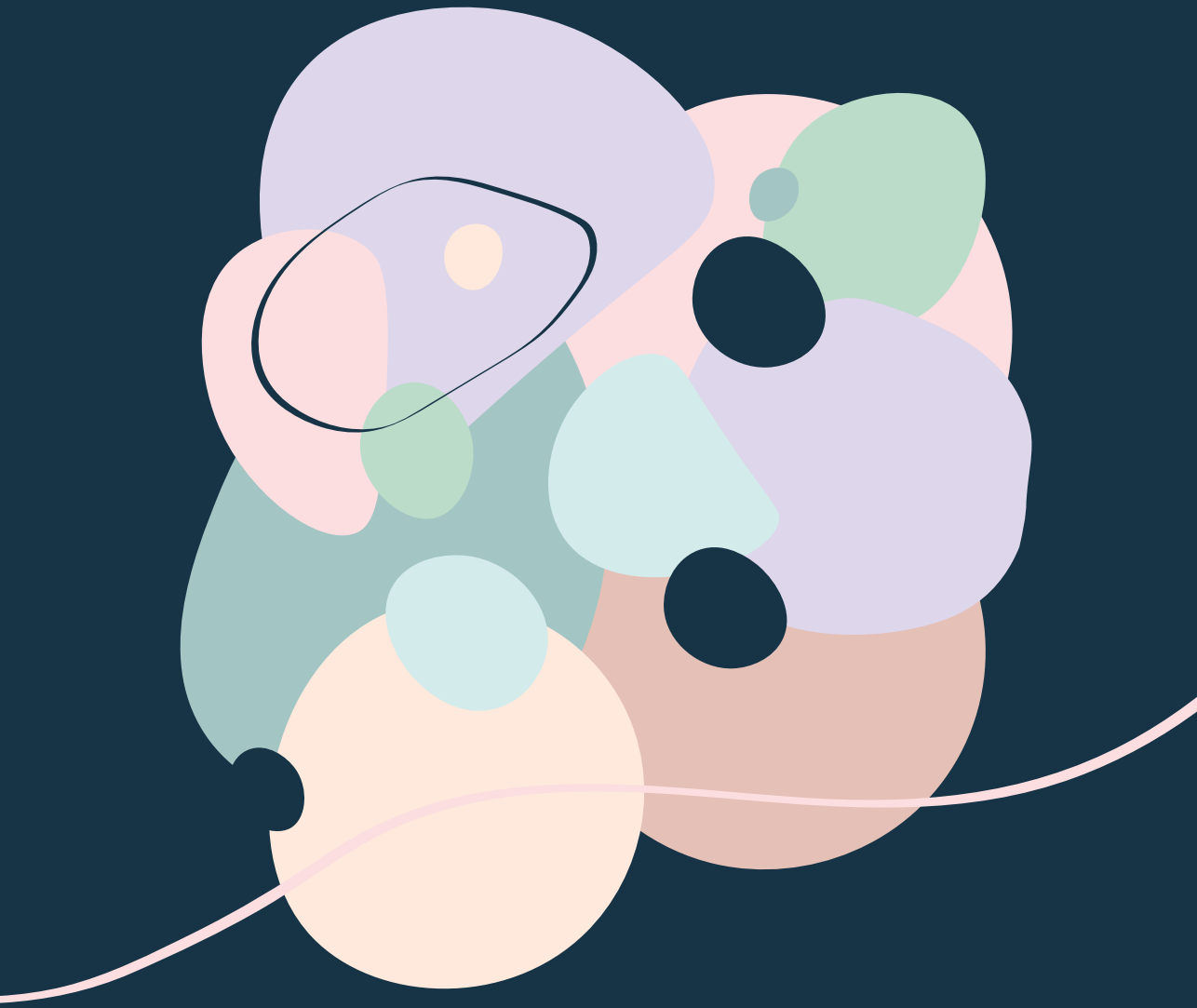
Better together

SUPPORTING YOUTH WITH MENTAL HEALTH NEEDS BY UTILIZING THE SOCIAL NETWORK



Natasha Koper

Better together:
Supporting youth with mental health needs by utilizing the social network

Samen sterk:
Jongeren met psychische problemen ondersteunen door samen te werken met het sociale netwerk

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Supporting youth with mental health needs by utilizing the social network

Samen sterk:
Jongeren met psychische problemen ondersteunen door samen te werken met het sociale netwerk
(met een samenvatting in het Nederlands)

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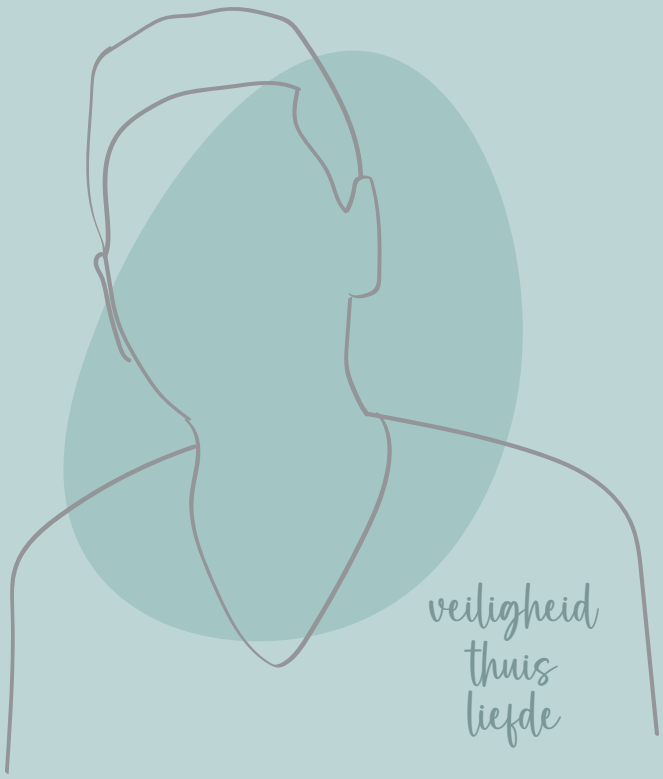
Chapter 1

GENERAL INTRODUCTION



Childhood adversity and mental health problems are associated with various adverse outcomes, including substance abuse, low quality of life and suicidality during adulthood (e.g., Brown et al., 1999; Lee et al., 2011; McLaughlin et al., 2012; Simon et al., 2009). Alarmingly, the number of youth in the Netherlands experiencing mental health problems has rapidly increased since 2017 to rates between 31% and 33% in 2021 (Boer et al., 2022). Part of these youth receive mental health care (Bakker, 2022). Yet, although youth mental health interventions in general have beneficial effects, not all interventions are effective (Howick et al., 2022; Weisz et al., 2017). That is, a meta-analysis showed that interventions for youth with multiple mental health needs did not have any effects (Weisz et al., 2017), suggesting that interventions are not effective for those who need it the most. Thus, interventions or the conditions under which they are provided should be improved (Weisz et al., 2017; Weisz, Ugueto, et al., 2013). As strong social support networks are linked to higher levels of resilience (Smith & Carlson, 1997), which is the ability to adapt in face of adversity (Ungar, 2011), it has been suggested that interventions can be improved by engaging the informal support network (Sousa & Rodrigues, 2009), thus using the full potential of youth's support systems.

The present dissertation focuses on youth with mental health needs, including youth that grow up in multi-problem families. Multi-problem families are families that experience multiple and complex problems, which are often chronic and intergenerational, and which occur in multiple domains such as mental health, family functioning, and their social networks (Bodden & Deković, 2016; Tausendfreund et al., 2016). These problems place children in these families at risk for developing psychological problems (Bodden & Deković, 2016), while psychological interventions are often ineffective (Richtlijnen jeugdhulp en jeugdbescherming, 2022a; Weisz et al., 2017). As a result of the complexity of problems that multi-problem families experience, these families often receive care from various organizations, resulting in fragmentation of care, hampered coordination between professionals and institutions, and single solutions that fail to solve complex problems (Ghesquière, 1993; Mehlkopf, 2008; Sousa & Rodrigues, 2009; Tausendfreund et al., 2016). Various methods of integrated care approaches have been developed to overcome fragmentation and lack of coordination and continuity of youth care (World Health Organization, 2016) with the aim to improve treatment effect and efficiency, quality of life, and client satisfaction (Valentijn et al., 2013). Examples are the 'Wraparound care' model in the United States (Malysiak, 1997), the 'Troubled Families' program in the United Kingdom (Hayden & Jenkins, 2014), and the 'One family, one plan' (*1Gezin1Plan*) policy in the Netherlands (NJI, 2011). These approaches integrate formal care systems, that is, care provided by organizations in formal settings (e.g., health care and social services), yet very few integrate formal with informal care systems, that is, a family's informal social network including relatives, friends and informal groups. As multi-problem families depend on various support systems, including informal support, promoting the coordination between formal and informal support may be particularly important to strengthen the resilience of youth from multi-problem families (Sousa & Rodrigues, 2009).

Activating the social network in interventions

Social support from the informal network, including natural mentors, friends, relatives and professionals, is consistently linked to resilience and positive youth development (Sarason & Sarason, 2009; Southwick et al., 2006; Ungar, 2011; van Dam, Smit, et al., 2018) and, thus, protects individuals from developing problems in stressful situations (Harandi et al., 2017). Activating and utilizing the resources in the informal social network by involving social network members

in interventions may be promising, because it could enhance effectiveness while reducing the involvement of professionals from the formal care systems. Two potential working mechanisms may explain why social network engagement in interventions could enhance intervention effectiveness.

First, engaging the social network in interventions is thought to contribute to the fulfillment of the basic needs for self-determination (autonomy, competence, and relatedness; Ryan & Deci, 2000), which is thought to promote treatment motivation and subsequently effectiveness (Krause, 1966; van der Helm et al., 2018). Engagement of the social network may facilitate shared decision-making, which means that goalsetting is done in collaboration with the client system, which is thought to result into personal treatment goals that are set for autonomous reasons (Bartelink et al., 2015; van Dam & Schwartz, 2020). Shared-decision making with the client's social network can help youth achieve the treatment goals from the perspective of *autonomy*, foster youth's self-experienced *competence* by emphasizing what they can achieve by themselves with their own social environment, and strengthen youth's feelings of *relatedness* with their network (Ashida et al., 2019; Chan et al., 2013; van Dam et al., 2020). Second, engaging the social network in interventions is assumed to result in increased social support and higher quality relationships (e.g., Ashida et al., 2019; Chan et al., 2013; van Dam et al., 2020). As these relationships are likely to endure after the treatment has ended (Zimmerman, 2005), they are thought to enhance resilience, or the ability to recover from adversity (Ungar, 2011), by acting as a protective factor during times of crisis (Ozbay et al., 2007; Southwick et al., 2006; Ungar, 2011). This potentially leads to less future care use, and more sustained intervention effects.

Thus, utilizing the resources in social networks by engaging social network members in youth interventions is promising. Indeed, a meta-analysis indicated that interventions for promoting family wellness that focused on building parents' social networks were more effective than interventions without such element (MacLeod & Nelson, 2000), and recent (meta-analytic) reviews on youth-initiated mentoring (YIM), an intervention program with social network involvement, also found positive effects (Dantzer & Perry, 2022; van Dam et al., 2020). However, other overview studies failed to demonstrate positive effects of specific programs that activate the social network, that is, family-group decision making (FGDM; Dijkstra et al., 2016; McGinn et al., 2020) and multi-family program Families and Schools Together (FAST; Valentine et al., 2019). Therefore, the first aim of this dissertation is to synthesize the knowledge on the effectiveness of psychological interventions for youth that involve their social network by conducting a meta-analysis.

InConnection approach

A care approach in which the informal social network is involved, developed for youth with mental health needs from multi-problem families, is the InConnection approach (*InVerbinding*) (van Dam et al., 2017, 2020; van Dam & Verhulst, 2016). The InConnection approach is a specialized treatment that aims to increase resilience in youth from multi-problem families and prevent (repetition of) out-of-home placements. The treatment integrates both formal and informal networks. It integrates formal support systems through its multidisciplinary team consisting of professionals specialized in youth and family care, psychiatry, addiction care, and care for people with mild intellectual disabilities. Thus, the InConnection approach brings different types of expertise and care together within one approach and team (van Dam & Verhulst, 2016), which is thought to increase the experienced continuity of care, as treatments are coherently organized to meet the family's needs and preferences (van Dam & Schwartz, 2020). Previous research indeed

demonstrates that continuity of care is valued by multi-problem families (Visscher et al., 2022), and is linked to increased treatment effectiveness (Valentijn et al., 2013).

The InConnection approach also integrates the youth's informal network by collaborating with a youth-initiated mentor (YIM; *Jouw Ingebrachte Mentor* or *JIM* in Dutch), who is a natural mentor or supportive non-parental adult nominated by the youth (van Dam & Schwartz, 2020). This mentor is a confidant and spokesperson for the youth, and a partner for parents and professionals (Schwartz et al., 2013). The involvement of the YIM is thought to increase youth and family resilience through increasing youth's social resourcefulness, shared-decision making and treatment motivation (van Dam & Schwartz, 2020).

The experience of a supportive relationship with a YIM may increase youth's social resourcefulness (van Dam & Schwartz, 2020), which is the ability to seek help and support from the social network. It is suggested that the positive relationship with a YIM is a safe context for youth to practice and develop relationship skills, allowing youth to benefit more from the social ties within their networks (van Dam & Schwartz, 2020). Indeed, higher quality mentoring relationships are associated with improved relationships with other adults (Chan et al., 2013; Rhodes et al., 2005). Social resourcefulness is, in turn, found to be related to positive treatment outcomes, such as increased self-esteem, prosocial behaviors, and reductions in misconduct in school-based programs (Chan et al., 2013; Rhodes et al., 2005).

Collaboration with a YIM may increase shared-decision making with the client system and broader social network (van Dam & Schwartz, 2020). The YIM represents the youth and actively collaborates with the case manager (van Dam & Schwartz, 2020), for example in formulating a treatment plan (van Dam & Verhulst, 2016), which is thought to enhance shared-decision making. Having personal goals has been associated with goal progress (Koestner et al., 2002), suggesting that shared-decision making may indeed increase treatment effectiveness.

The positioning of and collaboration with a YIM is also suggested to contribute to treatment effectiveness through enhanced treatment motivation. It has been long recognized that treatment motivation is an important factor for treatment effectiveness (Krause, 1966; Ryan et al., 1995). InConnection has been developed with the aim to fulfil the three basic needs for self-determination, which are the necessary ingredients for motivation (Ryan & Deci, 2000). That is, InConnection aims to support youth to *autonomously* choose a YIM and participate in shared-decision making, as adults (e.g., parents, professionals) believe youth have the *competence* to choose what is right for them. Furthermore, the positioning of a YIM is thought to increase the *relatedness* with a supportive figure (van Dam et al., 2019) and others (Chan et al., 2013; Rhodes et al., 2005). Mentors also *directly* encourage youth to participate in treatment and achieve challenging treatment goals (Spencer et al., 2016).

InConnection started as a small pilot (van Dam & Sijbesma, 2014), but has since grown to be a popular intervention adopted by different youth care organizations in the Netherlands. The intervention is attractive for both families and care organizations, as it aims to reduce the need for more intensive, restrictive and expensive care options such as out-of-home placements (van Dam & Verhulst, 2016). Yet, it may *seem* simpler than it is to integrate care by collaborating with other mental health professionals (Nooteboom, Van Den Driesschen, et al., 2020) and the client's social network through youth-initiated mentoring (Schwartz & Rhodes, 2016). While treatment programs that involve the client's social network are promising, there is limited evidence for their success and effectiveness (Dantzer & Perry, 2022; Dijkstra et al., 2016; McGinn et al., 2020; Valentine et al., 2019; van Dam et al., 2020). Yet, preliminary results of InConnection, specifically, are promising, as between 80% and 90% of youth continued to receive outpatient treatment

only, despite a prior indication for out-of-home placement (van Dam et al., 2017; van Dam, Klein Schaarsberg, et al., 2018). Research with a more rigorous design is needed to examine the effectiveness of InConnection. Therefore, the second aim of this dissertation is to examine the effectiveness and working mechanisms of the InConnection approach for youth from multi-problem families.

Support during the Covid-19 pandemic

As social support protects individuals from developing problems in stressful situations (Harandi et al., 2017), it may have been of particular importance during the Covid-19 pandemic. Governments have taken extraordinary and severe measures to fight the virus since January 2020, such as lockdowns and physical distancing, which may have negatively impacted individuals' mental health (Brooks et al., 2020; Jones et al., 2021), particularly for those with pre-pandemic vulnerabilities such multi-problem families. As a result of the imposed restrictions, many youth and their parents were forced to spend most of their time at home, potentially limiting the possibilities for support from their informal and formal networks. Results of studies on the impact of the Covid-19 pandemic on youth are heterogeneous, and suggest that for a sizable group (but not for everyone) the imposed restrictions during the pandemic negatively affected youth mental health (Brooks et al., 2020; Jones et al., 2021), mediated by increased stress (Achterberg et al., 2021). People who already were vulnerable before the pandemic tended to suffer more (Kim & Laurence, 2020; Weeland et al., 2021). Yet, research in high-risk populations, such as multi-problem families, during the Covid-19 pandemic is lacking. Consequently, the third aim of this dissertation is to gain insight in the mental health of multi-problem families during the pandemic, and whether experienced informal and formal support were protective factors.

The present dissertation

The overall purpose of this dissertation is to increase knowledge on the effectiveness of integrating and utilizing the social network in treatment programs, thereby addressing several aforementioned gaps in the literature. The first aim of this dissertation is to provide insight into the effectiveness of youth interventions that utilize the social network. *Chapter 2*, therefore, describes a meta-analysis on studies examining the effectiveness of mental health interventions that utilize the youth's social network. In this meta-analysis, I include various types of interventions that activate and utilize the social network, such as youth-initiated mentoring and family group decision-making. The second aim of this dissertation is to further extend the knowledge on the effectiveness and working mechanisms of the InConnection approach for youth with mental health needs from multi-problem families. We set up the project *Growth in Personal Environment* (GRIP), of which the background and methods have been described in a study protocol in *Chapter 3*. GRIP uses a mixed-methods and multi-site design, including both semi-structured interviews with youth, parents and mentors, as well as a quasi-experiment with multi-informant questionnaire assessments. To better understand the perspectives and needs of youth, parents and mentors in the YIM approach within InConnection, *Chapter 4* includes a qualitative interview study in which we investigated their opinions and needs. We also described to what extent the needs of youth and parents were met by the YIMs. The effectiveness of the InConnection approach was examined in a quasi-experimental study, which is presented in *Chapter 5*. We examined the effectiveness of InConnection in comparison to care as usual for youth from multi-problem families on several youth and parental outcomes, including youth resilience. This chapter also examined potential working mechanisms as mediators of treatment effectiveness. Our third aim

was to better understand the links between pandemic-related stress, support and mental health in multi-problem families during the Covid-19 pandemic. The pandemic potentially impacted both families' mental health as well as their possibilities for receiving support. Therefore, in *Chapter 6* we study the concurrent associations between experienced formal and informal support, pandemic-related stress, and mental health of youth and parents from multi-problem families at multiple timepoints during the Covid-19 pandemic. Finally, the findings of this dissertation are discussed in *Chapter 7*, and concluding remarks and recommendations for future research and practice are provided.

Natasha Koper, Roos M. van der Heijden, Sophie Donk, Thao Kieu, Hanneke E. Creemers, Levi van Dam, Susan Branje, & Geert Jan J. M. Stams

Author contributions

Koper, van der Heijden, Donk, Creemers, van Dam, Branje and Stams contributed to the design of the study. Koper, van der Heijden and Donk performed the literature search and selected studies for inclusion. Koper, van der Heijden, Donk and Kieu were responsible for coding. Stams supervised the processes of the literature, selection and coding. Koper wrote the manuscript in close collaboration with all authors. All authors read and approved the final manuscript.

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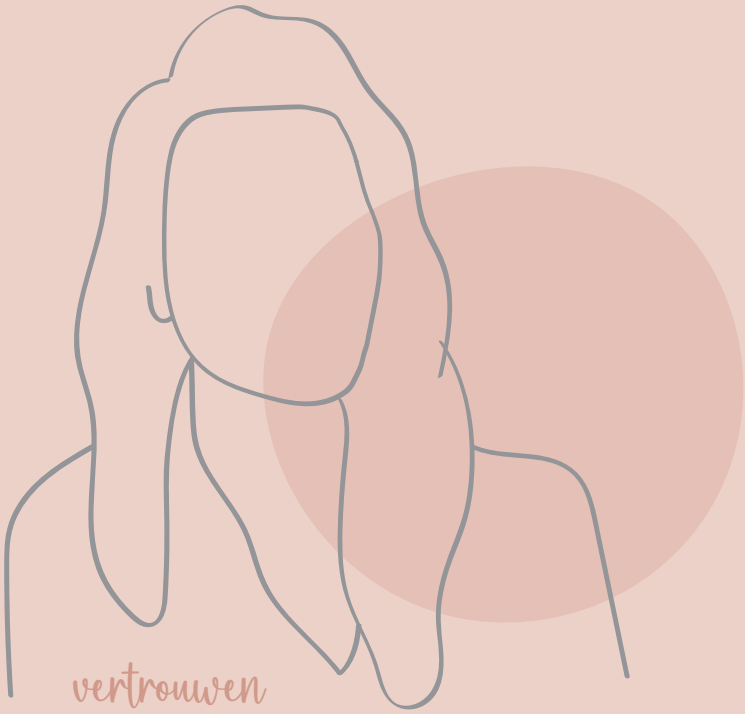
Chapter 2

THE EFFECTIVENESS OF INTERVENTIONS FOR YOUTH THAT ACTIVATE THE SOCIAL NETWORK: A META-ANALYTIC STUDY



Abstract

Introduction: Activating and utilizing the resources in social networks by engaging social network members in youth interventions may enhance effectiveness while reducing the involvement of professionals. This meta-analysis aims to examine the effectiveness of interventions for youth that activate the social network for improving youth outcomes (i.e., academic and work functioning, externalizing problems, psychological problems, family functioning and child safety, and social functioning). **Methods:** A literature search yielded 37 studies with 35 independent samples (N = 712,269) of youth aged 0-26 years (M = 7.20). From these studies, 409 effect sizes could be extracted. We conducted a three-level meta-analysis to control for the dependency among effect sizes within studies. **Results:** Overall, we found no effect of interventions activating the social network (d = 0.11, p = .241). Yet, moderator analyses revealed circumstances under which such interventions were effective in improving youth outcomes. Positive effects were demonstrated for youth-initiated mentoring interventions (d = 0.46), youth deciding who to involve (d = 0.52), interventions that involve only one person (d = 0.56), European samples (d = 0.40), interventions targeting youth with mental health needs (d = 0.75), data retrieved through questionnaires (d = 0.10) and official records (d = 0.14), assessments completed by professionals (d = 0.34) or parents (d = 0.17), and outcomes that were corrected for pre-test differences between conditions (d = 0.27). **Discussion:** This meta-analysis demonstrates that social network activation matters for intervention effectiveness under specific conditions. Our findings show that youth-initiated mentoring interventions, in which youth themselves select who to involve, and in which only one person from the social network is involved, was most effective in promoting positive youth outcomes. Additionally, interventions that activate the social network were more effective in youth with mental health needs. These results can be used to improve interventions.

