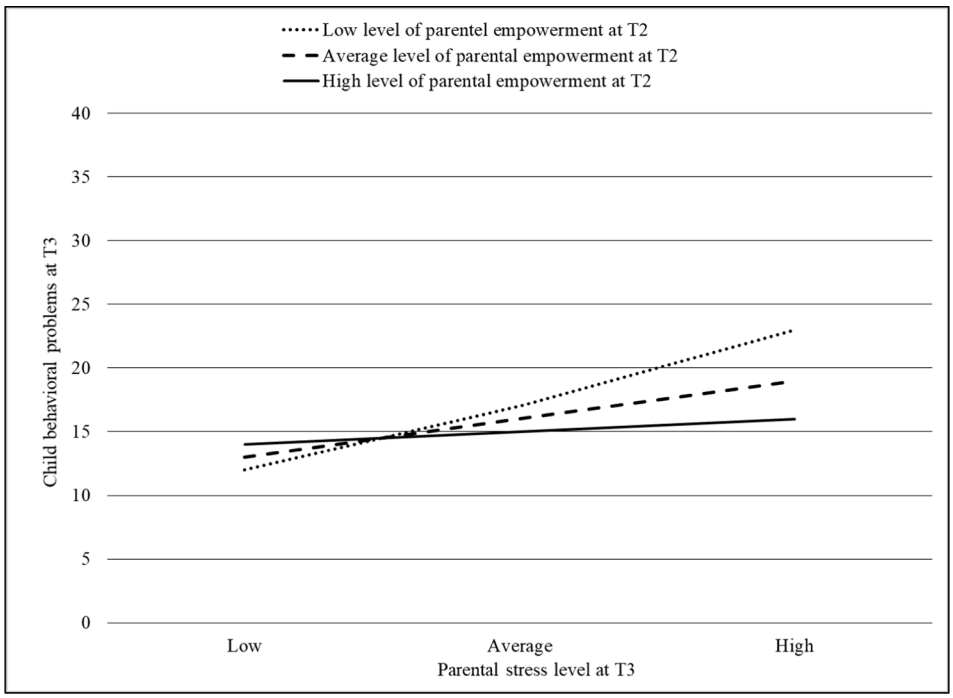

Fig. 1. Parental empowerment at the end of IFT (T2) as a buffer between parental stress and child behavioral problems at follow-up (T3). Note: Predicted scores on child behavioral problems. Scores on parental stress and parental empowerment are centered. Controlled for professional support at T3. Parental stress and parental empowerment; high level = average score + 1½ * SD; low level = average score − 1½ * SD.

(Damen et al., 2017; Graves & Shelton, 2007). Moreover, these outcomes will strengthened parents' belief that they can also deal with stressful situations after treatment and make them more tenacious and consistent in their behavior towards their children (Deković et al., 2012; Sandler et al., 2011). Such effects might have contributed to the sustainability of the child behavior improvements that were made during IFT.

The buffering hypothesis was confirmed, taking into account the fact that further professional support for families with multiple problems after treatment is usually still is needed (Hair, 2005; Tausendfreund et al., 2016). In our study, the professional support appeared to fall into two main groups: professional support that was concentrated on the child behavioral problems (61%) and support that was focused on both child behavioral and parenting problems (33%). Only a small group (5%) of families did not receive professional support after IFT. This means that the parental empowerment buffer worked in families that were supported in child behavioral problems as well as in families that received in additional support for parenting problems. Parents in both groups of supported families were more likely to deal with the negative influence of environmental stressors on their children's behavioral problems if they were more empowered at the end of IFT. This is probably because more empowered parents will exhibit less negative parenting behavior under stressful circumstances. The findings also confirm that professional support after IFT for families with multiple problems often is a necessity. Unfortunately, it was unknown whether professional support was initiated by parents in these cases. If so, the effect could be due to the interactional empowerment (Zimmerman, 1995) that increased during IFT so that parents were more alert afterwards and willing to look for support when they needed it.