Keywords: meta-analysis, social network activation, intervention effectiveness, youth outcomes

Childhood adversity and mental health problems are associated with various adverse outcomes, including substance abuse, low quality of life and suicidality during adulthood (e.g., Brown et al., 1999; Lee et al., 2011; McLaughlin et al., 2012; Simon et al., 2009). Psychological care is considered the primary resource to help prevent and reduce many of these mental health problems in youth (Weisz et al., 2005). Although youth (mental health) care in general has beneficial effects, not all interventions are effective (Howick et al., 2022; Weisz et al., 2017) and thus, interventions or the conditions under which they are provided should be improved (Weisz et al., 2017; Weisz, Ugueto, et al., 2013). One of the avenues to achieve this is by making use of the youth's and its primary caregiver's social network, because social support offered by extended family and other very important persons outside the family (i.e., VIPs, including friends, peers and neighbors) is associated with resilience and positive youth development (Sarason & Sarason, 2009; Southwick et al., 2006; Ungar, 2011; van Dam, Smit, et al., 2018). From here onwards, we will refer to this support system as 'social network'.

Activating and utilizing the resources in social networks by engaging social network members in youth interventions may be promising, because it may enhance effectiveness while reducing the involvement and time investment of professionals. Indeed, a meta-analysis indicated that interventions for promoting family wellness that focused on building parents' social networks were more effective than interventions without such element (MacLeod & Nelson, 2000), and recent (meta-analytic) reviews on a youth-initiated mentoring (YIM), an intervention program with social network involvement, also found positive effects (Dantzer & Perry, 2022; van Dam et al., 2020). However, other overview studies failed to demonstrate positive effects of specific programs that activate the social network, that is, family-group decision making (FGDM; Dijkstra et al., 2016; McGinn et al., 2020) and multi-family program Families and Schools Together (FAST; Valentine et al., 2019). Since no recent systematic quantitative review (i.e., meta-analysis) exists that includes all types of interventions that involve the social network in order to prevent or reduce mental health problems in youth, and because the evidence of extant reviews is unequivocal, this meta-analysis examined the effectiveness of youth interventions that activate the social network compared to forms of interventions that do not involve the social network, and what moderates this effectiveness.

Activating the social network in interventions

Engaging the social network in interventions to promote youth outcomes can be a promising approach for two reasons. First, engaging the social network in interventions is thought to contribute to the fulfillment of the basic needs for self-determination (autonomy, competence, and relatedness; Ryan & Deci, 2000), which may be expected to promote motivation and subsequently the effectiveness of the intervention (Krause, 1966; van der Helm et al., 2018). Engagement of the social network facilitates shared decision-making about self-concordant treatment goals (Bartelink et al., 2015) and how to achieve these goals from the perspective of *autonomy*, it fosters self-experienced *competence* by emphasizing what clients can achieve by themselves with their own social environment, and strengthens feelings of *relatedness* with their network (Ashida et al., 2019; Chan et al., 2013; van Dam et al., 2020). Second, engaging the social network in interventions is assumed to result in increased social support and higher quality relationships (e.g., Ashida et al., 2019; Chan et al., 2013; van Dam et al., 2020). As these relationships are likely to endure after the interventions ends (Zimmerman, 2005), they are thought to enhance resilience, or the ability to recover from adversity (Ungar, 2011), by acting as a protective factor during times of crisis (Ozbay et al., 2007; Southwick et al., 2006; Ungar, 2011).

This potentially leads to less future care use.

In summary, interventions that involve the youth's social network may promote treatment motivation, foster higher quality relationships and social support, which can help alleviate problems. These interventions can be differentiated from treatments that target social network problems, such as multisystemic therapy or multidimensional family therapy, by their focus on *utilizing* the resources in existing social support networks outside the nuclear family rather than improving the social network by reducing interaction problems (Baldwin et al., 2012). Thus, this meta-analysis focused on the effectiveness of youth interventions in which the social network is utilized through its strength rather than the network being the target of the treatment itself.

Moderators of intervention effects

In addition to assessing overall effectiveness of social network engagement in youth interventions, the aim of this study was to identify who benefits most from these interventions and under which circumstances, by examining moderators of intervention effects. Four categories of moderators were examined: program characteristics, sample characteristics, outcome characteristics, and study quality characteristics.

Program characteristics

Studying program characteristics, such as intervention type, duration and method of involvement of the social network, as moderators of effectiveness, can help understand which intervention types are most effective.

Programs vary in who and how many people from the social network are involved, and who chooses to involve whom. That is, interventions vary in who is involved, for example family members (Dijkstra et al., 2016; McGinn et al., 2020), or school staff and peers (Valentine et al., 2019). Some interventions allow anyone to be involved regardless of their role or type of relationship, such as in youth-initiated mentoring (Dantzer & Perry, 2022; van Dam et al., 2020) and some family group decision-making programs (Dijkstra et al., 2016; McGinn et al., 2020). Moreover, child-centered interventions may promote youth to have close contact with one person (Dantzer & Perry, 2022; van Dam et al., 2020), whereas family-centered interventions may include components in which different parties with an interest in the youth's wellbeing are gathered without the youth necessarily having close contact with the people engaged (Dijkstra et al., 2016; McGinn et al., 2020). Thus, the number of people involved varies greatly, ranging from one person (van Dam et al., 2020) to a maximum of around 30 people (Dijkstra et al., 2016; McGinn et al., 2020). We expect that it is more effective to involve one person rather than several people, based on the mechanism of diffusion of responsibility (Darley & Latane, 1968; Fischer et al., 2011). That is, if one person holds responsibility, the task will be taken more seriously, whereas if multiple people are involved, they may believe that others from the group will take responsibility, which can result in a situation where no one takes action, because everyone is waiting for someone else to act. Thus, we expect that if one or relatively few people are involved, they are more likely to act (Darley & Latane, 1968; Fischer et al., 2011), thus making these programs more effective than interventions involving more people.

Furthermore, we expect that if youth themselves make the decision on whom to involve, this increases their sense of autonomy, which subsequently stimulates their treatment motivation, which thus contributes to more effective interventions (Ryan & Deci, 2000). Therefore, we expect that treatment motivation and consequently intervention effectiveness is lower in programs in which youth cannot choose who to involve, for example because their parents makes this decision

(Dijkstra et al., 2016; McGinn et al., 2020), or people become involved because they belong to the same social group (e.g., classmates, Valentine et al., 2019).

Sample characteristics

By examining sample characteristics such as age, socioeconomic status (SES), gender, and region as moderators, we gain insight in for whom interventions with a social network component work best. For example, interventions with a social network component may be more effective for adolescents than for children, because youth become more autonomous and create relationships independently from their parents during adolescence (Spear & Kulbok, 2004). Perhaps youth benefit more from interventions if they autonomously involve individuals from their social network.

Another example is that social network involvement in interventions may be more effective depending on youth's SES background. That is, low SES families may be less likely to find and involve someone from the network who is well able to assist or engage in an intervention for youth (Schwartz & Rhodes, 2016), as they have less social support and social capital (American Psychological Association, 2006; Leventhal & Brooks-Gunn, 2000). This might result in a higher effectiveness for high and average SES youth than for low SES youth. Alternatively, low SES youth may have more to gain from interventions as they experience more problems (Mclaughlin et al., 2012), thus resulting in greater effects compared to high SES youth.

Assessment characteristics

Intervention effectiveness may be influenced by outcome or assessment characteristics, such as type of assessment and informant. For example, assessment types could influence intervention effectiveness due to response bias (Shadish et al., 2002). That is, if a researcher is present during data collection, such as in interviews, people are less likely to disclose socially undesirable information and report higher levels of program satisfaction to accommodate the researcher (Ford et al., 1997; Gnambs & Kaspar, 2014). Hence, we expect that data collected through interviews yield larger effect sizes than questionnaire data and official reports.

Study quality characteristics

Intervention effectiveness may vary depending on characteristics that make up the quality of a study, such as study design, type of control group, and sample size, as these factors have consistently shown to affect meta-analytic results (Cheung & Slavin, 2016). For example, studies with a more robust design like a randomized-controlled trial (RCT) may yield smaller effect sizes than quasi-experimental studies (Farrington, 2003), as groups are generally less comparable in quasi-experimental studies (Shadish et al., 2002). Furthermore, quasi-experimental studies can be retrospective, and may only include participants who completed the intervention, which is a select group. In comparison, RCTs generally include all participants who started the intervention, including those who did not complete it, and thus include participants in the evaluation who likely did not benefit (Farrington, 2003). Thus, we expect to find larger effect sizes in studies using the completer approach compared to the intention-to-treat approach.

Additionally, we expect that studies in which the control group receives no intervention (waiting list) yield larger effect sizes than studies in which the control group receives care as usual (CAU). That is, participants receiving another form of intervention are more likely to improve during the study than untreated participants (Shadish et al., 2002).

Finally, we expect that the quality of older studies is lower compared to more recent studies due to statistical and methodological advances in social science research over the last decades.

Additionally, studies that have been published in journals with high impact factors may report larger effects than unpublished studies due to publication bias (Cheung & Slavin, 2016; Saha et al., 2003).

Current study

In this study, we aimed to gain knowledge on the effectiveness of youth care interventions with a social network component, and on the impact of potential moderators of effectiveness. For this purpose, a literature search was conducted to trace relevant studies. A three-level meta-analytic design was used, allowing the extraction of multiple effect sizes from individual primary studies. In this way, a comprehensive understanding of the effectiveness of social network involvement in interventions for youth is provided.

Method

Study selection

The literature search included English-language peer-reviewed studies and (unpublished) dissertations and reports about interventions for youth in which the social network is involved. A number of criteria were specified to determine whether studies could be included in this meta-analysis. First, interventions should be focused on youth (0-26 years) to be included. That is, interventions that do not have youth as (primary) client (e.g., parent training programs) were not included. Second, interventions had to include at least one component of social network involvement. This component should be an essential and integral part of the intervention, hence, the engagement of the social network should not be optional or recommended. The social network should be involved to provide youth and/or parents with support, and interventions that aim to change dysfunctional dynamics in the social network (such as family therapy) were excluded. Likewise, interventions that are led by the social network (e.g., peer-led or teacher-led) were also excluded. Moreover, interventions that only engaged the immediate family (parents, siblings and other members of the household), and no other members of the social network, were not considered for this study. Third, only controlled studies were included. Although RCTs can be regarded as the "golden standard" in effectiveness studies (Farrington, 2003), we decided to include any experimental study with a control group to increase the power, enhance generalizability of the results, and to reduce the risk of missing relevant results. Fourth, studies had to report on youth outcomes, such as social and emotional competencies, psychological or behavioral functioning and child safety. Sixth and finally, studies had to report or provide statistics suitable for meta-analyses, or sufficient statistical information that is required for calculating an effect size manually (e.g., proportions or mean scores and standard deviations).

We conducted a literature search through Ovid in electronic databases ERIC and PsycInfo using a search string with five elements: 1) social network component; 2) intervention; 3) target group; 4) research design; and 5) youth outcome. The complete search strategy is shown in Appendix A. This search strategy resulted in 6303 records. Next, we identified more potentially relevant primary studies using snowballing. We inspected reference lists of meta-analyses and systematic reviews (Allan et al., 2021; Dijkstra et al., 2016; McGinn et al., 2020; Valentine et al., 2019; van Dam et al., 2020) and studies found through the electronic search. These additional sources resulted in 73 records. After deduplicating, these search strategies resulted in a list of 5979 studies, which were screened by the first, second and third authors in Rayyan (Ouzzani et al., 2016) according to the aforementioned inclusion criteria. Studies were most frequently excluded because the interventions were not youth-focused and/or did not include a social network component. We

excluded 13 studies because full texts were unavailable. A total of 37 studies, with 35 independent samples, and 409 effect sizes met the inclusion criteria. The study selection process is presented in a flowchart in Figure 1. Table 1 shows the characteristics of the included studies.

Coding studies and potential moderators

To code relevant study characteristics, a coding instrument was developed based on the coding instruments of Dijkstra et al. (2016) and van Dam et al. (2020). The coding was done by the first, second, third, and fourth authors with continuous support from the last author. During the coding process there were regular meetings with the team during which ambiguities, disagreements and inconsistencies were discussed. The codebook can be found in Appendix B.

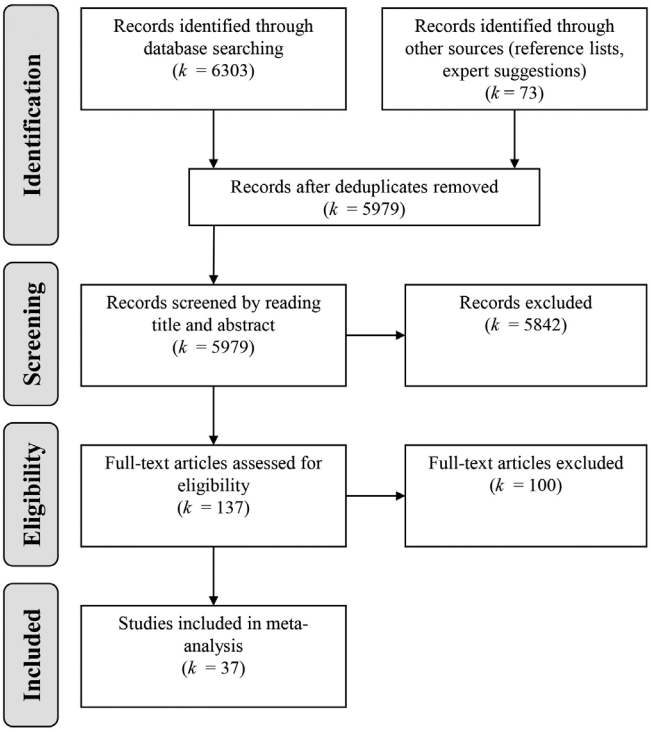


Figure 1. *Flowchart of the Study Selection Process*

Program characteristics

Intervention program characteristics were coded by the nature of the intervention (universal preventive, selective preventive, indicative preventive, curative), program context (child welfare, mental health care, law enforcement, or community/school), program duration (in sessions and in months), whether the intervention was a youth-initiated mentoring, family group decision-making or multi-family program (yes, no), whether youth themselves decide on who to involve (yes, no), the types of people that are involved (extended family, school, peers, and neighborhood), the number of people that are involved (one person, multiple people), and the percentage of

participants from the experimental group in which social network engagement was successful, which served as a measure of fidelity.

Table 1. *Characteristics of Included Studies*

Study	Intervention	Design	*n*	No. of outcomes	No. of ES
Baffour, 2006	FGDM	RCT	292	1	1
Berzin, 2006	FGDM	QE	327	3	4
de Vries et al., 2017	NP	RCT	101	11	22
de Vries et al., 2018	NP	RCT	101	9	18
Dijkstra et al., 2019	FGDM	RCT	328	7	22
Edwards et al., 2006	FGDM	QE	680	1	3
Greeson & Thompson, 2017	YIM	RCT	17	11	11
Hauken et al., 2018	CPP	RCT	35	2	2
Hollinshead et al., 2017	FGDM	RCT	503	3	3
James et al., 2016	NP	RCT	127	21	21
Jeong et al., 2012	FGDM	RCT	782	2	2
King et al., 2006	YIM	RCT	197	17	28
King et al., 2009	YIM	RCT	448	15	17
King et al., 2019	YIM	RCT	448	2	2
Knox et al., 2011	FAST	QE	282	4	10
Kratochwill et al., 2004	FAST	RCT	100	5	20
Kratochwill et al., 2009	FAST	RCT	134	5	20
Lambert et al., 2017	FGDM	QE	613,180	1	1
Leon et al., 2016	FF	QE	458	4	4
McGarrell & Hipple, 2007	FGDM	RCT	782	2	9
Millenky et al., 2010	NGYCP	RCT	3,074	55	55
Millenky et al., 2014	NGYCP	RCT	1,173	12	12
Onrust et al., 2015	FGDM	QE	124	1	1
Pennell et al., 2010	FGDM	QE	649	1	1
Reekers et al., 2018	SoS	QE	38	5	5
Rushovich et al., 2021	FGDM	RCT	1,423	5	13
Sheets et al., 2009	FGDM	QE	4,066	1	1
Sundell & Vinnerljung, 2004	FGDM	QE	239	8	8

Teal, 2013	FGDM	QE	755	2	2
Tijms et al., 2018	BBC	RCT	90	1	2
Turley et al., 2017	FAST	RCT	3,084	2	4
van Dam et al., 2017	YIM	QE	200	1	1
van Dam, Klein Schaarsberg, et al., 2018	YIM	QE	42	3	3
Vandivere et al., 2017	FF	RCT	568	38	63
Wang et al., 2012	FGDM	QE	80,690	1	1
Weigensberg et al., 2009	FGDM	QE	650	6	6
Wingrove & Weisz, 2005	FGDM	QE	66	2	2

Note. ES = effect size; FGDM = family group decision making; NGYCP = National Guard Youth Challenge program; NP = New Perspectives; YIM = youth-initiated mentoring; CPP = Cancer PEPSONE Program; FAST = Families And Schools Together; FF = Family Finding; SoS = Signs of Safety; BBC = Bibliotherapeutic Bookclub; QE = quasi-experimental trial; RCT = randomized-controlled trial.

Sample characteristics

The following sample characteristics were coded: continent, level of risk, special populations (juvenile offenders, mental health needs), gender, ethnicity, age, SES, and family composition. The continent was coded as the continent from which the sample originated. Level of risk was coded as low risk (normative samples) or high risk (samples with apparent pre-existing risk factors). Additionally, two special populations were identified, that is, juvenile offenders and youth with mental health needs (yes, no). Gender was operationalized as the percentage of boys in the sample, and age as the mean age. We coded the percentage of ethnic minorities in the sample as a measure of ethnicity. SES was coded as predominantly low, or predominantly average or high based on education, job and income of youth and/or their parents. We calculated the percentage of intact families as a measure of family composition.

Assessment characteristics

The following assessment characteristics were coded: the outcome domain (1=academic/work functioning: school, work, executive functioning; 2=externalizing problems: aggression, delinquency, conduct problems; 3=family functioning/child unsafety: child unsafety, child maltreatment, out of home placements, service use; 4=physical health; 5=psychological problems: internalizing problems, substance use, unhealthy coping; and 6=social: social support, social skills), assessment type (questionnaire, interview, official record, observation), information source (youth, parents, school, combination, staff, official record), time of assessment (post-test, follow-up), and the number of weeks after the intervention ended. For each outcome, we coded the *n* per group and corresponding effect size.

Study quality characteristics

The following study quality characteristics were coded: year of publication, whether a study was peer-reviewed (yes, no), journal impact factor, Q-rank, sample size, non-response, study design (RCT or quasi-experimental, and retrospective or prospective), whether the effect size is corrected for pre-test levels (yes, no), intention-to-treat (yes, no), and control condition (CAU, no care).

Calculation and analysis of effect sizes

Cohen's *d* was calculated to establish the effectiveness of social network involvement in youth interventions based on differences between youth receiving interventions containing a social network component and youth receiving regular care or no care. Following the criteria of Cohen (1988), an effect size of $d = 0.20$ was considered small, an effect size of $d = 0.50$ was considered medium and an effect size of $d = 0.80$ was considered large. In most cases, Cohen's *d* was computed based on means, standard deviations, *t*, *F*, χ^2 or a one-tailed *p*-value using formulas of Lipsey and Wilson (2001).

All coded data and calculated effect sizes were entered in SPSS version 26. Before the analyses were performed, categorical variables were recoded into dummy variables for each category of a variable and continuous variables were centered around their mean.

To examine the overall effect of interventions involving the social network, a multi-level meta-analysis was performed as most of the included studies assessed more than one outcome. To account for dependency of the effect sizes from the same study a three-level meta-analytic approach was used. This approach results in a better estimation of effects and more statistical power compared to a traditional meta-analytic approach (Bijleveld & Commandeur, 2009). An advantage is that multiple variables can be tested as potential moderators of the overall effect (Assink & Wibbelink, 2016).

Three sources of variance are modeled in a three-level meta-analysis: (1) the sampling variance of the observed effect sizes, (2) the variance between effect sizes obtained from the same study, and (3) the variance between studies. To determine whether the variance on the second (within-study) and/or third (between-study) level was significant, two one-sided log-likelihood-ratio tests were conducted (Assink & Wibbelink, 2016). Significant variance at level two or three indicates heterogeneity in the effect size distribution, meaning that the overall mean effect size is not a correct estimate of a common effect size. In such cases, moderator analyses can be performed in an attempt to explain within-study and/or between-study heterogeneity in effect sizes.

All analyses were conducted in *R* (version 4.0.5, R Core Team, 2016) using the metafor package (Viechtbauer, 2010), and the syntax by Assink and Wibbelink (2016). All model parameters were estimated using the restricted maximum likelihood estimate in random effects meta-analytic models, using a 5% significance level. The Knapp and Hartung adjustment (2003) was used in testing the significance of individual regression coefficients, implying that the significance of coefficients was tested using the *t*- and *F*-distributions rather than the *z*-distribution. Moderator analyses were conducted to test the moderating effect of the selected sample characteristics on the overall effect of the interventions. Finally, a multiple moderator model was tested, including all significant moderators to examine the unique impact of each moderator.

Publication bias

A common problem in performing meta-analyses is that studies may not have been published because of non-significant or unfavorable findings, the so-called "file drawer problem", resulting in publication bias (Rosenthal, 1979). We obtained unpublished material as best as possible, which is the simplest solution to publication bias (Mullen, 2013). To examine the potential presence of publication bias, we applied three methods. First, we used Egger's (1997) regression test to test publication bias. Following Fernández-Castilla et al. (2021), an adapted version of the Egger's test was used, accounting for dependency of effect sizes, to test the association between the effect size and the standard error. The standard error of the effect size was included as a moderator in the regression model.

Second, we used an extension of the funnel plot test for use in three-level meta-analyses (Fernández-Castilla et al., 2021), formally testing funnel plot asymmetry. Following the guidelines by Fernández-Castilla et al. (2020), we depict both funnel plots of effect sizes and plots of study effects. Effect sizes missing in the lower-left part of the funnel plot indicates publication bias. In a funnel plot of study effects, separate random-effects meta-analyses are conducted on each study, resulting in a dot based on the sample size and the number of effect sizes within the study.

Third, we performed the trim-and fill-method (Duval & Tweedie, 2000a, 2000b), testing whether effect sizes are missing on the left side of the distribution, indicating publication bias. Previous simulation studies have shown that effect size estimates based on imputation of effect sizes after the trim-and-fill procedure may not be accurate (Fernández-Castilla et al., 2021; Peters et al., 2007). Therefore, we used the trim-and-fill procedure as outlined by Fernández-Castilla et al. (2021), which estimates the number of effect sizes imputed at the right side or left side of the distribution to examine whether the overall effect size estimates were sensitive to potential presence of publication bias. Fernández-Castilla et al. (2021) have proposed a method in which the estimated number of effect sizes on the left side of the funnel plot distribution is related to a cutoff value of the estimator of the trim-and-fill method, based on the population effect size and power (number of effect sizes). If the number of imputed studies exceeds the cutoff value, this may be indicative of publication bias.

Results

Descriptive characteristics

The current meta-analysis consisted of 37 studies, with 35 independent samples, and 409 effect sizes. The samples consisted of 712,269 participants in total. There were two studies with extremely large samples ($n > 5{,}000$), namely Wang et al. (2012) $n = 80{,}690$, and Lambert et al. (2017) $n = 613{,}180$. Samples consisted of youth aged 0-26 years ($M = 7.20$), and 52.7% boys on average. Most samples came from North-America (71.4%), and some from Europe (28.6%). Almost all samples included at-risk youth populations (94.1%), such as youth with mental health needs (17.1%) and juvenile offenders (11.4%). Studies were published between 2004 and 2021. Most studies had a RCT ($k = 21$, 56.8%) as study design, others had a quasi-experimental design ($k = 16$, 43.2%). Intention-to-treat was the most common analytic design ($k = 16$, 43.2%), other studies were analyzed using completer-analysis ($k = 14$, 37.8%), or did not mention the analysis strategy ($k = 7$, 18.9%). The studies examined various program types involving the social network, such as youth-initiated mentoring, family group decision-making, and multi-family programs (see Table 2).

Table 2. *Number of Studies and Effect Sizes per Intervention Type*

	YIM	FGDM	Multi-family	Other	Total
# Studies (%)	11 (29.7)	20 (54.1)	4 (10.8)	2 (5.4)	37
# ES (%)	190 (46.5)	147 (35.9)	69 (16.9)	3 (0.7)	409

Note. # studies = number of studies; # ES = number of effect sizes; YIM = youth-initiated mentoring; FGDM = family group decision making.

Overall effect and heterogeneity in effect sizes

Overall, interventions with social network involvement for youth were not significantly more effective than interventions without such component, $d = 0.11$, 95% CI [-0.07; 0.29], $t(408) = 1.17$, $p = .241$ (see Table 3 for detailed model results and Appendix C for the forest plot). The one-sided log-likelihood ratio tests showed that significant variance was present both at level 2 and level 3 of the meta-analytic model, $\chi^2(2) = 2922.30$, $p < .001$, and $\chi^2(2) = 84.12$, $p < .001$, respectively. Of the total variance, 23.2% was distributed at the within-study level (level 2), and 75.2% at the between-study level (level 3). Random sampling error accounted for 1.6% of the total variance.

Table 3. *Overall Effect of Interventions Involving the Social Network on Youth Outcomes*

k	*#ES*	Mean *d* (*SE*)	95% *CI*	*p*	$\sigma^2_{level\ 2}$	$\sigma^2_{level\ 3}$	% $\sigma^2_{level\ 1}$	% $\sigma^2_{level\ 2}$	% $\sigma^2_{level\ 3}$
37	409	0.11 (0.09)	-0.07, 0.29	.241	0.08	0.25	1.61	23.20	75.19

Note. *k* = number of studies; *#ES* = number of effect sizes; Mean *d* = mean effect size (Cohen's *d*); *SE* = standard error; *CI* = confidence interval; $\sigma^2_{level\ 2}$ = variance between effect sizes extracted from the same study; $\sigma^2_{level\ 3}$ = variance between studies; % σ^2 = percentage of variance distributed.

Publication bias

The significant Egger's test ($b = -3.57$, $z = -4.58$, $p < .001$) and the visual inspection of the funnel plots (Figures 2 and 3) showed some indication of publication bias. However, publication bias is not confirmed in the formal test of funnel plot asymmetry ($b = 0.00$, $z = -0.92$, $p = .356$). Moreover, further funnel plot analysis shows that there are no effect sizes that could or should be imputed on the left or right side of the funnel to restore symmetry. Since publication bias was unlikely, imputation of effect sizes was not necessary.

Sensitivity analyses

We conducted two types of sensitivity analyses to check the robustness of the overall effect. First, we winsorized the effect sizes for seven outlying effect sizes (one positive and six negative) that exceeded a *Z*-score of 3.3 (Tabachnick & Fidell, 2013). The analysis including the winsorized effect sizes produced an overall effect of $d = .03$, 95% CI [-0.05; 0.11], $t(408) = 0.73$, $p = .467$. This effect size is somewhat below our initial estimated overall effect ($\Delta d = -0.08$), but it lies within the confidence interval of the initial effect size, indicating that the outliers did not significantly influence our results.

Second, we performed a sensitivity analysis excluding two studies with extremely large samples ($n > 5{,}000$), namely Wang et al. (2012) $n = 80{,}690$, and Lambert et al. (2017) $n = 613{,}180$. The analysis excluding these studies produced an overall effect of $d = .13$, 95% CI [-0.06; 0.31], $t(406) = 1.30$, $p = .194$. This effect size is very similar to our initial estimated overall effect ($\Delta d = 0.02$) and lies within its confidence interval, indicating that the two large samples did not significantly influence our results. Therefore, we continued with the original, untransformed data including all studies in the following moderator analyses.

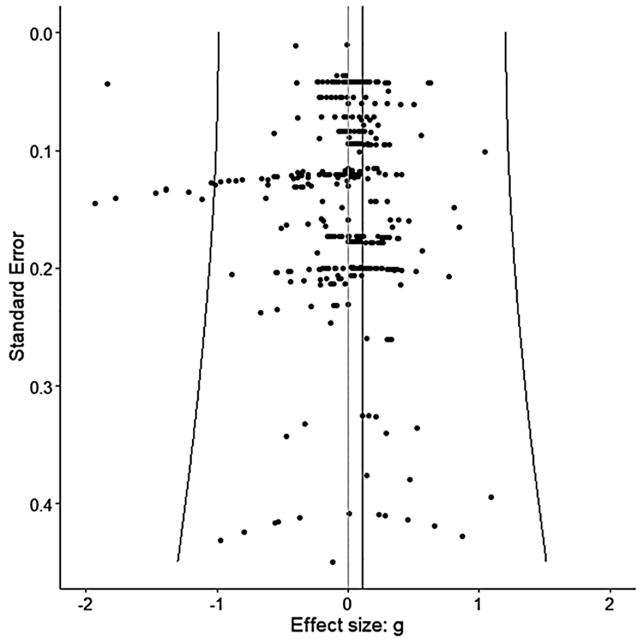


Figure 2. *Funnel plot of effect sizes*

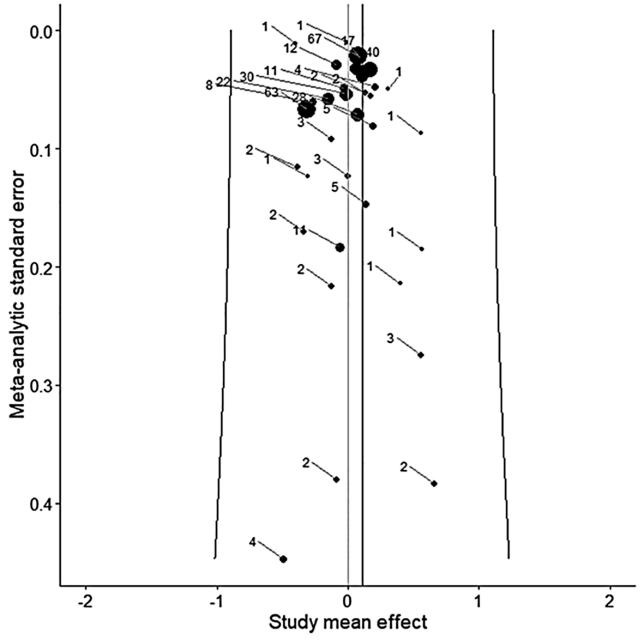


Figure 3. *Funnel plot of study effects*

Moderator analysis bivariate models

Program characteristics

Three program characteristics influenced the effectiveness of interventions in which the social network is activated. First, intervention type was a significant moderator. That is, interventions involving a form of youth-initiated mentoring (d = 0.46) yielded small to medium intervention effects (Cohen, 1988), whereas interventions without mentoring (d = -0.03) were not effective, $F(1, 407) = 6.51$, $p = .011$. There was no effect for family group decision-making ($p = .134$) and multi-family interventions ($p = .488$). Second, interventions in which youth decide themselves who to involve (d = 0.52) were more effective than interventions in which other parties decide (d = -0.03), $F(1, 379) = 7.11$, $p = .008$. Third, interventions involving just one person from the social network (d = 0.56) was more effective than interventions involving multiple people (d = -0.02), $F(1, 407) = 7.60$, $p = .006$. The effects of interventions in which youth decide and interventions involving just one person were medium in size (Cohen, 1988).

The remaining program characteristics did not moderate the intervention effects, that is, intervention nature ($p = .822$), context ($p = .228$), the number of sessions ($p = .636$), duration (in months, $p = .787$), who is involved from the social network ($ps \geq .446$), and the percentage of participants from the experimental group in which social network engagement was successful ($p = .246$).

Sample characteristics

Only two sample characteristics significantly moderated the effectiveness of interventions that activate the social network. First, the continent from which samples originated moderated intervention effects, $F(1, 407) = 4.34$, $p = .038$. That is, intervention effects were small (Cohen, 1988) in European samples (d = 0.40), whereas there were no intervention effects in North-American samples (d = -0.01). Second, while the overall risk level of the sample did not moderate intervention effects ($p = .718$), effects were significantly moderated by whether a sample included youth with mental health needs. That is, interventions were more effective for youth with mental health needs, than those without, $F(1, 407) = 14.01$, $p < .001$. The effect sizes indicated that interventions for youth with mental health needs (d = 0.75) were medium to large (Cohen, 1988), whereas interventions for other youth was not effective (d = -0.03). The effectiveness did not vary for samples with and without juvenile offenders, $p = .679$.

Other sample characteristics did not moderate the effectiveness, that is, gender ($p = .974$), age ($p = .151$), SES ($p = .381$), ethnicity ($p = .180$), and family composition ($p = .235$).

Assessment characteristics

Assessment type and information source were significant moderators of intervention effectiveness. First, intervention effects were smaller if data were retrieved through interviews (d = -0.08), than through questionnaires (d = 0.10) and official records (d = 0.14), $F(2, 406) = 5.04$, $p = .007$. Yet, all effects were (very) small (Cohen, 1988). Second, information source was significant, indicating that intervention effects were larger if assessments were completed by professionals (d = 0.34) or parents (d = 0.17), or if data were retrieved from official records (d = 0.15), compared to assessments completed by youth (d = -0.06), school staff (d = 0.06), or a combination of information sources (d = 0.00), $F(5, 403) = 4.06$, $p = .001$. The effects were small for assessments completed by professionals, and very small for parent-reported data and official records (Cohen, 1988).

Outcome domain ($p = .793$), timing of assessment ($p = .770$), and the number of weeks after ending the intervention ($p = .565$) did not significantly moderate intervention effectiveness.

Study quality characteristics

Effect sizes were significantly larger if the effect size was corrected for differences between the intervention and control conditions at pre-test, $F(1, 406) = 10.72$, $p = .001$. That is, effect sizes were non-significant if they were not corrected ($d = 0.03$), and small in size if they were corrected for pre-test differences ($d = 0.27$), which points to a self-selection effect.

The other study quality characteristics did not moderate intervention effectiveness, that is, publication year ($p = .098$), peer-reviewed studies ($p = .243$), impact factor ($p = .497$), Q-rank ($p = .987$), sample size ($p = .357$), non-response ($p = .482$), study design ($p = .098$ for RCT vs. quasi-experimental, and $p = .213$ for retrospective vs. prospective), intention-to-treat as analytic method ($p = .358$), and control condition ($p = .246$). See Table 4 for the results of all moderator analyses.

Table 4. *Results of the Moderator Analyses*

Moderator	# samples	# ES	β_0 / Mean *d* (95% *CI*)	β_1 (95% *CI*)	$F(df_1, df_2)$	*p*
Program characteristics						
Program nature					0.31 (3, 405)	.822
Universal preventive	3	64	-0.14 (-0.76, 0.47)			
Selective preventive	3	47	0.10 (-0.53, 0.74)	0.25 (-0.64, 1.13)		
Indicative preventive	1	1	0.40 (-0.85, 1.65)	0.55 (-0.85, 1.94)		
Curative	28	297	0.13 (-0.08, 0.34)	0.28 (-0.37, 0.92)		
Program context					1.45 (3, 403)	.228
Child welfare	18	144	-0.02 (-0.26, 0.23)			
Mental health care	10	183	0.39 (0.07, 0.71) *	0.41 (0.01, 0.81) *		
Law enforcement	1	10	0.25 (-0.21, 0.71)	0.27 (-0.25, 0.79)		
Community / school	5	70	0.01 (-0.45, 0.46)	0.03 (-0.49, 0.54)		
Program duration (sessions)	7	47	0.06 (-0.12, 0.24)	0.10 (-0.03, 0.05)	0.23 (1, 45)	.636
Program duration (months)	13	232	0.04 (-0.13, 0.20)	-0.00 (-0.03, 0.03)	0.07 (1, 230)	.787
YIM program					6.51 (1, 407)	.011
Not YIM	26	219	-0.03 (-0.22, 0.17)			
YIM program	9	190	0.46 (0.14, 0.77) **	0.48 (0.11, 0.86) *		
FGDM program					2.25 (1, 407)	.134
Not FGDM	17	329	0.24 (-0.01, 0.49)			
FGDM program	18	80	-0.03 (-0.28, 0.22)	-0.27 (-0.62, 0.08)		

Moderator	# samples	# ES	β_0 / Mean *d* (95% *CI*)	β_1 (95% *CI*)	*F* (df_1, df_2)	*p*
Multi-family program					0.48 (1, 407)	.488
Not multi-family	31	340	0.13 (-0.06, 0.33)			
Multi-family program	4	69	-0.06 (-0.57, 0.45)	-0.19 (-0.74, 0.35)		
Youth decides					7.11 (1, 379)	.008
Youth do not decide	26	219	-0.03 (-0.23, 0.17)			
Youth decide	8	162	0.52 (0.17, 0.86) **	0.54 (0.14, 0.94) **		
Extended family involved					0.20 (1, 407)	.655
Extended family not involved	5	70	0.01 (-0.47, 0.48)			
Extended family involved	30	339	0.13 (-0.07, 0.32)	0.12 (-0.40, 0.63)		
School involved					0.11 (1, 407)	.745
School not involved	5	36	0.04 (-0.44, 0.51)			
School involved	30	373	0.12 (-0.08, 0.32)	0.09 (-0.43, 0.60)		
Peers involved					0.58 (1, 407)	.446
Peers not involved	8	177	-0.02 (-0.39, 0.35)			
Peers involved	27	232	0.15 (-0.06, 0.36)	0.16 (-0.26, 0.59)		
Neighborhood involved					0.02 (1, 407)	.897
Neighborhood not involved	5	87	0.08 (-0.39, 0.55)			
Neighborhood involved	30	322	0.11 (-0.09, 0.31)	0.03 (-0.48, 0.56)		

Moderator	# samples	# ES	β_0 / Mean *d* (95% *CI*)	β_1 (95% *CI*)	$F(df_1, df_2)$	*p*
Number of people involved					7.60 (1, 407)	.006
Multiple people	28	280	-0.01 (-0.20, 0.17)			
One person	7	129	0.56 (0.19, 0.92) **	0.57 (0.16, 0.98) **		
% successful involvement	19	260	0.16 (-0.21, 0.54)	0.76 (-0.53, 2.06)	1.35 (1, 258)	.246
Sample characteristics						
Continent					4.34 (1, 407)	.038
North-America	25	305	-0.01 (-0.21, 0.20)			
Europe	10	104	0.40 (0.07, 0.73) *	0.41 (0.02, 0.80) *		
Level of risk					0.13 (1, 407)	.718
Low risk	3	10	0.00 (-0.63, 0.63)			
High risk	32	399	0.12 (-0.07, 0.31)	0.12 (-0.54, 0.78)		
Juvenile offenders					0.17 (1, 407)	.679
No juvenile offenders	31	336	0.12 (-0.07, 0.32)			
Juvenile offenders	4	73	0.00 (-0.52, 0.53)	-0.12		
Mental health needs					14.01 (1, 407)	<.001
No mental health needs	29	357	-0.03 (-0.19, 0.14)			
Mental health needs	6	52	0.75 (0.37, 1.12) ***	0.78 (0.37, 1.18) ***		
Gender (% boys)	25	305	0.19 (-0.08, 0.47)	-0.01 (-0.49, 0.48)	0.00 (1, 303)	.974
Ethnicity (% ethnic minority)	24	325	0.03 (-0.06, 0.12)	-0.21 (-0.51, 0.10)	1.80 (1, 323)	.180
Age	24	192	0.33 (0.01, 0.65) *	0.04 (-0.02, 0.10)	2.08 (1, 190)	.151

Moderator	# samples	# ES	β_0 / Mean *d* (95% *CI*)	β_1 (95% *CI*)	$F(df_1, df_2)$	*p*
SES					0.77 (1, 166)	.381
Average or high SES	4	33	0.14 (-0.13, 0.40)			
Low SES	10	135	0.00 (-0.17, 0.16)	-0.14 (-0.45, 0.17)		
Family composition (% intact)	5	123	0.03 (-0.10, 0.15)	0.54 (-0.36, 1.44)	1.42 (1, 121)	.235
Assessment characteristics						
Outcome domain					0.48 (5, 403)	.793
Academic/work functioning	7	32	0.17 (-0.05, 0.38)			
Externalizing problems	12	74	0.14 (-0.07, 0.34)	-0.03 (-0.18, 0.12)		
Family functioning/child safety	19	119	0.12 (-0.08, 0.31)	-0.05 (-0.21, 0.10)		
Physical health	1	6	0.08 (-0.22, 0.38)	-0.09 (-0.34, 0.17)		
Psychological problems	16	128	0.08 (-0.12, 0.27)	-0.09 (-0.23, 0.05)		
Social	9	50	0.11 (-0.10, 0.31)	-0.06 (-0.21, 0.08)		
Assessment type					5.03 (2, 406)	.007
Questionnaire	16	258	0.10 (-0.10, 0.29)			
Interview	4	60	-0.08 (-0.30, 0.14)	-0.18 (-0.34, -0.02) *		
Official record	22	91	0.15 (-0.05, 0.33)	0.05 (-0.08, 0.18)		

Moderator	# samples	# ES	β_0 / Mean *d* (95% *CI*)	β_1 (95% *CI*)	$F(df_1, df_2)$	*p*
Information source					4.06 (5, 403)	.001
Youth	10	213	-0.06 (-0.26, 0.14)			
Parents	8	44	0.17 (-0.06, 0.40)	0.23 (0.06, 0.41) *		
School staff	3	38	0.06 (-0.22, 0.33)	0.12 (-0.12, 0.36)		
Professionals	5	20	0.34 (0.07, 0.60) *	0.40 (0.16, 0.64) **		
Combination	3	5	0.01 (-0.36, 0.37)	0.07 (-0.26, 0.39)		
Official record	21	89	0.15 (-0.04, 0.34)	0.21 (0.09, 0.33) ***		
Time of assessment					0.09 (1, 403)	.770
Post-test	25	193	0.10 (-0.09, 0.29)			
Follow-up	17	212	0.11 (-0.08, 0.31)	0.01 (-0.08, 0.11)		
Number of weeks after the intervention ended	32	330	0.14 (-0.08, 0.35)	0.00 (-0.00, 0.00)	0.33 (1, 328)	.565
Study quality characteristics						
Year of publication	35	409	0.11 (-0.07, 0.28)	0.02 (-0.00, 0.05)	2.74 (1, 407)	.098
Peer-reviewed					1.37 (1, 407)	.243
Not peer-reviewed	5	65	0.02 (-0.21, 0.25)			
Peer-reviewed	30	344	0.12 (-0.06, 0.30)	0.10 (-0.07, 0.27)		
Journal impact factor	30	344	0.11 (-0.09, 0.31)	0.02 (-0.03, 0.06)	0.46 (1, 342)	.497
Q-rank					0.00 (1, 341)	.987
Q1	14	217	0.01 (-0.12, 0.13)			
Q2	15	126	0.01 (-0.17, 0.17)	0.00 (-0.11, 0.12)		

Moderator	# samples	# ES	β_0 / Mean *d* (95% *CI*)	β_1 (95% *CI*)	*F* (df_1, df_2)	*p*
Sample size	35	409	0.12 (-0.06, 0.30)	-0.00 (-0.00, 0.00)	0.85 (1, 407)	.357
% of non-response	17	304	0.00 (-0.09, 0.09)	0.09 (-0.16, 0.34)	0.50 (1, 302)	.482
Study design (trial)					2.75 (1, 407)	.098
Quasi-experimental	16	41	0.28 (0.01, 0.54) *			
Randomized-controlled trial	19	368	-0.02 (-0.25, 0.21)	-0.30 (-0.64, 0.06)		
Study design (prospective)					1.56 (1, 405)	.213
Prospective	25	391	0.07 (-0.12, 0.26)			
Retrospective	9	16	0.27 (-0.04, 0.56)	0.20 (-0.11, 0.51)		
Effect size corrected for pre-test differences					10.72 (1, 406)	.001
Not corrected	22	232	0.03 (-0.16, 0.22)			
Corrected	13	176	0.27 (0.06, 0.47) *	0.24 (0.10, 0.38) **		
Analysis method					0.85 (1, 326)	.358
Completer	15	87	0.08 (-0.15, 0.32)			
Intention-to-treat	13	241	0.17 (-0.06, 0.41)	0.09 (-0.11, 0.29)		
Control condition					1.35 (1, 407)	.246
No care	5	93	0.02 (-0.21, 0.25)			
Care as usual	30	316	0.12 (-0.06, 0.30)	0.10 (-0.07, 0.27)		

Note. # samples = number of samples; # ES = number of effect sizes; β_0 = intercept; Mean *d* = mean effect size (Cohen's *d*); *CI* = confidence interval; β_1 = Regression coefficient; *F* = *F*-statistic (omnibus test); *df* = degrees of freedom; *p* = *p*-value of the omnibus test.
* $p < .05$; ** $p < .01$; *** $p < .001$

Multiple moderator model

We tested a multiple moderator model to determine the unique contribution of the significant moderators in the bivariate models. We excluded the variable official record as information source, as it overlaps with the variable official record as assessment type.