The present study has several strengths. Longitudinal data over a substantial period of time were used and families were followed both during and after a period of treatment. Moreover, our study contributed to the existing knowledge about the sustainability of family-centered treatment to support families with multiple problems and the important role of parental empowerment in treatment. This knowledge is valuable, since in families with multiple problems, empowerment of parents in raising children is seen as a crucial factor to achieve sustainable changes (Graves & Shelton, 2007; Henggeler & Schaeffer, 2016).

There were also some limitations in our study. First, the selection of the families in our study was not random but was determined by the decisions of professionals and the availability of ROM data. The study findings, therefore, could be biased by the inclusion of certain families, such as families who were willing to fill out the SDQ and the EMPO at moments of measurement. However, additional analyses showed, that this was not the case; there were no differences between the included group of families in this study and the excluded group in terms of children's gender and age, treatment duration, parental empowerment, and children's behavioral problems at the start of IFT. Second, we did not include a comparison group of families that were treated in a different way, for example with a child-focused and deficit-based approach. Including such a comparison group provided more insight into the value of family-centered support and the sustainability of treatment effects. Third, we expected a negative relationship between parental stress and child behavioral problems, which we assumed to be mediated by negative parenting behavior. Since this parenting behavior was not measured, this mediation effect could not be tested.

Future research should, therefore, consider inclusion of a control group and should also measure the parenting behavior in families with multiple problems. Although the findings of our study showed a statistically significant buffering effect of parental empowerment, less is known about the exact way in which this buffer works. Therefore, qualitative research among parents might be conducted to further understand the buffer function of parental empowerment in vulnerable families after treatment. Retrospective follow-up interviews can provide more insight into this, particularly regarding what exactly has ensured that parents can cope better with the often still precarious situation that they face after IFT. Another topic for future research is related to our assumption that the relationship between parental stress and child behavioral problems is one-sided. Based on empirical references, we stated that environmental stressors after family treatment cause parental stress, which subsequently lead to negative parenting behavior and an increase in child behavioral problems (Anthony et al., 2005; Gershoff, 2002; Grant et al., 2003). However, since at least one study (Neece,

Green, & Baker, 2012) has revealed that the relationship between stress of parents and child behavioral problems is reciprocal, more research in this area is needed to test our assumption. In addition, future research should also further specify the professional support provided after family treatment, such as in terms of duration and intensity.

The findings of our study underline the importance of family-centered programs for families with multiple problems and particularly highlight the role of parental empowerment to achieve sustainable long-term outcomes with regard to their children's problem behavior. Although family-centered treatment cannot fully solve these child behavioral problems, it can strengthen parents' ability to control these problems on the long term and seeking professional support, if necessary. Taking into account that professional support is still needed, the empowerment outcomes will protect parents, to a significant degree, from the negative influence of future stress regarding their parenting behavior towards their children, and thus regarding the problem behavior of their children. This buffer is especially essential, since parents of families with multiple problems often must deal with many environmental stressors after treatment. Therefore, it is important to pay attention to the family environment after treatment right from the start of IFT. In particular, it is essential to get a full picture and accurate analysis of the environmental stressors that parents could face after treatment. Moreover, it is important to prepare them for these stressors, for example by exploring possible scenarios and solutions with parents, and by teaching parents to deal with problems in practice such a way and order that suits them best.

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7. Research involving human participants and/or animals

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

Informed consent

Informed consent was obtained from all individual participants included in the study.

CRediT authorship contribution statement

Harm Damen: Conceptualization, Methodology, Investigation, Formal analysis, Project administration, Writing - original draft. **Ron H. J. Scholte:** Writing - review & editing. **Ad A. Vermulst:** Methodology, Writing - review & editing. **Petra van Steensel:** Writing - review & editing. **Jan W. Veerman:** Conceptualization, Writing - review & editing.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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