The omnibus test was significant, indicating that the moderators significantly explained the heterogeneity in intervention effects, $F(12, 367) = 4.46$, $p < .001$. Yet, there was still significant residual heterogeneity, $p < .001$. Only one individual moderator was significant, that is, whether effect sizes were corrected for pre-test differences between conditions, $p = .020$. None of the other moderators were significant in this model, $ps \geq .059$. See Table 5 for the results of the multiple moderator model.

Table 5. *Results of the Multiple Moderator Model*

Moderator variables	β (*SE*)	95% *CI*	*t*-statistic
Intercept	-0.10 (0.10)	-0.30, 0.10	-0.97
YIM program	-0.03 (0.36)	-0.73, 0.68	-0.07
One person involved	0.35 (0.47)	-0.57, 1.26	0.75
Country Europe	0.20 (0.21)	-0.21, 0.62	0.96
Mental health needs	0.68 (0.36)	-0.03, 1.38	1.89
Assessment type: Questionnaire	0.06 (0.32)	-0.58, 0.69	0.18
Assessment type: Interview	-0.11 (0.33)	-0.76, 0.53	-0.35
Information source: Youth	-0.25 (0.32)	-0.88, 0.38	-0.78
Information source: Parent	-0.09 (0.33)	-0.74, 0.55	-0.28
Information source: School staff	-0.13 (0.34)	-0.80, 0.53	-0.40
Information source: Professionals	-0.06 (0.34)	-0.73, 0.60	-0.18
Information source: Combination	-0.25 (0.29)	-0.81, 0.31	-0.88
Effect size corrected for pre-test differences	0.22 (0.09) *	0.04, 0.40	2.34
$F\ (df_1, df_2)$	4.45 (12, 367) ***		
$\sigma^2_{level\ 2}$	0.07 ***		
$\sigma^2_{level\ 3}$	0.17 ***		

Note. β = estimated regression coefficient; *SE* = standard error; *CI* = confidence interval, *F* = *F*-statistic (omnibus test); *df* = degrees of freedom; $\sigma^2_{level\ 2}$ = variance between effect sizes extracted from the same study; $\sigma^2_{level\ 3}$ = variance between studies. Two variables were ignored in the analysis, i.e., *youth decides* and *assessment type: official record*, therefore, the results of these variables are not presented.

* $p < .05$; ** $p < .01$; *** $p < .001$

Discussion

The aim of this three-level meta-analysis was to gain insight in the overall effectiveness of youth interventions that activate the social network, and the impact of potential moderating variables. This study is the first comprehensive meta-analysis including all types of youth interventions that involve the social network in order to prevent or reduce mental health problems in youth. This meta-analysis represents a synthesis of 37 studies with 35 independent samples and 409 effect sizes. Overall, we found that interventions in which the social network was activated were not more effective than interventions without this component. Moderator analyses revealed eight significant moderators of intervention effectiveness, yielding larger effects for youth-initiated mentoring interventions, youth deciding who to involve, interventions that involve only one person from the social network, European samples, interventions targeting youth with mental health needs, data retrieved through questionnaires and official records, assessments completed by professionals or parents, and outcomes that were corrected for pre-test differences between conditions.

Although we expected larger effects for interventions with a social network component, the lack of an overall effect for youth interventions that activate the social network is in line with various previous meta-analyses that found that such interventions yielded either small (Dantzer & Perry, 2022; MacLeod & Nelson, 2000; van Dam et al., 2020) or no effects (Dijkstra et al., 2016; McGinn et al., 2020; Valentine et al., 2019). Yet, despite the lack of an overall effect, we found several conditions under which interventions with social network components were effective, suggesting that the effectiveness of such interventions depends on the way the intervention is implemented, the target group at which the intervention is directed, and the way the effects are measured.

Moderators of intervention effects

Moderator analyses revealed three intervention characteristics that moderated intervention effects. Similar to recent (meta-analytic) reviews on youth-initiated mentoring (Dantzer & Perry, 2022; van Dam et al., 2020), we found that youth-initiated mentoring interventions had a small to medium effect, whereas other forms of interventions were not effective in promoting positive youth outcomes. Youth-initiated mentoring is a child-centered program, and promotes youth to have close contact with one person (van Dam et al., 2020). This method of social network activation can stimulate the youth's feelings of relatedness (Ryan & Deci, 2008) and social resourcefulness (Schwartz et al., 2017), which, in turn, have been shown to be related to positive intervention outcomes (Chan et al., 2013; Rhodes et al., 2005).

The finding that youth-initiated mentoring interventions were more effective than other interventions activating the social network may also be explained by two other moderators of intervention effects, that is, whether youth decide who to involve, and how many people are involved in the intervention. Intervention effects were larger for interventions in which youth decide who to involve, and for interventions in which just one person was involved, which are both the case in youth-initiated mentoring and less likely in other forms of interventions. Autonomy may explain why interventions in which youth decide themselves who to involve were more effective than interventions in which other parties decide. Youth are more likely to experience autonomy if they are given the freedom to decide who to involve in the intervention. Autonomy is linked to increased treatment motivation, which subsequently contributes to greater intervention effects (Ryan & Deci, 2000). In most intervention types the parents – not the youth – choose who to involve, which may explain why we did not find any intervention effects on youth outcomes for the other intervention types.

Youth-initiated mentoring interventions involve just one person, which was found to be more effective than involving multiple people in social network interventions. This may be explained through the mechanism of diffusion of responsibility (Darley & Latane, 1968; Fischer et al., 2011). Research indeed indicated that youth-initiated mentors aim to be pro-active in their role, and aim to act in the best interest of the youth (Koper et al., 2021). Another possible explanation for the effectiveness of interventions that involve just one person is the concept of collective intelligence, which is the general ability of a group of people to perform well in different tasks (Woolley et al., 2010), and has been found to be present in small groups of two to five people (Woolley et al., 2010, 2015).

We found that intervention effects were larger in certain samples. Intervention effects were small but significant in European samples, whereas there were no intervention effects in North-American samples, which was a surprising effect, for which we do not have a clear explanation. The difference could potentially be explained by factors such as cultural differences or differences in social and demographic living conditions (e.g., OECD, 2022). Future research should focus on pinpointing in what (cultural) environment youth interventions with a social network component work best.

Interventions yielded medium to large effects in samples of youth with mental health needs, whereas interventions were not effective in other samples. This finding is in line with other meta-analyses demonstrating that intervention effects are generally larger if problems are more severe at the start of the program (e.g., Stice et al., 2009; van Loon et al., 2020). However, our results indicated that this did not hold for the level of risk in general: Neither overall risk level nor the nature of the intervention (i.e., preventative vs. curative interventions) moderated effectiveness. Moreover, intervention effects did not vary depending on whether juvenile offenders were present in the sample. Thus, interventions in which the social network is activated seem especially beneficial for youth with mental health needs, as opposed to at-risk populations in general. There are two possible explanations for this finding, namely the importance of social connectedness for mental health, and overlap with other moderators. Research has repeatedly confirmed the importance of social support and connectedness for mental health (Harandi et al., 2017), including youth mental health (e.g., DuBois & Silverthorn, 2005; Sterrett et al., 2011; van Dam, Smit, et al., 2018). Thus, it can be expected that youth with mental health needs in particular benefit from the social support offered in interventions with a social network component. Alternatively, the effect could be explained by the overlap with another moderator. That is, all but one study in samples with youth with mental health needs examined the effectiveness of youth-initiated mentoring interventions, which proved to be the only effective intervention type in this meta-analysis.

Our moderator analyses revealed several assessment characteristics that impacted the effectiveness of interventions with a social network component. First, results indicated that both assessment type and information source were moderators of intervention effects. Effects were smaller if data were retrieved through interviews than through questionnaires and official records, which was contrary to our hypothesis. Yet, all effects were (very) small. Second, intervention effects were larger if assessments were completed by professionals or parents, or if data were retrieved from official records, compared to assessments completed by youth, school staff, or a combination of information sources. The effects were small but significant for assessments completed by professionals, and very small for parent-reported data and official records. These differences may be explained by youth wanting to give a favorable presentation of themselves (Breuk et al., 2007), and school staff showing a tendency to give a favorable presentation of their students with psychological or behavioral problems in order to avoid negative labeling (Stams et

al., 2000), thereby underestimating problems at pre-test assessments, which unduly reduces the chance of finding intervention effects at post- or follow-up assessments. On the contrary, helping professionals and parents may overestimate positive intervention effects, because positive treatment outcomes may serve positive and rewarding professional self-evaluations, and give parents feelings of hope and expectancy, and motivation to continue their efforts and treatment.

Finally, intervention effects were small but significant if effect sizes were corrected for pre-test differences between the intervention and control conditions, whereas there was no effect if the effect size was not corrected. This may seem contradictory, since we could expect that more robust designs in which effect sizes are corrected yield smaller effects (Farrington, 2003). Yet, Shadish et al. (2000) argue that selection effects that can be present in non-randomized designs (Hariton & Locascio, 2018) may explain why effect sizes were larger if outcomes were corrected for pre-test differences. That is, if youth in the intervention condition experience more problems before starting care than youth in control conditions, and these differences are not corrected in effect size estimations, this causes bias and underestimation of effects (Hariton & Locascio, 2018).

Strengths, limitations and future directions

Our meta-analysis has several noteworthy strengths. First, applying a multi-level approach to meta-analysis is a strong method using all available data while dealing with dependency of effect sizes (Assink & Wibbelink, 2016). Effect sizes that stem from the same study sample are likely dependent, as they are obtained in a similar context and with the same study procedures. Ignoring the correlation between effect sizes may lead to flawed inferences due to underestimation of standard errors, which in turn increases the likelihood of false positives (Hedges & Olkin, 2014). Three-level models properly accounted for the dependency among effect sizes within studies (Assink & Wibbelink, 2016). Additionally, we used publication bias tests appropriate for multi-level meta-analyses (Fernández-Castilla et al., 2020, 2021). Second, the high number of included studies increases the statistical power of this meta-analysis. Hox (2017) recommends to include at least 20 studies, which is amply exceeded with an inclusion of 37 studies in this meta-analysis.

This meta-analysis also has several noteworthy limitations. First, some studies lacked information on program, sample, and assessment characteristics, including the sample's SES, program duration and program fidelity. This limited the possibilities to conduct robust moderator analyses. It is important that future studies investigating intervention effects report sufficient information about the program, sample and study, in order to further determine what works for whom and under what circumstances (Kraemer et al., 2002).

Second, detailed information on the control groups was lacking in many studies. That is, studies reported if the control groups received CAU or no care, but it was often unclear what CAU entailed, how CAU differed from the intervention condition, and how high treatment fidelity was. This limits our certainty that the CAU control group interventions did not activate the social network, which could potentially result in biased outcomes, possibly underestimating the impact of interventions that activate the social network. However, we found no moderating effect of the type of control condition (CAU vs. no care), giving us confidence in the accuracy of our results.

Third, although almost half of the included studies included follow-up assessments, not many followed youth up for longer than two years (i.e., 17 effect sizes). By including long-term assessments, potential sleeper effects (i.e., effects that increase further over time) could be observed. Future studies should include more follow-up assessments to examine the effects of interventions that activate the social network over longer periods of time.

Conclusion

This meta-analysis showed that, overall, youth interventions that activate the social network do not outperform care as usual in improving youth outcomes. However, youth-initiated mentoring interventions, interventions in which youth decide who to involve, and interventions involving only one person from the social network, showed positive outcomes. Additionally, interventions that activate the social network were more effective in European samples and youth with mental health needs, as well as in studies in which data were collected through questionnaires or official records, or in which assessments were completed by professionals or parents. Thus, the way in which the social network is activated in interventions matters for its effectiveness. According to our findings, youth-initiated mentoring seems the most promising method of social network activation in interventions to promote positive youth outcomes. It seems that interventions that aim to promote positive youth outcomes by activating the social network should do so by giving youth autonomy to select who to involve, and by involving only one person to enhance intervention effects.

Appendix A: Search strategy

Literature search performed through Ovid electronic databases ERIC and PsycINFO.

1. Social network

social network or social networks or communit* or support network or support networks or natural mentor* or informal mentor* or natural youth mentor* or informal youth mentor* or naturally acquired mentor* or naturally occurring mentor* or community mentor* or non-parental adult* or nonparental adult* or peer leader* or school-based mentor* or informal connection* or informal network or informal networks or YIM or youth initiated mentor* or youth-initiated mentor* or youth nominated support team or youth-nominated support team or family group or family team meeting* or family decision making or family decision-making or team decision making or team decisionmaking or family-to-family or family to family or family unity meeting or family team meeting or family meeting or FGC or FACT or flexible assertive community treatment or assertive community treatment or SNAP or "Stop Now And Plan" or National Guard Youth Challenge Program or New Perspectives or family finding or assertive continuing care or family critical time intervention or social capital intervention

2. Intervention

intervention* or treatment* or program* or therap* or care or project evaluation

3. Target group

newborn* or new-born* or infan* or baby* or babies or toddler* or child* or kid or kids or prepubescen* or prepuberty* or preadolesc* or pubescen* or puberty or teen* or adolesc* or juvenile* or under ag* or underag* or youth* or girl* or boy*

4. Research design

RCT* or randomized controlled trial* or randomized-controlled trial* or randomised controlled trial* or randomised-controlled trial* or randomized design or randomised design or experiment* or control group* or control condition* or comparison group or trial* or randomly assigned or random assignment or intent-to-treat*

5. Youth outcome element

internal* or anxi* or depress* or stress or external* or aggress* or delinq* or crime* or criminal* or recidiv* or "substance use" or substance abuse or "drug use" or drug abuse or "alcohol use" or alcohol abuse or out-of-home or out of home or wellbeing or well-being or resilien* or school function* or school drop-out or school drop out or academic achievement or truancy or educational outcome* or youth care or child care or youth welfare or child welfare or youth protect* or child protect* or maltreatment or child abuse or mental disorder* or psychological disorder* or psychiatric disorder* or mental illness* or personality disorder* or ADHD or mood disorder* or eating disorder* or symptom* or self-harm* or selfharm* or self harm* or self-injury or self-mutilation or suicid*

6. 1 and 2 and 3 and 4 and 5 — 6303 RESULTS

Appendix B: Codebook

Category	Variable	Label
Study information	articleID	article or report ID
	studyID	study or sample ID
	effectsizeID	effect size ID
Program characteristics	program_nature	nature of the program: universal prev. (1), selective prev. (2), indicative prev. (3), or curative (4)
	program_context	context of the program: child welfare (1), mental health care (2), law enforcement (3), or community/school (4)
	YIM_program	whether the program includes YIM: no (0), yes (1)
	FGDM_program	whether the program includes FGDM: no (0), yes (1)
	multifamily_program	whether the program includes multi-family sessions: no (0), yes (1)
	program_duration	the duration of the program in months
	program_sessions	number of sessions in the program
	youth_decides	whether youth decide who to involve from the social network: no (0), yes (1)
	sn_extendedfamily	which people from the social network are engaged? extended family (e.g., aunts, uncles, grandparents) : no (0), yes (1)
	sn_school	which people from the social network are engaged? professionals from school: no (0), yes (1)
	sn_peers	which people from the social network are engaged? peers or friends: no (0), yes (1)
	sn_neighborhood	which people from the social network are engaged? neighborhood: no (0), yes (1)
	sn_number	how many people from the social network are engaged? one person (0) or multiple people (1). If one or more people can be engaged, code as '1'.
	sn_executed	percentage of participants in the experimental group in which engagement of the social network was successful and/or executed as intended
Sample characteristics	continent	continent in which the study took place: North-America (0) or Europe (1)
	risk_level	low risk (0) or high risk (1)
	juvenileoffenders	special population: juvenile offender
	mentalhealthneeds	special population: mental health needs
	perc_male	percentage male
	ethnic_min	percentage ethnic minority
	age_mean	mean age

Category	Variable	Label
	SES	socioeconomic status (SES) of youth and/or parents (scored based on education, job, and income): low (1) or average or high (2)
	fam_intact	Percentage intact families
Assessment characteristics	domain_broad	outcome domain: 1=academic/work, 2=externalizing, 3=family functioning/child safety, 4=physical health, 5=psychological, 6=social
	assessment_type	asessment type: questionnaire (0), interview (1), or official record (2)
	information_source	informant: youth (0), parent(s) (1), school (2), combination (3), professional (e.g., psychologist, social worker) (4), official record (5)
	assessment_timing	post-test (first assessment after intervention; 0), or follow-up (assessments after post-test; 1)
Study quality characteristics	assessment_weeks	number of weeks after ending the program
	year	year of publication
	peer_reviewed	not peer-reviewed (0) or peer-reviewed (1)
	impact_factor	impact factor as mentioned on journal website
	Q-rank	Q-rank (2021), 1=Q1, 2=Q2, 3=Q3, 4=Q4
	N_exp	number of participants in experimental group
	N_ctrl	number of participants in control group
	N_total	total number of participants (at pre-test)
	non-response	percentage of participants who have not completed the study
	design_RCT	study design: quasi-experimental (0) or randomized (RCT) (1)
	design_prospective	study design: retrospective (0) or prospective (1)
	intention_to_treat	analyses including drop-outs (intention-to-treat; 1) or excluding drop-outs (completer; 0) (drop-outs = did not complete the program)
	control_condition	condition of the control group: no care/waitlist (0) or care as usual (CAU; 1)
Effect sizes	ES	effect size
	ES_corrected	is the variable 'effect size' corrected for the effect size at pre-test? no (0), yes (1)
	stderr	standard error
	v	variance

Appendix C: Forest plot

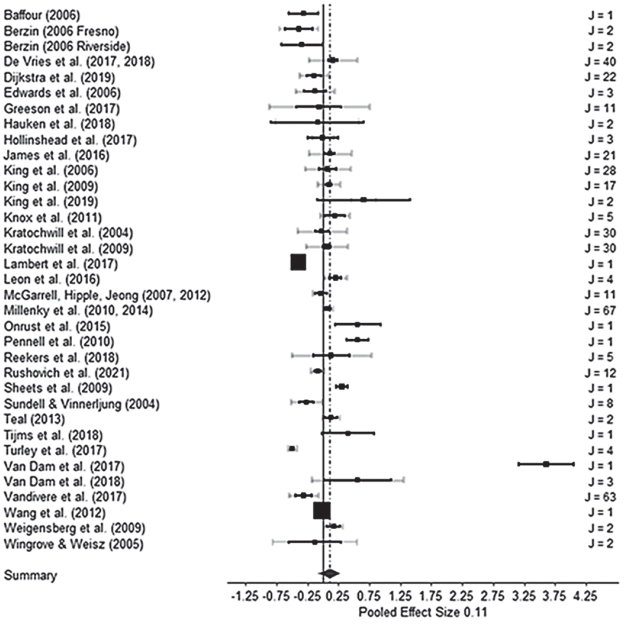


Figure 1. *Forest Plot of Effect Sizes per Independent Sample*

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Author contributions
Van Dam obtained funding for the study. All authors contributed to the design of the study. Koper coordinates the recruitment of participants and data collection during the study. Creemers and van Dam supervised the process. Koper wrote the manuscript in close collaboration with all authors. All authors read and approved the final manuscript.

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Chapter 3

EFFECTIVENESS AND WORKING MECHANISMS OF THE INCONNECTION APPROACH IN MULTI-PROBLEM FAMILIES: STUDY PROTOCOL OF A MIXED-METHODS STUDY

Abstract

Background: Multi-problem families face problems in several domains that are often found to be chronic and intergenerational. Effective mental health care for youth from these families is currently lacking, urging research on new methods. The InConnection approach is an integrated care program to improve resilience in multi-problem families by connecting the professional expertise from multiple disciplines with the informal social network of the youth. Specifically, youth are asked to nominate a *youth initiated mentor* (YIM) from among the supportive adults in their network. The aim of this protocol is to describe the design of a mixed-methods study to examine the effectiveness and working mechanisms of the InConnection approach. **Method/ Design:** The effectiveness of the InConnection approach is studied in a quasi-experimental questionnaire study using propensity score matching, with N = 300 families with youth aged 10-23 years receiving treatment in either the intervention group (InConnection approach) or the control group (care as usual). The main outcome variables include youth resilience (*primary*), youth mental health, parental functioning, and the number, duration and types of out-of-home placements. Mediators, moderators, and predictors of effectiveness are examined. Assessments take place at the start of the care program and after three, nine and 15 months. Additionally, semi-structured interviews are conducted with families who have and have not nominated a YIM to understand why some families successfully nominate a YIM, whereas others do not. **Discussion:** Effective care for youth in multi-problem families is urgently needed. Given its flexibility and accessibility to suit all youth aged 10-23 years from multi-problem families, and its low costs compared to out-of-home placements, the InConnection approach seems an appealing approach to support these families. The current study will provide information on the effectiveness of the InConnection approach. Strengths of this study include its robust design, the ecological validity, and the inclusion of possible mediators, predictors, and moderators of treatment effects.

Trial registration: Netherlands Trial Register NL7565. Retrospectively registered on March 5 2019.

Keywords: effectiveness, InConnection approach, mixed-method, multi-problem youth, quasi-experimental trial, Youth Initiated Mentoring

Multi-problem families face several problems, which are often chronic and intergenerational, and which occur in multiple domains, such as psychosocial functioning, family functioning, mental health, financial situation and functioning in their social networks (Bodden & Deković, 2016; Tausendfreund et al., 2016). Such problems may place the child's development at risk (Cicchetti & Lynch, 1993): Children in multi-problem families experience more internalizing and externalizing behavior problems and a lower quality of life compared to children in the general population (Bodden & Deković, 2016). Not surprisingly, both parents and children in multi-problem families receive more mental health care, have a longer history of care, and receive more intensive care, such as out-of-home placements, than parents and children in the general population (Bodden & Deković, 2016). Despite the frequency and intensity of care offered to multi-problem families, there is no convincing evidence for the effectiveness of care for youth in multi-problem families in general (Weisz et al., 2017), nor for (residential) out-of-home care for youth in particular (Strijbosch et al., 2015; Vinnerljung & Sallnäs, 2008). Given the severe and chronic difficulties faced by multi-problem families and the lack of effect of existing treatment programs for these families, evidence-based care approaches are urgently needed.

Care as usual for multi-problem families

Treatment for multi-problem families is commonly systemic or family based. These treatment programs generally provide individualized care in multiple domains, strive to actively involve the family system in decision making, and take place in the least restrictive environment (Knot-Dickscheit, 2006). Given the complexity of problems, multi-problem families often receive support from different care providers. This may result in fragmentation of care, hampered coordination between professionals and institutions, and single solutions for complex problems (Ghesquière, 1993; Mehlkopf, 2008; Sousa & Rodrigues, 2009). To avoid this, treatment approaches have been developed in which various forms of care can be integrated and coordinated by a case manager or family guardian who functions as the link between the family and professional care services. Examples are the 'Wraparound care' model in the United States (Malysiak, 1997), the 'Troubled Families' program in the United Kingdom (Hayden & Jenkins, 2014), and the 'One family, one plan' policy in the Netherlands (NJI, 2011). These approaches and policies integrate *formal* care systems, that is, care provided by organizations in formal settings (e.g., health care and social services), yet very few integrate formal with *informal* care systems, that is, a family's informal social network including family, friends and informal groups. As multi-problem families attract various support systems, including informal support, and strong social support networks are linked to higher levels of resilience (Smith & Carlson, 1997), that is, successful adaption in face of adversity (Ungar, 2011), treatment programs could be enhanced by promoting the coordination between formal and informal support (Sousa & Rodrigues, 2009), thus using the full potential of families' support systems.

The InConnection approach

An innovative approach has been developed that addresses this potential by actively involving a youth initiated mentor (YIM) from the youth's social network: the InConnection approach (van Dam et al., 2017; van Dam & Verhulst, 2016). The InConnection approach is a specialized care approach, and aims to increase resilience in youth in multi-problem families and prevent (repetition of) out-of-home placements. The approach has two features that distinguish the approach from care as usual for multi-problem families (van Dam & Schwartz, 2020). First, it involves care provided by a multidisciplinary team, consisting of professionals specialized in youth

and family care, psychiatry, addiction care, and care for people with mild intellectual disabilities. The InConnection approach thereby extends other approaches, as it does not only include a case manager who coordinates care from different organizations or types of expertise, but brings the different types of expertise and care together within one approach and team. This approach thus offers families direct access to a wide range of specialized treatment possibilities, depending on the family's needs (van Dam & Verhulst, 2016). Examples are youth-focused treatments, such as cognitive behavioral therapy, psychomotor therapy; caregiver and family-focused treatments, such as, parent training, trauma therapy; and multisystem treatments, such as, multisystemic therapy. Despite the different forms of treatment, families experience continuity of care as treatments are coherently organized to meet the family's needs and preferences (Valentijn et al., 2013). Integrating (mental) health care is considered to improve treatment effect and efficiency, quality of life, and client satisfaction (Valentijn et al., 2013).

Second, the InConnection approach includes an innovative method to collaborate with the youth's social network. In the first phase of the treatment, youth nominate a YIM from the supportive adults within their social networks. The YIM is a confidant and spokesperson for the youth, and a partner for parents and professionals (Schwartz et al., 2013). During treatment all members of the client system, including the YIM, actively participate in the decision-making process by giving their perspectives on desired treatment goals and contributing to reaching these goals (van Dam & Verhulst, 2016). The active participation of the client system stimulated by the InConnection approach is what makes the approach more client-focused and strength-based than care as usual. Moreover, the role of an InConnection case manager is to guide and facilitate a collaborative process that contributes to sustainable improvements, rather than directly addressing the problems in a family. As a result, the contact time of an InConnection case manager is on average 6 hours per week (van Dam & Verhulst, 2016), as compared to 10-20 hours per week in care as usual.

The InConnection approach assumes that all youth have a mentor who they can nominate as YIM. Approximately 83% of multi-problem youth treated with the InConnection approach found a YIM within 33 days (van Dam et al., 2017), suggesting that most youth do indeed have supportive adults in their social networks. Youth nominate a mentor based on aspects like personality, trustworthiness, and similarities in experiences (Spencer et al., 2016), yet is it not known why some youth do not nominate a YIM (van Dam et al., 2017). It is possible that these youth do not have bonds with adults that meet their criteria for being a YIM, or that youth may not be willing to disclose information about their problems and engagement in treatment to non-parental adults due to a lack of trust. Compared to non-clinical youth, youth of multi-problem families are more likely to have insecure attachment representations (Zegers et al., 2006), and therefore experience less trust in relationships (Simpson, 2007). To our knowledge, there is no research to date on what makes families successful in nominating a YIM.

Effectiveness of the InConnection approach

The potential of mentoring for enhancement of treatment effectiveness has been empirically supported. Research indicates that the mere presence of a mentor and participation in mentoring programs are positively associated with positive youth outcomes (Raposa et al., 2019; van Dam, Smit, et al., 2018), including resilience (Southwick et al., 2006). For example, youth who participated in treatment programs in which they nominated YIMs demonstrated better academic and vocational outcomes (Millenky et al., 2012), and reduced mortality rates (King et al., 2019) after participation. In addition, preliminary positive results of the InConnection

approach, including working with YIMs, have been found. In two studies with a total of 138 youth from multi-problem families, approximately 80-90% of youth continued to receive outpatient treatment only, despite a prior indication for out-of-home placement (van Dam et al., 2017; van Dam, Klein Schaarsberg, et al., 2018). Yet, both studies have methodological limitations, such as the lack of a control group (van Dam, Klein Schaarsberg, et al., 2018) and a retrospective quasi-experimental case-file-analysis design without measures of youth adaptivity (van Dam et al., 2017). Thus, further research is needed, with more rigorous designs to examine the effects, moderators, and mediators of the InConnection approach.

Mediators of effectiveness

Treatment mediators identify how treatments work (Kraemer et al., 2002). Three potential mediators are assumed to explain how the collaboration with the YIM in the InConnection approach results in increased youth resilience: social resourcefulness, shared decision making and treatment motivation.

The experience of a supportive relationship with a YIM may increase youth's social resourcefulness (van Dam & Schwartz, 2020), which is the ability to seek help and support from the social network. It is suggested that the positive relationship with a YIM is a safe context for youth to practice and develop their relationship skills, allowing youth to benefit more from the social ties within their networks (van Dam & Schwartz, 2020). Indeed, higher quality mentoring relationships are associated with improved relationships with other adults (Chan et al., 2013; Rhodes et al., 2005). Moreover, in a qualitative study (Schwartz et al., 2017) youth reported they felt more comfortable seeking help after participation in a mentoring program, suggesting a link between mentoring relationships and social resourcefulness. Social resourcefulness is, in turn, related to positive treatment outcomes, such as increased self-esteem, prosocial behaviors, and reductions in misconduct (Chan et al., 2013; Rhodes et al., 2005). As this mediation has only been examined in school-based programs, we will examine whether social resourcefulness mediates the link between YIM and outcomes in the context of care.

Collaboration with a YIM may increase shared-decision making with the client system and broader social network (van Dam & Schwartz, 2020). Shared-decision making means that goalsetting is done in collaboration with the client system and its social network, which is thought to result into personal goals that are set for autonomous reasons (van Dam & Schwartz, 2020). Having personal or self-concordant goals has been associated with goal progress (Koestner et al., 2002), suggesting that shared-decision making may increase treatment effectiveness. The collaboration with a YIM is thought to enhance shared-decision making, as the YIM represents the youth and actively collaborates with the case manager (van Dam & Schwartz, 2020), for example in formulating a treatment plan (van Dam & Verhulst, 2016). We thus expect that shared-decision making serves as a mediator of care effectiveness.

The positioning of and collaboration with a YIM is also suggested to contribute to treatment effectiveness through enhanced treatment motivation. It is long known that treatment motivation is an important factor for treatment effectiveness (Krause, 1966). Self-determination theory (Ryan & Deci, 2000) suggests that autonomy, competence, and relatedness, which may be present in the context of choosing a YIM, are necessary ingredients of motivation. That is, youth are supported to *autonomously* choose a YIM and participate in shared decision making, as adults such as the social worker believe youth have the *competence* to choose what is right for them. Furthermore, the positioning of a YIM increases the *relatedness* with a supportive figure (van Dam et al., 2019) and others (Chan et al., 2013; Rhodes et al., 2005). Mentors also *directly*

encourage youth to participate in treatment and achieve challenging treatment goals (Spencer et al., 2016). Thus, it is expected that youth are more motivated to engage in treatment through the positioning of a YIM.

Moderators and predictors of effectiveness

In addition to studying the working mechanisms of InConnection, studying moderators and predictors of effectiveness is needed to identify which youth profit most from the approach and under which circumstances (Kraemer et al., 2002). Client characteristics, including age, gender, ethnicity, and socio-economic status, and treatment characteristics, including duration, intensity and content of treatment, will be examined as moderators of effectiveness, because these factors are measured in both treatment groups. As previous research stresses the importance of measuring treatment integrity (Mowbray et al., 2003), and suggests that high mentoring relationship quality (Raposa et al., 2019; Rhodes, 2002; van Dam, Smit, et al., 2018), and the collaborative relationship between the YIM and case manager (van Dam & Schwartz, 2020) are associated with positive outcomes, these factors will be examined as predictors.

Aims and hypotheses

In conclusion, the InConnection approach is a promising treatment program for multi-problem youth, but its effectiveness in comparison to care as usual and potentially important mediators, moderators and predictors have not been investigated yet in a prospective multi-informant study. Similarly, reasons for not positioning a YIM and factors contributing to the successful positioning of a YIM are unknown. Information on the effectiveness, mediators, moderators, predictors, and the positioning of a YIM are assumed to be essential for treatment success.

The *Growth in Personal environment* (GRIP) study aims to generate this information. GRIP consists of 1) a prospective, quasi-experimental study to examine the positioning of a YIM, the effectiveness of the InConnection approach, and the mediators, moderators and predictors of effectiveness; and 2) a semi-structured multi-informant interview study to deepen our understanding of why youth do or do not nominate a YIM. Based on prior research and the program theory of YIM (van Dam & Schwartz, 2020), hypotheses have been formulated which will be tested with data from both studies. Figure 1 presents this study's model.

1. The InConnection approach is more effective than care as usual in promoting youth resilience (*primary outcome*), youth mental health, parent-child relationship quality, and parental functioning; and reducing the risk of child unsafety and the number and duration of out-of-home placements (*secondary outcomes*). (Study 1)
2. The effects of the InConnection approach are mediated by social resourcefulness, treatment motivation, and shared decision making; moderated by socio-demographic factors and treatment characteristics; and greater at higher levels of youth-YIM relationship quality, alliance between case manager and YIM, and adherence to the approach. (Study 1)
3. Youth with fewer problems and higher levels of social resourcefulness are more likely to nominate a YIM. (Study 1)
4. Youth who nominate a YIM do so based on the relationship quality and similarities with the YIM. We will exploratively examine why some youth do not nominate a YIM. (Study 2)

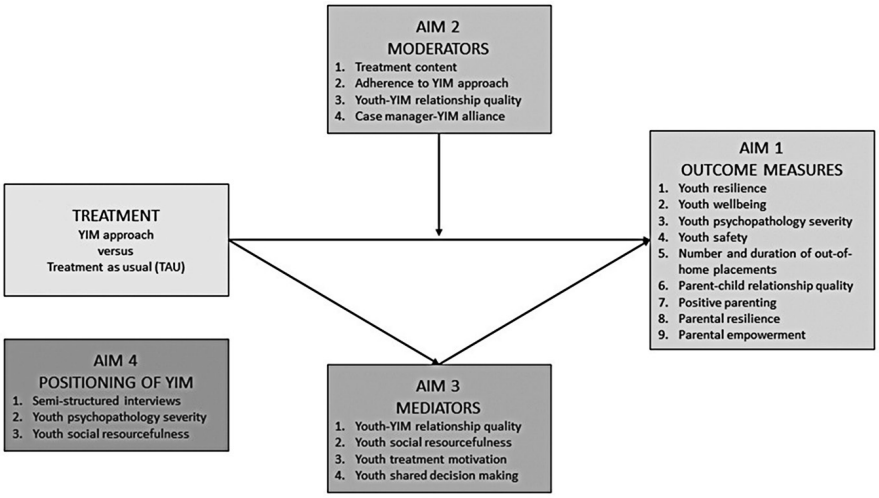

Figure 1. *Aims, treatment conditions, outcomes, and potential mediators, moderators and predictors examined in this study.*

Methods and design

The study is registered at the Netherlands Trial Register (NL7565). The design of the study is according to the guidelines of Helsinki (1964) and its later amendments, and approved by the faculty ethical review board of the Faculty of Social and Behavioral Sciences of Utrecht University (FETC-18-093). The study design is reported in accordance with the SPIRIT 2013 Statement for reporting intervention trials. Participant recruitment started on January 1, 2019 and ends October 1, 2020. The final follow-up measurements are estimated to end in January 2022.

Design

GRIP is a multi-site study performed at five organizations for youth and family care located in urban areas in the Netherlands. These organizations offer a variety of youth and family care, including – for multi-problem families – the InConnection approach and one or more other approaches for systemic outpatient care (care as usual). Multi-problem families referred to any of these organizations are offered the InConnection approach or care as usual. Allocation to care programs is non-random, as it depends on the availability of care within a specific program (sometimes programs have a waiting list and clients are therefore allocated to the other form of care) and the client's preference for the content and methods of one care program over the other.

Study sample

The inclusion criteria are families with: 1) at least one youth aged 10 to 23 years; 2) problems that are considered complex, multiple and severe, and/or previous treatments have not yielded the intended effects, and/or indication for an out-of-home placement; 3) sufficient Dutch proficiency.

Quasi-experimental study

For the quasi-experimental study, a total 300 multi-problem families ($N = 300$) will be included in this study consisting of at least one family member. If approved by the youth, the case manager and the YIM are also approached for participation in the study.

The $N = 300$ included families will consist of $n = 225$ families in the intervention group and $n = 75$ families in the control group. We have chosen for a 3:1 ratio to allow propensity score matching. Participants will be matched on the following characteristics: age, ethnicity, gender, educational level, resilience, and severity of psychopathology, which will result in two comparable groups of $n = 75$ for the analyses.

Power analyses

The number of families per group was determined by a priori power analyses using the commonly accepted power level of .80 and $\alpha = .05$. A power analysis in G*Power 3.1 (Faul et al., 2009) was performed for the research question on the overall effectiveness of InConnection in terms of primary and secondary outcomes. A total sample size of $n = 138$ is sufficient to identify small effects ($f = .10$) in repeated measures analyses of variance. We estimated the power of the analyses to examine mediation (Schoemann et al., 2017) and moderation (Hughes, 2017) of intervention effects using R (R Core Team, 2020). Our total sample size of $n = 150$ is sufficient to detect mediation in a model with medium correlations ($r = .30$), and to detect moderation in a model with $\beta = .25$. Analyses to test prediction of intervention effects and to compare youth who nominated a YIM mentor to youth who did not, will be performed using the intervention group only ($n = 225$). For the regression analyses to test prediction of effectiveness, sample sizes of $n = 52$-65 are required depending on the number of predictors to find a small effect ($f^2 = .20$) as demonstrated by power analyses in G*Power 3.1 (Faul et al., 2009). A sample of $n = 228$ is required for the *t*-test comparing youth who found a YIM to youth who did not, to find a medium effect ($d = .20$). Expectations of effect sizes were based on meta-analyses on the effects of formal (Raposa et al., 2019) and natural (van Dam, Smit, et al., 2018) mentoring, as well as empirical studies on the effects of YIM in the context of care (King et al., 2019; Millenky et al., 2012; van Dam, Klein Schaarsberg, et al., 2018).

If the data show a hierarchical structure and require multilevel analyses, we will perform an interim power analysis while recruitment is still active. To estimate power for multilevel analyses, a large number of factors must be estimated, including the means, variances, and covariances for the explanatory variables, the sample sizes at each level and the variances and covariances for the random effects. These values are notoriously difficult to estimate a priori (Scherbaum & Ferreter, 2009). Therefore, we will use an internal pilot study design to perform an interim power analysis before closing the recruitment phase to determine whether a sufficient sample size has been obtained or whether the recruitment phase should be extended (within the constraints of our project) (van Schie & Moerbeek, 2014).

Interview study

The semi-structured interviews are conducted in a subsample of the intervention group from the quasi-experimental study, whose selection is based on background characteristics, such as age, gender, ethnicity and city, by which we aim to seek the maximum variation in experiences. A total of 10-20 client systems is selected: We select five to ten client systems who nominated a YIM within six weeks after the start of the treatment, and five to ten client systems who did not nominate a YIM within this time frame.

Recruitment

It is estimated by the participating organizations that an average of 22 clients start treatment every month. Given the number of participants to be included in the study ($N = 300$), and taking into account that approximately two thirds of clients give consent for participation, we expect to complete the inclusion period within 21 months (January 2019 to October 2020).

Families that start treatment in one of the treatment groups in this study between January 1, 2019 and October 1, 2020 are informed about this study by an employee of the care providing organization, often the case manager. The employee asks verbal permission from the client system to share their contact details with the independent research team. A member of the research team then makes a phone call to the client system, informs the client of the study, and suggests to schedule an appointment with the client, parents and/or YIM to further inform them about the study. Active informed consent for participation is received from youth, parents, and YIMs for their own participation. For youth under the age of 16, active informed consent for their participation is also received from one parent. Participants will receive a financial reward of €50 for completion of the questionnaire assessments and €10 for participation in the interview. See Figure 2 for the participants' flow through the study. The frequency of non-response and drop-out will be meticulously recorded for every stage in the study.

Conditions

InConnection approach

The InConnection approach is designed as a systemic outpatient alternative to out-of-home care for youth from multi-problem families. Treatment consists of four phases: 1) *who*, 2) *what*, 3) *how*, and 4) *adaptivity* (van Dam & Verhulst, 2016). The first phase will be discussed in most detail, as this phase is unique to the InConnection approach. In contrast to most other treatment programs, the InConnection team does not start with an analysis of problems. Instead, in the first phase, that is, *who*, the case manager opens the conversation on the value of a YIM and its implications for the family and the professional. The case manager explains that a YIM is someone who is trusted by the youth, someone s/he can go to for support or advice, and/or someone who inspires the youth. The youth is asked to think about who could be this person for him/her. If necessary, the case manager provides more support in identifying a potential YIM, for example by making a social network map. Once youth have identified a potential YIM, this person is nominated by the youth and invited for a meeting with the case manager. The case manager explains what the positioning of a YIM means. If the YIM accepts the position as YIM, all parties meet to discuss issues of confidentiality, privacy, contact frequency, boundaries, and a worst case scenario, which are laid down in a plan of action. The YIM is officially installed when all parties have signed the plan of action (van Dam & Verhulst, 2016). The duration of this phase is on average one month.

In the second phase, that is, *what*, all parties give their opinion on what they would like to see changed. The case manager motivates youth, parents, and YIM to discuss the ideal situation. This information is used by the professional to make an analysis of the problem and potential solutions. In the third phase, that is, *how*, all parties work together on formulating a plan of action based on the input from the second phase. The plan of action documents the treatment goals, what support is offered by professionals, such as specialized treatment, and what support is offered by the informal network. In this phase, the plan of action is also executed, and evaluated with all parties every two months. The fourth and final phase, *adaptivity*, starts when treatment goals have been met and/or all parties feel that professional support is no longer needed. The case manager poses

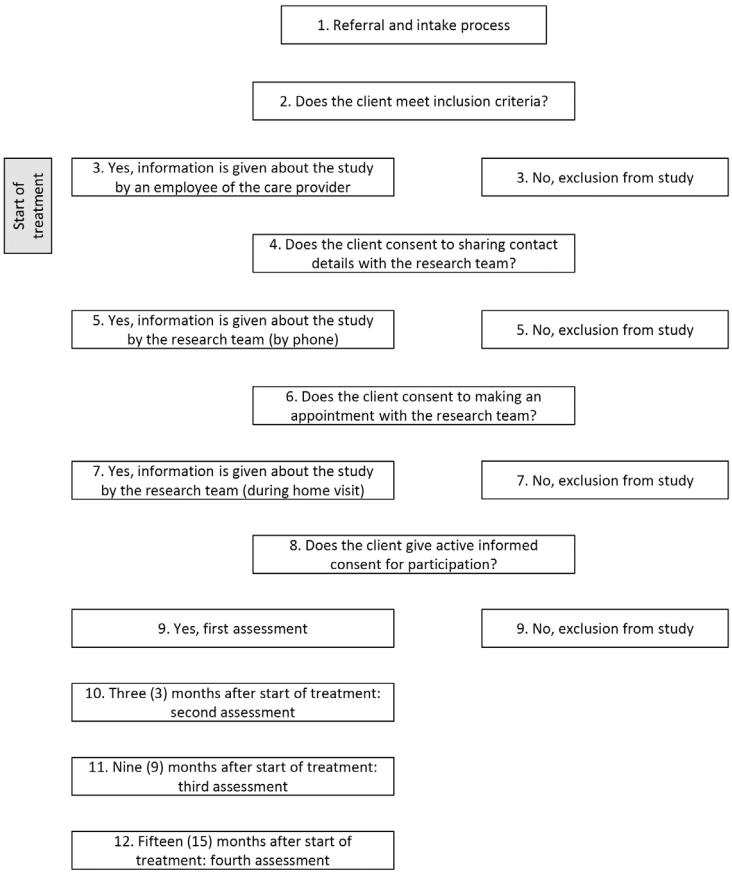

Figure 2. *Participants' flow through the study.*

several questions to the youth, parents, and YIM, such as 'what changes when professional support ends?' and 'what happens to the position of the YIM?'. Once all parties agree on how the family will proceed without professional support, the treatment is concluded (van Dam & Verhulst, 2016).

As treatment is tailored to the needs of a family, the treatment varies in duration and content. That is, for youth with more complex needs, the treatment may take 12 months or more, whereas for others the treatment may only take 6 months. To tailor the content to the family's needs, the treatment teams consist of professionals with different types of expertise: youth and family care, psychiatry, addiction care, and care for people with mild intellectual disabilities. These professionals are trained in delivering the treatment according to the InConnection approach to enhance adherence to the guidelines. The number and combination of treatment techniques used differ across families. A few examples: youth with addiction problems can be offered specialized addiction care; parents who experienced trauma can be offered specialized trauma therapy; and families that experience interpersonal conflicts can be offered systemic counselling (van Dam & Verhulst, 2016).

Care as usual

Care as usual includes different alternative outpatient treatment programs for multi-problem families. All selected treatment programs are multi-modal systemic family care programs for multi-problem youth and their parents, such as versions of (intensive) family preservation programs. Team members collaborate with other professionals involved in the family (both from within the same organization as from other organizations) to ensure integration of care. Families can thus be enrolled in several treatment programs at the same time. The average duration of the treatment programs is similar to that in the intervention group, that is, approximately six to 12 months. Short-term interventions, such as crisis interventions, are not included.

Data collection

Quantitative data collection

To assess changes in outcomes during treatment, four multi-informant (youth, parent, YIM, and case manager) assessments using questionnaires are conducted: 1) at the start of treatment; 2) after three months; 3) after nine months; and 4) after 15 months. In Table 1, concepts, measures, and informants of all administered instruments are presented. At the first assessment, the youth, parent(s) and YIM complete questionnaires at a chosen location, often at home, in the presence of a member of the research team who assists the participants in answering the questions if problems, such as reading problems, are present. If the participant is 16 years or older and does not experience problems in answering the questions, the subsequent assessments are completed online. To comply with the measures against the coronavirus taken by the Dutch government, we temporarily replaced home visits by phone and video calls. Case managers complete online questionnaires at all assessments. Each assessment takes approximately 30 minutes to complete. All questionnaires were administered in Dutch.

Primary outcome measure

The primary outcome measure is resilience of youth as measured by the self-reported Child and Youth Resilience Measure – Short form (CYRM-12), which consists of 12 items (Liebenberg et al., 2013; Ungar & Liebenberg, 2013b). Resilience is the capacity of the individual and its social and physical environment to cope with adversity (Ungar, 2011). The CYRM-12 assesses the resources (individual, relational, communal and cultural) available to individuals that may sustain their resilience. Items are rated on a 5-point scale from 1=*does not describe me at all* to 5=*describes me a lot*. Higher scores reflect higher levels of resilience. Internal consistency was satisfactory in the original Canadian sample (Liebenberg et al., 2013) and a Dutch sample (Broekhoven, 2015) (α = .84 and α = .93, respectively). The CYRM-12 showed sufficient content validity to be used as a cross-cultural screener of resilience (Liebenberg et al., 2013).

Secondary outcome measures

A broad range of secondary outcome measures will be assessed, namely youth and parental well-being, youth emotional and behavioral problems, risk of child unsafety, out-of-home placements, parent-child relationship quality, parental resilience, parental empowerment, and parenting behaviors.

Youth and parental well-being is measured using the self-reported World Health Organization Well-Being Index (WHO-5), which assesses subjective psychological well-being (WHO, 1998). Youth and parents rate 5 items on a 6-point scale from 0=*none of the time* to 5=*all the time*. Higher scores reflect higher levels of well-being. The internal consistency and validity were satisfactory

in a variety of samples (Topp et al., 2015), including a Dutch sample (α = .91-.93) (Hajos et al., 2013). The measure is deemed appropriate for cross-cultural screening purposes and to be used in clinical trials (Topp et al., 2015).

Youth emotional and behavioral problems are measured using the multi-informant Brief Problems Monitor (BPM). The BPM is the abbreviated version of the Child Behavior Checklist and monitors children's emotional and behavioral functioning (Piper et al., 2014). Youth fill out the self-report version (BPM-Y) and parents and YIMs fill out the parent version (BPM-P). Both versions consist of 19 items, which are rated on a 3-point scale from 0=*not true* to 2=*very true*. Higher scores reflect more problems. Psychometric properties of the BPM-Y (Richter, 2015) and BPM-P (Piper et al., 2014; Richter, 2015) were adequate in American and Norwegian samples: Internal consistency was high (α = .90 and α = .91, respectively) and validity was satisfactory. Dutch versions of the abbreviated and extended versions of this measure have been developed (Verhulst & Van der Ende, n.d.), but the psychometric properties of the BPM have not yet been studied in the Netherlands.

Risk of child unsafety is measured using the Actuarial Risk Assessment Tool for Protection of Juveniles (ARIJ). The ARIJ is a Dutch assessment tool for professionals to assess the future risk of unsafety of children and youth (van der Put et al., 2015). Case managers rate 32 items on a 3-point scale with 1=*yes*, 2=*no*, and ?=*unknown*. (The item "young child, <5 years old" of the original ARIJ has been excluded in this study, as youth participating in our study are 10 years or older.) The risk of future unsafety is scored as low, medium or high. The ARIJ was developed and tested in the Dutch context, and has adequate psychometric properties: The items showed adequate interrater and intrarater reliability (Vial et al., 2019).

The number, duration, and type of previous out-of-home placements experienced by the youth are assessed as part of the demographic questionnaire at the first assessment. Out-of-home placements during the study are assessed at the second, third and fourth assessment, using the same questions. Both youth and parents report on the (history of) out-of-home placements.

Parent-child relationship quality is measured using the Psychological Availability and Reliance on Adult (PARA). The PARA is designed to measure relationship quality in asymmetrical relationships, such as parent-child and mentoring relationships, from an attachment perspective. It measures three aspects of the relationship: availability, reliance, and affective bond (Zegers, 2007; Zegers et al., 2006). Youth report on the relationship with mothers and fathers separately. Parents individually report on the relationship with their child. Three items of the original affectional bond scale have been deleted, as they were not deemed appropriate for the parent-child relationship (e.g., "You dread knowing you may have another [father/mother] in the future"), resulting in a 16-item scale. Youth and parents report on the 16 items which are identical in content, but phrased from another perspective (i.e., either from the perspective of the child or the parent). Items are rated on a 4-point scale from 1=*disagree* to 4=*agree*. Higher scores reflect higher levels of parent-child relationship quality. Its internal consistency (α = .65-.81) and validity were satisfactory for most scales in a Dutch sample (Zegers, 2007).

Parental resilience is measured with the self-reported Adult Resilience Measure – Short form (ARM-12) consisting of 12 items (Ungar & Liebenberg, 2013a). The ARM-12 is an adapted version of the CYRM-12 (Liebenberg et al., 2013) for use with adults. In contrast to the CYRM-12, psychometric properties of the ARM-12 have not been examined yet.

Parental empowerment is measured using the self-reported Family Empowerment Scale (FES), which measures empowerment in families with children who have emotional, behavioral or mental disorders (Koren et al., 1992). In this study, only the Family scale that assesses parents' perception of empowerment in parenting situations is administered. Parents rate 12 items on a

5-point scale from 1=*never* to 5=*always*. Higher scores reflect greater empowerment. Validity of the Family scale was good in American (Koren et al., 1992; Singh et al., 1995) and Dutch (Segers, 2017) samples. The internal consistency has only been examined in an American sample, and was excellent (α = .98) (Singh et al., 1995).

Parenting behaviors are measured using the self-reported Alabama Parenting Questionnaire – Short form (APQ-9). The APQ-9 measures three main parenting practices in response to child behavioral problems: positive parenting, inconsistent discipline, and poor supervision (Elgar et al., 2007). Fathers and mothers report on the APQ-9 separately. The APQ-9 consists of 9 items that are rated on a 5-point scale from 1=*never* to 5=*always*. Higher scores reflect higher levels of parenting practices in a certain domain. Validity of the APQ-9 was good, but the internal consistency was low (α = .44) in an Australian sample (Elgar et al., 2007). Yet, a low internal consistency is not necessarily problematic when the purpose is to measure a broad concept using few items, like in the APQ-9. Internal consistency of the extended APQ were low to good in a Dutch sample (α = .48-.80) (Menting et al., 2014). The psychometric properties of the APQ-9 have not yet been studied in the Netherlands.

Mediators

The following potential mediator variables are assessed: social resourcefulness, shared decision making, and treatment motivation.

Social resourcefulness is assessed using the subscale Seeking Social Support of the Dutch questionnaire Utrecht Coping List (UCL). This subscale measures seeking comfort and understanding from others; to tell someone or ask for help (Schreurs et al., 1993). Youth rate the 6 items on a 4-point scale from 1=*rarely or never* to 4=*very often*. Higher scores reflect more social resourcefulness. The internal consistency and validity of the UCL were good in a Dutch sample (α = .70-.82) (Schreurs et al., 1993).

Shared decision making is measured using the Session Rating Scale (SRS), which is a brief four-item measure of therapeutic alliance. The items tap into a relational bond between the therapist and client, agreement on the goals of therapy, agreement on the tasks of therapy, and the client's view of the sessions (Duncan et al., 2015). The second and third item are used to measure shared decision making. Both youth and parents rate the items on a continuous scale of 10 cm, where the left side indicates a more negative response and the right side indicates a more positive response. Thus, higher scores reflect higher levels of shared decision making. The internal consistency and validity of the SRS including all four items were satisfactory to good in American (Duncan et al., 2015) and Dutch (Boezen-Hilberdink et al., 2014) samples (α = .88 and α = .85-.95, respectively).

Treatment motivation of youth is assessed using the self-reported Treatment Motivation Scales for Forensic Outpatient Treatment (TMS-F), which measures the motivation to engage in treatment (Drieschner & Boomsma, 2008). Youth rate the 16 items of the subscale motivation to engage in treatment on a 5-point scale from 1=*strongly disagree* to 5=*strongly agree*. Higher scores reflect greater treatment motivation. Internal consistency and validity were satisfactory in a Dutch adult sample (α = .88) (Drieschner & Boomsma, 2008). Psychometric properties have not yet been studied in youth samples.

Moderators

Two categories of potential moderator variables are assessed: socio-demographic factors and treatment characteristics.

Socio-demographic factors are self-reported by youth, parents and YIMs, and include age, gender, educational level, ethnicity, and ethnic identity. Parents and YIMs also report on their

income as a measure of socio-economic status.

Treatment characteristics are assessed using the Dutch Taxonomy of Interventions for Families with Multiple Problems (TIFMP), which is developed to register techniques that have been used in the treatment of multi-problem families (Visscher et al., 2017, 2018). The TIFMP includes 53 techniques divided over eight domains: A) assessment and organization of information; B) planning and evaluation; C) working on change; D) teaching parenting skills; E) task support; F) activation of the social network; G) activation of the professional network; H) maintaining the collaboration. The case manager indicates whether a technique has been used in the period between assessments. If relevant, the case manager indicates to whom the technique was directed (e.g., youth, parent, etc.) and whether a specific intervention has been used (e.g., cognitive behavioral therapy). The TIFMP was developed and tested in the Netherlands, and showed sufficient interrater reliability (Visscher et al., 2018).

Predictors.

The following potential predictors of effects of the InConnection approach are assessed: YIM-youth relationship quality, case manager-YIM alliance, and InConnection approach treatment integrity. These concepts are only measured in the intervention condition.

YIM-youth relationship quality is assessed using three measures: the PARA (Zegers, 2007; Zegers et al., 2006), an adapted version of the Perceptions of Parents Scale (POPS) (Niemiec et al., 2006), and a measure of frequency and intensity of contact. The PARA used to assess the YIM-youth relationship quality is similar to the one used to assess parent-child relationship quality. The only difference is the addition of one of the original items from the affectional bond scale (i.e., "It makes no difference to you who your YIM is"). The POPS measures the perception of the child about its caregiver, including its perception on autonomy support. In this study, the POPS is adjusted to measure the youth's perception of autonomy support from the YIM. Youth rate 9 items on a 5-point scale from 1=*strongly disagree* to 5=*strongly agree*. Higher scores reflect more autonomy supportiveness. The internal consistency was good in an American sample (α = .88-.90) (Niemiec et al., 2006). The first author and a professional translator translated the items from English to Dutch using back translation for the purpose of this study. The third measure taps into yet another aspect of YIM-youth relationship quality: frequency and intensity of contact (Rhodes, 2002). This measure was developed for the purpose of this study. YIMs report on the frequency, intensity and types of contact with the youth, parent(s), and case manager.

Case manager-YIM alliance is assessed using the Work Climate Questionnaire – Short version (WCQ-6), which measures the YIMs' perceptions of the degree of autonomy support from the case managers (Baard et al., 2004; Center for Self-Determination Theory, n.d.). YIMs rate six items on a 5-point scale from 1=*strongly disagree* to 5=*strongly agree*. Higher scores reflect a better alliance. The extended 15-item WCQ is based on two comparable questionnaires with high internal consistency (α = .92-.96) and good validity in American samples (Williams et al., 1996; Williams & Deci, 1996). The first author and a professional translator translated the items from English to Dutch using back translation for the purpose of this study.

To assess the adherence to the InConnection approach, case managers indicate whether they have performed the 21 steps of the InConnection approach in the treatment of multi-problem families (van Dam & Verhulst, 2016). Of these 21 steps, 13 are divided over the four phases of the approach. Two steps should be performed to improve the overall alliance with the family. The final six steps are only performed and reported on if the youth has been placed out of home. The instrument was developed in the Netherlands, and its psychometric properties have not been researched yet.

Table 1. *Overview of Administered Questionnaires and Informants*

Variable	Concept	Measure	Informant			
			Youth	Parent	YIM	CM
Primary outcome	Youth resilience	CYRM-12	x			
Secondary outcomes	Well-being	WHO-5	x	x		
	Youth emotional and behavioral problems	BPM	x	x	x	
	Out-of-home placements	demographics/ FCU	x	x		
	Parent-child relationship quality	PARA	x	x		
	Parental resilience	ARM-12		x		
	Parental empowerment	FES		x		
	Parenting behaviors	APQ-9		x		
	Risk of child safety	ARIJ				x
Mediators	Social resourcefulness	UCL	x			
	Shared decision making	SRS	x	x		
	Treatment motivation	TMS-F	x			
Moderators	Socio-demographic factors	demographics/ FCU	x	x	x	
	Treatment characteristics	TZOM				x
Predictors	Youth-YIM relationship quality	PARA, POPS & FIC	x		x	
	Case manager-YIM alliance	WCQ-6			x	
	Adherence to approach	InConnection guidelines				x

Note: YIM = youth-initiated mentor; CM = case manager; CYRM-12 = Child and Youth Resilience Measure – Short form; ARM-12 = Adult Resilience Measure – Short form; PARA = Psychological Availability and Reliance on Adult; WHO-5 = World Health Organization Well-Being Index; BPM = Brief Problems Monitor; FES = Family Empowerment Scale; APQ-9 = Alabama Parenting Questionnaire – Short form; ARIJ = Actuarieel Risicotaxatie Instrument voor Jeugdbescherming [Actuarial Risk Assessment Tool for Protection of Juveniles]; FCU = Family Check-up; UCL = Utrecht Coping List; SRS = Session Rating Scale; TMS-F = Treatment Motivation Scales for Forensic Outpatient Treatment; POPS= Perceptions of Parents Scale; FIC = Frequency and Intensity of Contact; WCQ-6 = Work Climate Questionnaire – Short version; and TIFMP = Taxonomy of Interventions for Families with Multiple Problems.

Qualitative data collection

The aim of the semi-structured interviews is to obtain detailed, qualitive information on the YIM nomination process as experienced by the youth, parent(s), YIM and case manager. Of each client system, the youth, parent(s), YIM, and case manager are invited for individual interviews at a location chosen by the participant, which is usually at home or at the care organization. Interviews with client systems who have positioned a YIM take place as soon as possible after positioning. Interviews with client systems who have not positioned a YIM within six weeks take place after

this time frame has passed. The interviews are conducted by trained researchers and are recorded with the permission of the participant. Interviews are transcribed verbatim by research assistants. The first author, who will conduct the majority of the interviews, developed an interview topic guide based on the nomination process of a YIM in the YIM approach (van Dam & Verhulst, 2016) and previous research. Questions about important adults and help-seeking were added based on research on social networks and social support (Small, 2013; e.g., Sterrett et al., 2011). Research on formal and informal mentoring helped us to develop questions about potentially important factors on which youth might base their choice for a YIM, such as trust (Hagler, 2018), gender (Spencer et al., 2018) and ethnicity (Spencer, 2007). Interview topics and questions are tailored to the experiences of each sample and participant type. Example questions are: "Can you tell me about how you chose [YIM] to be your YIM?" (question for youth with a positioned YIM); "What qualities do you think a successful YIM should have?" (question for youth without a positioned YIM); and "What is the reason that you want to help [youth]?" (question for YIM). For more details on the interview topics for youth, see Appendix A. Interviews last approximately 30 minutes.

Data management

Data are collected and stored in accordance to the guidelines of Helsinki (1964) and its later amendments, and guidelines of the faculty ethical review board of the Faculty of Social and Behavioral Sciences of Utrecht University. Collected data are processed and stored anonymously by storing raw data separately from identifiable data.

Data analyses

Quantitative data analyses

Preliminary analyses are conducted using data from the TIFMP to examine differences in intervention techniques between the InConnection approach and care as usual. All statistical analyses will be performed in Mplus (Muthén & Muthén, n.d.) using an alpha level of 0.05, following the intention-to-treat principle, but will also be analyzed per protocol. Missing data patterns are checked using Little's test in SPSS (Little & Rubin, 2002). If missing data are missing completely at random, the default setting in Mplus for handling missing data, that is, full information maximum likelihood, is used.

The data collected have a multilevel structure, as assessments are nested within participants and participants are nested within care organizations. Therefore, we will examine intraclass correlations to test whether there is significant variance at each level. In case of significant variance at multiple levels, multilevel analyses will be performed. In case of no multilevel structure in the data, for example due to low level of variance at the organization level, more parsimonious models without multilevel structure will be performed.

To examine which families in the intervention group are more likely to position a YIM within six weeks, a *t*-test is performed, comparing families who positioned a YIM within six weeks to those who did not position a YIM. The two groups are compared on severity of problems, social resourcefulness, and background characteristics.

To examine the intervention effects of the InConnection approach vs. care as usual, repeated measures analyses of variance are conducted. Mediators, moderators and predictors of intervention effects will be tested by linear multiple regression analyses. Separate models are conducted for each outcome variable to avoid a decrease in statistical power due to the addition of many variables. We will control for differences in timing of assessments across respondents by using time-variant models and test for the potential influence of covariates, such as socio-demographic factors.

Qualitative data analyses

To understand how and why youth selected a YIM, multistep thematic analysis (Braun & Clarke, 2006) will be conducted in NVivo (QSR International, 2012) of interviews with youth, parents, case managers, and YIMs from 10-20 client systems. For each client system, interviews will be conducted with the client, parent(s), case manager and (if applicable) a YIM. An initial codebook will be developed by the first author drawing from the interview topic guide and initial impressions of a small number of interview transcripts. The interviews are thematically coded using these initial codes, while the codebook will be continuously evaluated and refined based on themes identified in the coding process. All available interviews within one family are coded together. Once coding for one family is complete, the coder constructs a narrative summary, summarizing and synthesizing the participants' perspectives and experiences of the YIM selection process. These narrative summaries are then read multiple times to identify themes across families, which are laid down in a conceptually clustered matrix (Miles et al., 2013).

Discussion

Giving the lack of convincing evidence for an effective treatment for children of multi-problem families (Strijbosch et al., 2015; Weisz et al., 2017), evidence-based approaches are urgently needed. In this article we have presented the protocol of the GRIP study designed to investigate the effectiveness of the InConnection approach, an individualized treatment program for multi-problem families with specific focus on collaboration with the social network. By conducting a prospective quasi-experimental study with propensity score matching, the GRIP study aims to examine the effectiveness of the InConnection approach as well as mediators, moderators and predictors of this effectiveness among multi-problem families. Furthermore, the GRIP study aims to examine the selection process of a YIM in families who have succeeded to find a YIM within six weeks and families who have not. With this study, we hope to contribute to the treatment of multi-problem families as well as generate knowledge on mediators, moderators and predictors of treatment effectiveness.

Strengths and challenges

This study has several strengths. First, the study is conducted under real-life circumstances, thus testing the effectiveness, rather than the efficacy, of the InConnection approach, which optimizes the ecological validity and improves the generalizability into other real-life settings. Furthermore, this study compares two different active treatment conditions that are similar in most aspects, such as the systemic and individualized approach and the intensity and duration of the treatment. This makes it possible to disentangle the effects of the unique components of the InConnection approach, that is, the integrated care offered by a multidisciplinary team and the YIM. Additionally, by also examining mechanisms that can explain these effects (i.e., mediators) and circumstances under which the effects may be weaker or stronger (i.e., moderators), we gain better insight into what works for whom. A second strength is the use of validated measures and a mixed-methods approach, as the GRIP research project consists of a quantitative questionnaire study and a qualitative interview study. This 'methodological triangulation' enhances our understanding, helps interpretation and contributes to the strength of the research (Thurmond, 2001). A third strength is the use of multiple informants in both the quantitative and qualitative study, as youth, parents, YIMs and case managers are invited to participate. By collecting information from multiple informants the risk of biases is reduced and contextual variations in behaviors, for example between the home and in proximity of the YIM, can be identified (De Los Reyes et al., 2015).

The design of the study also offers potential challenges. First, the inclusion of participants is dependent on the collaboration with the participating organizations. That is, families have to consent to being contacted by the research team, and this consent is to be asked for by the case manager. To ensure that potential participants are requested for consent, the research team has frequent interaction with contact persons within the organizations and monitors the registrations of new clients. A second potential challenge is non-response and drop out due to multiple assessments and informants included in the study. This may be a particular challenge in our hard-to-reach sample of multi-problem families. We have tried to minimize the effort the families have to put into study participation by doing home visits and online assessments. Furthermore, we have an active and experienced research team with a large group of research assistants, who can quickly react to pending non-response in order to increase the response rate. For example, personal reminders are sent if participants have not completed assessments on time. A third potential challenge is that treatment intensity, duration and content may differ between as well as within the two treatment groups. Therefore, the number of face-to-face sessions with the case manager, as well as duration and content of treatment are registered and are taken into account as potential moderating factors. The fourth potential challenge is the fact that participants are not randomly allocated to one of the treatment groups, but rather self-select their preferred treatment program. Therefore, it is possible that differences in effects can be attributed to confounding client characteristics that have not been measured. This may complicate the interpretation of treatment effectiveness. To increase the comparability of the two groups and minimize the potential influence of measured confounding variables, we use propensity score matching.

Implications for practice

If the InConnection approach is effective in improving resilience and mental health in youth of multi-problem families and parental functioning of their parents, this may increase the developmental chances for youth in these families and improve quality of life for all family members (Bodden & Deković, 2016). In addition, since problems in multi-problem families are transmitted across generations (Connell & Goodman, 2002), effective treatment may break the intergenerational cycle of problems and thereby potentially protect future generations from developing multiple problems. Both directly and indirectly, this would alleviate the financial burden that intensive professional care use by multi-problem families places on society. Thus, successful treatment of multi-problem families benefits family members, their future generations and society.

In addition, the InConnection approach has the potential to be implemented widely and reach many multi-problem families for a number of reasons. First, the approach will be studied in four regions in the Netherlands, possibly demonstrating the flexibility of the approach to be implemented in different areas. Second, the program is designed to be accessible to all multi-problem families with youth in the age of 10-23 years and has no exclusion criteria. Third, although setting up a multidisciplinary team is an investment for care organizations, time (and money) may also be saved by providing direct access to specialized care for families in need.

Finally, this study will contribute to our knowledge on the effects of multidisciplinary care and YIM in this complex target group of multi-problem families, and on factors that mediate, moderate and predict treatment effects. This knowledge could help to improve the care for multi-problem families and care targeted at improving resilience.

Appendix A: Topic list for interviews with youth

Section	Topic	Main question	Prompt
Social network scheme	Important adults	To whom can you go for advice?	Can you tell me something about him/her? How important is he/she to you? What kind of advice do you ask him/her?
Attitude	Attitude towards YIM approach	What was your first impression of the YIM approach?	How do you feel about asking for help? Have you asked someone for help before? How do your parents feel about asking someone for help?
The YIM	The YIM	Can you tell me about your YIM?	How did you get know him/her?
		Does he/she help you often?	With what? Can you give an example?
YIM choice process	YIM identification	Who came to mind when you heard about the YIM approach?	Can you tell me more about him/her?
		Can you tell me how you came to the idea to ask him/her to be your YIM?	Who suggested him/her as a YIM? Did everyone agree? Why (not)?
		Did other people come to mind?	Who? Can you tell me more about him/her?
	YIM question	Did you ask him/her to be your YIM?	If yes, how and when did you ask him/her? Were other people present?
		What was his/her response?	How did you feel when he/she said that? Why do you think he/she said yes/no?
	YIM choice	Why did/didn't you ask him/her to be your YIM?	Why do you think this quality is important for a YIM to possess? Did this quality play a role in the choice for a YIM?
		If not already mentioned by the participant, questions concerning these topics are raised:	Trust Non-judgmental Empathy Dedication Time and location Gender Ethnicity
Changes since having a YIM	Changes in relationship quality	Has your relationship with your YIM changed since he/she has been appointed as YIM?	How?
	Changes in contact frequency	Do you see each other more or less often?	Does your YIM now come to places or meetings to which he/she did not used to go? Where?

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Author contributions
Van Dam obtained funding for the study. All authors contributed to the design of the study. Koper coordinated the recruitment of participants and data collection during the study. Creemers and van Dam supervised the process. Koper wrote the manuscript in close collaboration with all other authors. All authors read and approved the final manuscript.

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Chapter 4

NEEDS OF YOUTH AND PARENTS FROM MULTI-PROBLEM FAMILIES IN THE SEARCH FOR YOUTH-INITIATED MENTORS

Abstract

Youth-initiated mentoring is an innovative youth care approach in which youth recruit supportive adults from their social networks as a mentor for youth and a partner for parents and professionals. This qualitative interview study documents what youth (n = 15) and parents (n = 13) from multi-problem families look for in a mentor, what mentors (n = 8) believe they have to offer, and whether what mentors believe to offer matches youth's and parents' needs. Youth and parents indicated that a strong connection and trust were most important, or even prerequisites, as youth who were unable to find mentors did not have strong relationships of trust. Youth and parents also voiced preferences for an understanding, sensitive mentor who offered youth perspective by providing support and advice and (according to some) setting rules. What mentors believed to offer matched youth's and parents' needs, suggesting that most youth successfully recruited suitable mentors.

Keywords: interviews, mentors, multi-problem families, needs, selection process, YIM approach, youth-initiated mentoring

Youth-initiated mentoring (YIM) is an innovative approach in youth mental health care that empowers youth to recruit supportive adults from within their social networks as mentors (van Dam et al., 2019; van Dam & Verhulst, 2016). Mentors are non-parental figures who provide youth with guidance and support. YIM is a hybrid approach combining formal support (i.e., professional care) and informal support (i.e., support from the natural mentor) (van Dam et al., 2020). Including YIM mentors in mental health care for youth seems promising for improving a wide range of outcomes, including well-being and academic achievement (Christensen et al., 2020; Raposa et al., 2019; van Dam et al., 2020). Yet, little is known about what youth and parents look for in a YIM mentor. This specifically pertains to multi-problem families or multi-problem families, who are faced with a larger number of difficulties that are often chronic and intergenerational (Tausendfreund et al., 2016). Knowledge about their needs can help professionals to guide the mentor selection process, which is especially relevant since not all youth succeed in positioning a mentor (van Dam et al., 2017), suggesting that these youth experience barriers and could benefit from more guidance. To better understand the needs of youth and parents from multi-problem families, this qualitative study assessed what they search for in a mentor, and what mentors believe they can offer.

Contrary to formal mentoring, in which volunteers are matched to youth, YIM provides support for youth to identify and recruit a mentor from their existing social network. In the context of youth mental health care, YIM mentors are confidants and spokespersons for youth, and partners for parents and professionals (Schwartz et al., 2013). It is a client-focused approach, as mentors, youth and parents actively participate in the decision-making process during treatment (van Dam & Schwartz, 2020). Natural and YIM mentoring have been positively associated with various youth outcomes, including mental and physical health, social-emotional skills and school functioning (van Dam et al., 2020; van Dam, Smit, et al., 2018). These benefits were regardless of youth's risk status (van Dam, Smit, et al., 2018), emphasizing the potential of mentoring for vulnerable groups such as youth of multi-problem families.

However, the potential of YIM depends on whether youth can find a mentor. Given the common belief that multi-problem families live in isolation, positioning a mentor may be difficult. Yet, as multi-problem families have (strong) social ties with six people on average (Sousa, 2005), these youth also have the potential to find mentors. In fact, 83% of youth of multi-problem families found a mentor within 33 days (van Dam et al., 2017), confirming that most youth do indeed know adults who they want to involve in their treatment. However, this also shows that 17% of youth were *not* able to position mentors (van Dam et al., 2017). Positioning mentors is a precondition for involving them in the treatment process, and thus, for making optimal use of YIM. Documenting youth's experiences on the mentor selection process and information on what youth look for and which factors prevent them from positioning mentors, is important for helping youth who have difficulties finding a mentor. Moreover, it could contribute to better implementing YIM, which is assumed to ultimately result in better outcomes for youth.

Youth's needs in the mentor selection process

In studies of formal mentoring, youth who perceive more trusting, mutual, and empathic relationships with their mentors experience greater improvements than youth who perceive lower levels of relationship quality (Garringer et al., 2015). Research on YIM indicates that relationship quality also directs the selection process. Most youth chose mentors with whom they had a strong relationship already before the mentor is positioned, and some referred to their mentor as their 'friend', despite their familial bonds or age difference (Spencer et al., 2016). Moreover, youth

chose mentors who they find trusting, empathic, understanding, non-judgmental and dedicated (Spencer et al., 2016, 2019), which are indicators of high relationship quality.

Parents' roles in the YIM mentor selection process

Research on youth mentoring naturally tends to focus on the relationship between mentor and child (Keller, 2005). However, theoretical (Keller, 2005) and empirical (Basualdo-Delmonico & Spencer, 2016; Weiler et al., 2020) literature suggests that parents also contribute to the success or failure of mentoring. That is, parents are the primary gatekeepers of children's social networks (Kesselring et al., 2012), thus the relationship between a child and mentor may depend on the relationship between the parent and mentor. It is, therefore, expected that the youth's choice for a mentor is influenced by parents. This may be even more true in the context of YIM, as YIM is embedded within systemic care in which parents are also heavily involved (van Dam et al., 2019). Therefore, the relationship between mentors and parents may also play an important role in the selection process and effectiveness of YIM.

Parents indeed appreciate having a say in selecting mentors (Spencer et al., 2019) and generally prefer mentors who they know and trust so they feel comfortable in letting their child spend time with them (Spencer et al., 2019; Weiler et al., 2020). Yet, parents often accept their children's choice, although they may have different perspectives on who would be the best mentor (van Dam et al., 2019).

Mentor expectations

Mentors have another unique perspective on the mentoring selection process, as they can describe their expectations in how to fulfill their mentoring role, which may provide insight in how well the match is between what youth and parents need and what mentors can offer. This match may be especially important to examine, as unfulfilled expectations are an important reason for formal mentors to end their mentoring relationship prematurely (Spencer, 2007). Some mentors enter relationships with preconceived ideas about what youth might need and found that their mentee did not fit their expectations. Many described feeling overwhelmed by the needs of their mentees due to their difficult circumstances (Spencer, 2007). There is sufficient evidence to expect that the needs of youth of multi-problem families are also large (Bodden & Deković, 2016). However, in YIM we might expect a better match between mentors' expectations and youth's needs, as the pairs are already acquainted and often consider each other friends or family (Spencer et al., 2021), potentially resulting in a less overwhelming experience for mentors and a better match between the youth's and parents' needs and what mentors offer.

Current study

This study aims to understand the needs of youth and parents of multi-problem families in mentoring relationships during the selection process of a YIM mentor in the context of youth mental health care. More specifically, we aim to document 1) the views of youth, parents and mentors on involving a YIM mentor in treatment; 2) what youth and parents look for in mentors; and 3) what mentors think they can offer and whether that matches youth's and parents' needs. To fulfill these aims we conducted semi-structured interviews with youth, parents, and mentors, giving unique insight into different perspectives. To our knowledge, no studies have documented the needs of youth and parents who were unable to find a mentor. By including their perspectives as well, we can gather knowledge on potential barriers of positioning YIM mentors, that could be used to remove these barriers and help youth in finding a mentor. Needs of youth that are often

reported could be stressed by professionals. Also, youth's needs could inform mentors about what youth find important and thereby help mentors to adjust to the needs of youth (Spencer, 2007). Documenting the different perspectives may also provide important insights, which can help professionals guide the mentor selection process.

Methods

Participant recruitment and selection

Interviewees were recruited from among the participants in a multi-site quasi-experimental study of the InConnection approach (a YIM program in the Netherlands), called *Growth in Personal environment* (GRIP) (Koper et al., 2020). Participants are multi-problem families receiving youth and family care and their YIM mentors. Problems that these families encountered include school drop-out, divorce, trauma, antisocial behavior, and/or substance use, among other problems (for more details and inclusion criteria, Koper et al., 2020).

Active informed consent for their own participation in the GRIP study was received from all participants. For youth under the age of 16, active informed consent for their participation was also obtained from one parent or guardian (Koper et al., 2020). For the purpose of the current study, participants were orally asked for permission to participate in the interview at the start of the interview. All interviews were conducted individually between February 2019 and September 2020 after concluding the first treatment phase in which youth search for a mentor. The design of the study was approved by the ethical review board of the Faculty of Social and Behavioral Sciences of Utrecht University (FETC-18-093).

Participant selection

Interviews were only conducted with families who started treatment following the InConnection approach and, therefore, have sought a mentor. We selected participants based on background characteristics (e.g., age, gender, ethnicity, region) by which we aimed to seek maximum variation in experiences. We invited 19 systems for participation from among the 59 currently participating families receiving InConnection care. Of these, 16 systems agreed to participate (see Table 1 for an overview of systems). Of the three systems that did not participate, two indicated they did not want to, and one initially agreed but did not show up for the appointment after which we were unable to reach them. No significant differences were found between the participating and non-participating systems receiving InConnection care on demographic variables (i.e., age, gender, ethnicity, education level, youth's type of relationship to mentor).

Participants

Interviews were conducted with 15 youth, 13 parents and 8 YIM mentors from 16 systems. In one third of systems (37.6%) we documented the experiences of all potential members and conducted interviews with a youth, one or two parents and a mentor. In two cases (12.5%) two parents participated. In five systems (31.3%) youth had not found a mentor.

Table 1. *List of Participants*

	Youth			Parents						YIM mentor			
	Name	Gender	Age	Name	Gender	Age	Name	Gender	Age	Positioned?	Name	Gender	Age
1	Angela	♀	17	-	-	-	-	-	-	Yes	Francine	♀	23
2	Bernice	♀	15	Petra	♀	43	-	-	-	No	-	-	
3	Cora	♀	14	Rosa	♀	46	-	-	-	No	-	-	
4	Danny	♂	16	Selma	♀	49	-	-	-	Yes	Glenn	♂	50
5	Ellen	♀	17	Tessa	♀	42	-	-	-	Yes	Hannie	♀	53
6	Frankie	♂	17	Valerie	♀	45	-	-	-	Yes	Irene	♀	48
7	Gloria	♀	14	Willemijn	♀	36	Dirk	♂	36	Yes	-	-	
8	Hedy	♀	18	Yvonne	♀	46	-	-	-	Yes	Jeltje	♀	69
9	Ian	♂	18	-	-	-	-	-	-	Yes	-	-	
10	-	♀	14	Zoë	♀	41	-	-	-	Yes	-	-	
11	Janice	♀	15	Alida	♀	37	-	-	-	No	-	-	
12	Kevin	♂	14	Bibian	♀	42	Elias	♂	47	Yes	Kees	♂	22
13	Lenie	♀	13	-	-	-	-	-	-	Yes	Lieke	♀	37
14	Maria	♀	16	-	-	-	-	-	-	No	-	-	
15	Neelie	♀	13	Clara	♀	50	-	-	-	Yes	Marga	♀	25
16	Olivia	♀	17	-	-	-	-	-	-	No	-	-	

From the 15 youth, 11 were girls (73.3%) and the mean age was 15.67 years (*SD*=1.70, range = 13-18 years). Most followed preparatory secondary vocational education (66.7%). Eleven youth identified as Dutch (73.3%); the others identified as Belgian, Burundian, Eritrean, and Montenegrin (6.7% each). More than half lived with their parents: eight lived with one of their parents or alternately with either parent (53.3%), and one lived with both parents (6.7%). The others lived out of home: four lived in a residential facility (26.7%), one with friends or family (6.7%), and one in a foster home (6.7%).

Ten of the 13 parents were biological mothers (76.9%); the others were a biological father, a stepfather, and a foster mother (7.7% each). On average parents were 43.76 years old (*SD*=4.64, range = 36-50). Nine were divorced or separated (69.2%). Most parents identified as Dutch (92.3%) and one identified as Dutch-Moroccan (7.7%). Most parents finished secondary education (30.8%), vocational education (38.5%), or higher education (23.1%).

Most mentors were female (75.0%) and their mean age was 41.30 years (*SD*=17.15, range = 22-69). All mentors identified as Dutch (100%). Two were family members, two were friends of youth or parents, and two were neighbors or acquaintances (25.0% each). The others were an ex-mother-in-law and an ex-stepmother (12.5% each).

InConnection approach

The InConnection approach is an outpatient alternative to out-of-home care for youth from multi-problem families. Problems that these families encounter include school drop-out, divorce, trauma, antisocial behavior, and/or substance use, among other problems. Treatment is offered by a multidisciplinary team of youth social workers, systemic therapists, psychologists, and psychiatrists in four phases: 1) *who*, 2) *what*, 3) *how*, and 4) *adaptivity* (van Dam & Verhulst, 2016). In the *who* phase, caseworkers (social workers) open the conversation on the value of a YIM mentor. Caseworkers explain that mentors are someone who you trust, someone you can go to for support, and/or someone who inspires you to do your best. Youth are asked to think about who could be this person for them, sometimes with help from parents. If necessary, caseworkers provide more support in identifying potential mentors, for example, by making social network maps. Once youth have identified a potential mentor, this person is invited for a meeting with the caseworker, who explains what the positioning as a mentor means. If the mentor accepts the position, all parties meet to discuss issues of confidentiality, privacy, contact frequency, boundaries, and what happens if the parties wish to terminate the cooperation. The mentor is installed when all parties agree to collaborate. In the *what* phase, all parties give their opinion on what they would like to see changed, which serves as input for the treatment plan which is laid down and enacted upon in the *how* phase. In the *adaptivity* phase, all parties discuss how the family will proceed without professional support, after which the treatment is concluded (van Dam & Verhulst, 2016).

Interviews

Semi-structured interviews about the mentor selection process were conducted using topic guides developed by the first author based on previous research on YIM. The interview topics are tailored to the experiences of each type of participant (see Tables 2, 3, and 4 for translations of the topic guides). Youth and parents were asked about what makes a good mentor and the reasons to consider nominating someone as mentor, for example "What qualities should a good mentor have?" (youth and parents); "Can you tell me about how you chose [mentor] to be your YIM mentor?" (youth with mentors). Mentors were asked why they want to help the youth and how

they plan to do that, for example "What is the reason that you want to help [youth]?" (mentors). Some youth were not very forthcoming with their needs. If that was the case, open questions were followed by asking youth directly about potential needs identified in the literature search: trust, non-judgmental attitude, empathy, dedication, geographical location, gender, and ethnicity. Interviews lasted between 10 and 45 minutes and were conducted by the first author and seven research assistants after having received training from the first author to maintain consistency across cases. The interviews were conducted face-to-face in the participant's home until March 2020, after which the interviews were conducted through video calls, due to the outbreak of the coronavirus. Interviews were recorded after permission and transcribed verbatim.

Table 2. *Topic Guide of Semi-Structured Interviews with Youth*

Topic	Question	Follow-up questions
Theme: Attitude towards YIM		
Attitude towards YIM	What do you remember from being told about YIM by a social worker?	What was your first impression? What do you think of asking someone other than your parents and close family members for help?
Theme: YIM mentor and mentor needs of youth *with* mentors		
YIM mentor	Did we place your YIM mentor in this scheme?	Why/why not?
	Can you tell me something about your mentor?	How do you know [mentor]? How long have you known him/her? What kind of person is [mentor] to you? How often do you see [mentor]? What do you usually do when you are with [mentor]?
	Does [mentor] help you?	With what? Can you give examples? How often?
	Why do you think [mentor] wants to help you?	
Considerations in the mentor selection process	How did you choose [mentor] to be your mentor?	Who suggested [mentor] to be your mentor? Did everyone agree? Why / why not?
Needs	Why did you ask [mentor] to be your mentor? What makes [feature] important in a mentor?	*If not already mentioned:* *Trust:* Is [mentor] someone you trust? *Non-judgmental attitude:* Can you tell [mentor] anything without judging you? *Empathy:* Does [mentor] sympathize with you when he/she listens? How can you tell? *Dedication:* Is [mentor] there for you when you need him/her? *Practical:* Did practical reasons play a role in the choice? E.g., place of residence or time. *Gender:* Have you consciously chosen a man/woman to be your mentor? *Ethnicity:* Does [mentor] have the same ethnic or cultural background as you? Did this play a role in your choice?

Theme: Considerations in the mentor selection process and mentor needs for youth *without* mentors		
Considerations in the mentor selection process	Did you think of someone to nominate as mentor?	*If yes:* Why did you choose not to ask him/her as your mentor?
		If no: Do you have the feeling that no one you know would be a suitable mentor for you?
Needs	What features or characteristics should your mentor have? What makes [feature] important in a mentor?	*If not already mentioned:* *Trust:* Is trust important? *Non-judgmental attitude:* Is it important that you could tell your mentor anything without judging you? *Empathy:* Is it important that your mentor sympathizes with you when he/she listens? *Dedication:* Is it important that your mentor is there for you when you need him/her? *Practical:* Would practical reasons play a role in your choice? E.g., place of residence or time. *Gender:* Would you prefer a man/woman to be your mentor? *Ethnicity:* Would you prefer a mentor with the same ethnic or cultural background as you?

Table 3. *Topic Guide of Semi-Structured Interviews with Parents*

Topic	Question	Follow-up questions
Theme: Attitude towards YIM		
Attitude towards YIM	What do you remember from being told about YIM by a social worker?	What was your first impression? What do you think of asking someone other than close family members for help?
Theme: YIM mentor and mentor needs of parents of youth *with* mentors		
YIM mentor	Can you tell me something about the mentor?	
	Why do you think [mentor] wants to help your child?	
Considerations in the mentor selection process	How was [mentor] chosen?	Who suggested [mentor] to be the mentor? Did everyone agree? Why / why not?
	Why was [mentor] asked to be the mentor?	What makes [feature] important in a mentor?
Theme: Considerations in the mentor selection process and mentor needs of parents of youth *without* mentors		
Considerations in the mentor selection process	Did you think of someone for your child to nominate as mentor?	*If yes:* Why did your child choose not to ask him/her as mentor?
		If no: Do you have the feeling that no one you know would be a suitable mentor for your child?
Needs	What features or characteristics should a mentor have?	What makes [feature] important in a mentor?

Table 4. *Topic Guide of Semi-Structured Interviews with YIM mentors*

Topic	Question	Follow-up question
Theme: Attitude towards YIM and being a YIM mentor		
Attitude towards YIM	What do you remember from being told about YIM by a social worker?	What was your first impression? What do you think of asking someone other than close family members for help?
Feelings about being a mentor	How do you feel about the role of YIM mentor?	What makes the role enjoyable? What makes you uncomfortable about the role?
Theme: Considerations in the mentor selection process		
Considerations in the mentor selection process	Why were you asked to be [youth]'s mentor?	What makes [feature] important in a mentor?
Theme: Need fulfilment		
Want to help	What kind of person is [youth] to you?	
	Why do you want to help [youth]?	Have you helped him/her and his/her family before? With what? How was that for you?

Coding of interviews

Thematic analysis (Braun & Clarke, 2006) was conducted in NVivo (QSR International, 2012) with interviews with youth, parents, and mentors. First, an initial codebook was developed by the first author using the concepts that emerged from the literature which were part of the topic guide (i.e., sensitizing concepts, such as trust, non-judgmental attitude, and empathy). Second, a small number of interview transcripts was read to familiarize ourselves with the data and develop additional ideas for initial codes. We decided to read and code all available interviews within one system simultaneously to have a holistic view of the systems, leading to better understanding of individual interviews. We found that information from other participants within the system was especially helpful in interpreting the short responses from some youth. Third, the interviews were coded by the first author and a research intern using the initial codes. Additional codes were identified, resulting in continuous evaluation and refinement of the codebook. In this first coding step, the codes were basic and reflected the raw data closely, often using in vivo coding, for example: "mentor gives youth love and hugs". Fourth, codes were grouped into potential themes, to gather all data relevant to each potential theme. For example, the codes "mentor also didn't have a strong relationship with parents" and "mentor also moved from place to place" were grouped within the theme "mentor experienced similar situations". All interviews were reread to check if all relevant data were coded. Fifth, themes were reviewed by rereading the coded data and determining if the data appear to form a coherent pattern matching the description of the theme. If (some of) the data did not fit, these data were moved to another or a new theme or discarded from the analysis. The themes were clustered into overarching themes, which resulted in the final themes.

To assure quality of the data analysis process, coders met weekly to discuss questions and clarify definitions related to coding categories. Codes and final themes were also discussed with all authors. Transcription and data analysis were in Dutch; key quotes were translated into English.

Results

Views on involving a YIM mentor in treatment

All participants, except for two youth, had positive views on YIM. Most youth said it made sense to them to involve a mentor in care. They often described YIM as natural and normal. Youth with positioned mentors mentioned that their mentors already had important roles in their lives before the positioning. The two youth who felt negative about YIM did not position mentors and said that they could not trust others (including mentors), natural mentors do not have sufficient education to help youth, and they did not want to burden others with their problems. All parents indicated that they liked YIM because it is a different approach to care and a type of care they had not yet tried. Mentors were also positive of YIM and being a mentor: They liked having the role of mentor, as it allows them to help the youth. Most mentioned that even before the positioning as mentor, they already mentored the youth. Nevertheless, most mentors were happy to be given the formal position, because it allowed them to become more involved in the treatment and in decision-making.

What youth and parents search for in a YIM mentor

Youth and parents mentioned several needs for the characteristics of a YIM mentor: strong connection, trust, sensitivity to needs, future perspective, and discipline.

Strong connection

All youth, including youth without mentors, mentioned the need to have a warm and strong relationship with a mentor. Youth preferred mentors who they feel close to, and with whom they have a stable and (presumably) long-lasting relationship. Feeling safe and comfortable in the presence of mentors was important according to many youth, which is illustrated by Cora (aged 14) who explains why she considered asking the neighbor as her mentor: "*Because I'm actually quite comfortable with her.*" Some youth also mentioned feeling accepted the way they are and loved unconditionally by their mentors, like illustrated by Hedy (aged 18): "*She loves me very much. She can also be very angry with me sometimes, but she always loves me very much.*". When asked about the relationship youth have with their positioned mentors, some made comparisons with other relationships, such as friendships or family relationships. Lieke, mentor of Lenie (aged 13), said to consider Lenie as her daughter, even though they are not related: "*She is actually my second daughter to me. I always say I have two children. She feels that too and she always likes it very much. […] It feels like that to me and that is so beautiful.*"

Youth, but not parents, indicated that having fun with mentors is another important aspect, so their relationship is not only serious. For example, Hedy (aged 18) said when asked what is important in a mentor: "*That you can have fun together and laugh, but also that she strongly urges me to do things.*"

Trust

To be able to trust a mentor appeared to be a universal need: Both youth who positioned a mentor and youth who did not, emphasized the importance of trust. Youth trust mentors if they feel they can tell them anything and if they know that information is confidential. In a trusting relationship, youth feel safe and accepted. Bernice (aged 15), who did not position a mentor, explained she feels more comfortable talking to someone she trusts: "*It's just nice to talk to them because I have trusted them for a long time, I have trusted them all my life.*"

Youth were more likely to trust a person if they have known them longer and have experienced that they are reliable, for example because they are always there for them. Frankie (aged 17)

illustrated this when asked if he trusts his mentor: "*Yes, after so many years, I do. I don't trust people that easily.*"

Parents also indicated that trust is important for their children. Willemijn and Dirk, mother and stepfather of Gloria (aged 14), said about why Gloria chose her mentor:

Willemijn: "*It's very confidential, so we don't get informed about everything. [...] And yes, if there is something really worrying, we will be notified, but usually not.*"

Dirk: "*Gloria can discuss things with her mentor and those things stay with her; that is necessary for Gloria*."

Sensitivity to needs

Many youth indicated that they searched for a mentor who understands them and recognizes their needs, for example because the mentor has a similar experience. Cora (aged 14), who did not position a mentor, said why she thought her neighbor would make a good mentor: "*She also had children with similar problems.*" Youth thought this similar experience would make it easier for mentors to help them. Hedy (aged 18) believes this similar experience may be the reason that Jeltje is motivated to help her:

"*I think she finds it unfortunate for me, sad for me how it all happens; that she wants to help me with that. And I also think mainly because she has experienced it herself in the past and did not have that support [from someone]. She also moved from one place to another and did not have a good relationship with her parents.*"

Youth also voiced their needs for a mentor that is able to listen. If they want to talk about something, such as a problem they encountered, mentors should offer a listening ear. To youth this means that people should listen to them while they are talking, answer their questions and do not mind to keep talking for a long time, even if it is already late. By listening mentors can get a better understanding of youth's experiences, interests and needs.

Parents, similarly, indicated their preference for mentors who are empathic, understanding, and able to listen to their children. Tessa, mother of Ellen (aged 17), said the following when asked why Ellen chose Hannie as her mentor: "*Because Hannie is someone Ellen can talk to, because she shows a lot of empathy towards her, and a lot of understanding, and Ellen needs that.*" Similarly, mother Petra described what she would want for her daughter, who did not position a mentor: "*Someone who can understand, someone who can really talk to and support children.*"

Future perspective

Youth found it important that a mentor can help them to achieve a better future. Youth preferred mentors who are an example to them and that they look up to. Angela (aged 17) explained why she chose her mentor: "*She really behaves like an adult, she's thinking about her future and she's more concerned with school, work and things like that. She can help me towards independence.*" In order to achieve this better future, youth asked their mentors for help for a variety of subjects, such as practical help (e.g., for transportation), help with school or work, and advice about relationships (with friends, romantic partners, family members, etc.).

Similarly, parents wanted their children to have mentors who help them, support them and stand up for them to achieve a better future. Willemijn, mother of Gloria (aged 14), said the following about Gloria's mentor: "*She wants to help Gloria, because she just wants Gloria to be okay. That she just becomes a stable, healthy woman, a grown woman. And she wants to do everything she can for that.*" Janice (aged 15) does not have a mentor, and according to her mother Alida a mentor would have to help Janice quickly achieving her goals, because otherwise Janice would not take

the mentor seriously: "*At this moment Janice will only take people seriously if they can arrange things for her … [and] not … if they just talk to her about dealing with trauma's and things like that.*"

Discipline

Only one youth and a few parents with positioned mentors mentioned that they wanted a mentor who can help by means of discipline. Hedy (aged 18) said about Jeltje, who she chose as her mentor: "*Looking back, I sometimes think that it was good that she kicked my ass. Otherwise I would have done things differently and that would have had consequences.*"

A few parents indicated that they appreciated it if mentors would help them in the upbringing of their children. Parents acknowledged that their own influence on their children is limited, and they were happy if their children would listen to another adult. In parents' experience, other adults could usually do or say more to youth (such as teasing or speaking up about negative behavior), while parents got a negative response from the youth with the same behavior. Selma, mother of Danny (aged 15), said: "*It also gives me a lot of peace, you know. When Danny doesn't listen again, I say to his mentor: 'You know, Glenn, you can go solve it, you are his mentor'.*" It, thus, gave parents peace of mind to know that they could ask the mentor for support if their child did not listen to them, thereby reducing their parenting stress.

Mentors' perspectives on what they can offer youth

Mentors' perspectives on what they offer corresponded to the aforementioned themes of strong connection, trust, future perspective, sensitivity to needs, and discipline. Therefore, these themes are detailed below.

Strong connection.

Many mentors indicated that they knew the youth for a long time (often years and sometimes since the youth is born) and already had a strong connection with them before being positioned as mentor. Mentor Glenn described his relationship to Danny (aged 15): "*He is very dear to me. Well, I think we have a good relationship. The bond is simply good.*" Mentors also said they can laugh and joke with the youth. Sometimes they engaged in fun activities together, such as walking the dog, shopping, eating out and going to the cinema. They enjoyed participating in these activities.

Trust

Mentors acknowledged that trust is an important factor because trust makes youth want to talk to them. They conveyed to do their best to gain youth's trust. Glenn, mentor of Danny (aged 15), said: "*Due to the trust they also come to you and they are honest and sincere. If they do not trust you, they become closed off and you will not know what is going on.*" Despite that youth said they trust their mentors, youth did not always disclose to their mentors. Therefore, mentors often take initiative in contacting youth, offering help and creating situations in which youth are more forthcoming. For example, Kees, mentor of Kevin (14), said:

"*When I was talking to him for a while, it actually came to light that things weren't going well. I said to him 'If you need help, you know I live next door, you have my phone number. Just send me a message, and it will all be fine'.*"

Sensitivity to needs

Mentors indicated that they are understanding towards youth. In some cases, mentors said they go beyond understanding: They recognize youth's needs and empathize with their pain

and burden. According to Jeltje, mentor of Hedy (aged 18), she felt Hedy's pain because she has experienced a similar situation: "*I used to be in the same situation. So yes, I feel her. I understand her feelings and sometimes I feel it, too. I can't let her down because I've been there myself.*" This reflects that mentors are aware of the vulnerability and needs of youth.

As youth do not always disclose to their mentors, mentors found it important that they can sense if there is something wrong. Irene described a situation where she felt that Frankie (aged 17) needed to talk:

"*Last week, when Frankie was like 'I'm going outside for a cigarette', I just noticed. I said 'I'll go outside, too,' to just have a chat. […] At such moments he is a bit more open … than when he's sitting at the table with a group of people. Then he's brave enough to tell me things.*"

Future perspective

Most mentors indicated they wanted to achieve something with the youth, for example to go back to school with the end goal that the youth can grow into a healthy adult. When Hedy (aged 18) was not doing well at school, her mentor Jeltje said to her: "'*Now you're just playing with your future. I think it's just stupid if you don't continue school, you can learn, so don't just do nothing!*'."

Some mentors said they were motivated to help youth because they experienced similar problems. In turn, sharing these experiences with youth served as a motivation for youth to listen to their mentors. Glenn explained how he used his own experience to motivate Danny (aged 15):

"*I try to direct him every now and then, of course, because I have made many mistakes myself. I had to make these mistakes right, and I have received advice through it because you actually learn more in practice for yourself, which I would like to pass onto Danny. … if I explain something, I also try to explain my motivation. Because then I just know that I can reach him better.*"

Discipline

Most mentors indicated they wanted to help the youth by applying control or discipline: Mentors set and enforced boundaries by, for example, drawing up rules for smartphone use and for bedtime and wake-up time. They also encouraged youth to go to school and do their best. Glenn said he collaborated with Danny's mother Selma in the upbringing of Danny (aged 15) by dividing responsibilities:

"*It's not that she saddles me with responsibilities. It's more that I want to tackle that issue, in my opinion. … we try to do it well by doing it together. And then I try to do what I think should be done.*"

Discussion

Previous research examined the effects of natural mentoring relationships on youth development (e.g., van Dam, Smit, et al., 2018) and explored the potential of YIM in treatment for vulnerable youth (Schwartz et al., 2013; van Dam et al., 2020). However, previous studies have not addressed the needs of youth and parents in YIM mentors, and if these needs match to what mentors offer. This interview study indicated that youth and parents from multi-problem families unanimously voiced their needs for a strong connection and trust in mentoring relationships. This study was unique by including the perspectives of families who had not positioned mentors, which showed that these youth and parents reported (almost) the same needs. Youth and parents preferred mentors that were sensitive to youth's needs and helped them obtain a better future. Whereas only one youth and some parents with mentors mentioned the importance for mentors to provide discipline, rules and structure, mentors said to offer disciplining more often. Regarding the other themes, the needs of youth and parents and what mentors said to offer matched well.

Participants were fairly uniform in voicing favorable views on YIM, in line with our expectation, given that all had voluntarily enrolled in a treatment program including YIM. Yet, two youth without mentors indicated they did not want mentors to be involved, because they could not trust others and did not want to burden others, and because mentors are not as knowledgeable as professionals. Three more families indicated they wanted to position mentors, but that there was no suitable person, because youth had no strong relationships with trusting adults. Although the current study does not give insight in the number of youth with feelings of mistrust in the population of multi-problem families, it can be expected that many of them have experienced maltreatment and other adverse childhood experiences (Bodden & Deković, 2016), which can hinder the healthy development of trust (Geenen & Powers, 2007; Zegers et al., 2006). Nevertheless, the current and previous (van Dam et al., 2017) studies showed that most youth were capable of positioning mentors with the current support, suggesting that YIM may indeed be a promising tool in mental health care for youth of multi-problem families.

All youth and parents indicated that a strong connection and trust were the most important factors in mentoring relationships. Both factors were connected to the relationship duration prior to positioning the mentor, which was especially important for youth who did not trust others easily. This emphasizes the importance of trust in order to ask for support. These needs of youth and parents were met by the positioned mentors, as all mentors perceived the relationships with youth as trusting, warm and strong. Thus, most youth were able to position mentors who fulfill their most important needs of trust and warmth. The findings are in line with the program theory of YIM, which assumes that trust and strong connection are key factors explaining the effectiveness of YIM (van Dam & Schwartz, 2020).

Most youth and parents indicated they want mentors who are sensitive to youths' needs, understanding and empathic. In the interviews, mentors demonstrated their ability to sense that something is wrong, even if youth have not said anything, suggesting that mentors are indeed sensitive to youth's needs. Several youth, parents and mentors believed mentors to be more understanding if they had previous experiences with situations involving family conflict, mental health care or judicial or civil law. The similar experience allowed mentors to not just understand youth's situations, but also acknowledge them. This is in line with research suggesting that similar experiences increase the perception of empathy (Eklund et al., 2009; Hodges et al., 2010), and research indicating that empathy predicts relationship quality (Boele et al., 2019). Based on our and previous findings it seems desirable that mentors have similar experiences. Future research may demonstrate if mentor's sensitivity and empathy are working mechanisms of YIM.

Some mentors indicated that they offered structure, control or discipline, often by collaborating with parents. Yet, while only a few parents and just one youth voiced this need for discipline, they did not indicate that mentors used discipline too often. In the interviews, discipline and strong connection or warmth often occurred together, reflecting authoritative parenting, one of the core parenting dimensions (Baumrind, 1967) which is considered most optimal in Western societies (Abundis-Gutierrrez, 2018; Steinberg et al., 1992). This combination of discipline and warmth illustrates that mentors do not simply want to exercise power, but rather use their authority to help and guide youth. Perhaps, this is why youth were not bothered by mentors' discipline, even though they did not indicate this need. However, mentors should be cautious with offering unsolicited discipline, as it could be a potential source of tension and dissatisfaction, and should discuss their inclination in the what phase. The youth and parents who voiced the need for discipline were from families with a positioned mentor, perhaps suggesting that their need was based on the experience with their own specific mentor before positioning or

during the mentoring. It is not unexpected that youth do not voice the need for discipline when thinking about a hypothetical mentor, as adolescents are increasingly autonomous (Zimmer-Gembeck & Collins, 2008).

Youth and parents wanted mentors who can help youth obtain a better future and grow into healthy adults through advice and support. Similarly, mentors said to want to help youth to achieve goals, such as going to school, suggesting that positioned mentors match youth's and parents' needs. Mentors' focus on achieving goals is promising, as a meta-analysis on formal mentoring demonstrated that friendship models, which encourage mentors to provide general friendship aimed at broad developmental goals, were less effective than targeted models of mentoring, in which mentors offer support to mentees to achieve a specific, predetermined goal (Christensen et al., 2020). Therefore, goal-oriented mentoring relationships seem most desirable.

Limitations

There are several limitations to this study that are important to note. First, the interviews were conducted once when the phase in which mentors are positioned had only just ended. Therefore, we could only examine what youth and parents would like and what mentors believed they could offer after positioning the mentor, and not what actually happened. Thus, whether mentors really fulfilled the needs of youth and parents, is unknown. Second, only families who chose to receive care with YIM were included, and families who rejected YIM have not been interviewed. However, this was the first study to also include families without successful mentoring matches, thus gaining unique insight in the barriers experienced by families who are open to YIM, but have not positioned mentors. Thus, while our findings reflect the potential of YIM to meet the needs of youth and parents from multi-problem families, more knowledge is needed on how to engage families in YIM who preferred more traditional forms of youth mental health care.

Implications for practice

Our findings demonstrated that most youth of multi-problem families are successful at positioning mentors to involve in their treatment with the current level of support from professionals and parents, despite their increased risk for trust issues (Bodden & Deković, 2016; Geenen & Powers, 2007; Zegers et al., 2006), and the common belief that their families have weak social ties (Sousa, 2005). Yet, some youth were unable to find mentors, because they did not trust others and they did not want to seek or accept help. For these youth, care involving a YIM mentor may not have been the best approach, due to their unwillingness or the impossibility to position a mentor. In these cases, mental health professionals could first target the factors that hinder the search for a mentor and the use of informal support sources in general, such as creating trust and being able to seek and accept help. Although trust in other people is complex and depends on multiple factors (Sztompka, 1998), trust can be improved in children by means of attachment-based interventions, such as Basic Trust (Colonnesi et al., 2012; Zeegers et al., 2020). Likewise, youth who have trouble seeking help may benefit from gaining positive social support experiences and receiving encouragement from others (Gulliver et al., 2010).

Youth and parents preferred mentors with a similar experience, because such mentors would better understand the youth. Therefore, it seems advisable that YIM programs should not introduce screening of prospective mentors, as is recommended in formal mentoring (Garringer et al., 2015) by doing a comprehensive background check with the result that, for example, mentors with criminal records are excluded (Garringer et al., 2015). Thus, the selection criteria for formal mentoring cannot be transferred directly to the context of YIM, as the responsibility of mentor

selection lies with different parties. In formal mentoring, the mentoring programs are responsible for the match between mentors and mentees and they, therefore, have a great responsibility in making a suitable and, most of all, safe match. In contrast, in YIM the relationships already exist before enrollment, and involving mentors from the social network of the youth is an important strength of the approach.

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Author contributions

Van Dam obtained funding for the study. All authors contributed to the design of the study. Koper coordinated the recruitment of participants and data collection during the study. Koper and Boin cleaned and analyzed the data. Koper wrote the manuscript in close collaboration with all other authors. All authors read and approved the final manuscript.

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Chapter 5

EFFECTIVENESS OF A MULTIDISCIPLINARY TREATMENT WITH YOUTH-INITIATED MENTORING FOR YOUTH WITH MENTAL HEALTH NEEDS FROM MULTI-PROBLEM FAMILIES

Abstract

Background: Children from multi-problem families have an increased risk for experiencing mental health problems. These families face problems in several domains that are often found to be chronic and intergenerational. Yet, the effects of mental health care for youth from multi-problem families are small at best, urging research on new treatment programs. The InConnection approach is an integrated care program to improve resilience of youth with mental health needs from multi-problem families by connecting professional expertise from multiple disciplines with the informal social network of the youth. Youth are asked to nominate a youth-initiated mentor (YIM) from the supportive adults in their network. **Methods:** This quasi-experimental study compared the effectiveness of the InConnection approach to treatment as usual in a sample of 107 families (n = 66 intervention group, n = 41 control group) with n = 115 youth receiving treatment (cases). Youth (n = 102 reports, M_{age} = 15.59 years), parents (n = 85 reports) and case managers (n = 107 reports) responded to questionnaires four times over 15 months. Using these data, we measured youth resilience as the primary outcome, seven secondary outcomes, and three intermediate outcomes. **Results:** Latent growth models showed only one significant change in outcomes over time across conditions, namely a decrease in case manager-reported child unsafety, and only two condition effects, which were both parent-reported. Parents in the InConnection group reported improvements over time in youth's emotional and behavioral problems and their own positive parenting, whereas control parents reported no changes (ps ≤ .013). **Discussion:** The treatment conditions were not effective in improving most of the youth and parental outcomes over time, except for child safety. The InConnection approach only outperformed care as usual on two parent-reported outcomes. Given these limited effects for youth of multi-problem families and the potential negative consequences of the Covid-19 pandemic for treatment and treatment outcomes, future research should examine for whom and under what circumstances the InConnection approach works more convincingly.

Trial registration: Netherlands Trial Register NL7565. Retrospectively registered on March 5 2019.

Keywords: effectiveness, InConnection approach, multidisciplinary treatment, multi-problem families, quasi-experimental trial, youth-initiated mentoring

Multi-problem families face several problems in multiple domains, such as family functioning, mental health, financial situation and social network, which are often chronic and intergenerational (Bodden & Deković, 2016; Tausendfreund et al., 2016). Such problems may place the development of children growing up in those families at risk (Cicchetti & Lynch, 1993): Children in multi-problem families experience more internalizing and externalizing behavior problems and a lower quality of life compared to children in the general population (Bodden & Deković, 2016). Not surprisingly, both parents and children of multi-problem families receive more mental health care, have a longer history of care, and receive more intensive care, such as out-of-home placements, than parents and children in the general population (Bodden & Deković, 2016).

Given the severe and chronic difficulties faced by multi-problem, effective care approaches are urgently needed. Yet, studies examining the effectiveness of care for youth experiencing multiple problems and youth growing up in multi-problem families show small effects at best (Gutterswijk et al., 2020; Weisz et al., 2017), suggesting that we need better evidence-based forms of care. That said, youth mentoring has positive effects for youth of different risk levels, including youth of multi-problem families, across a broad range of outcomes (Christensen et al., 2020; Raposa et al., 2019; van Dam et al., 2020). The current study examined the effectiveness and mediating mechanisms of an innovative multidisciplinary systemic treatment including mentoring for youth of multi-problem families. The theoretical background and design of this effectiveness trial have previously been reported in a study protocol (Koper et al., 2020).

Treatment as usual for multi-problem families

Treatment for multi-problem families is commonly systemic or family-based. These treatment programs generally provide customized care in multiple domains and strive to actively involve the family system in decision making (Knot-Dickscheit, 2006). Given the complexity of problems, multi-problem families often receive support from various care providers. This may result in fragmentation of care, hampered coordination between professionals and institutions, and single solutions for complex problems (Ghesquière, 1993; Mehlkopf, 2008; Sousa & Rodrigues, 2009). To avoid this, treatment approaches have been developed in which various forms of care can be integrated and coordinated by a case manager or family guardian who functions as the link between the family and professional care services. Examples are the 'Wraparound care' model in the United States (Malysiak, 1997), the 'Troubled Families' program in the United Kingdom (Hayden & Jenkins, 2014), and the 'One family, one plan' policy in the Netherlands (NJI, 2011).

These approaches and policies integrate *formal* care systems, that is, care provided by organizations in formal settings (e.g., health care and social services). Very few integrate formal with *informal* care systems (Tausendfreund et al., 2015; Visscher et al., 2020), that is, a family's informal social network including family, friends and social groups. Yet, involving the social network is thought to contribute to the effectiveness of care (Visscher et al., 2022), as strong social support networks are linked to higher levels of resilience, or successful adaption in face of adversity (Smith & Carlson, 1997; Ungar, 2011). Thus, treatment programs could potentially be enhanced by promoting the coordination between formal and informal support (Sousa & Rodrigues, 2009) and using the full potential of families' support systems.

The InConnection approach

The InConnection approach is an innovative, multidisciplinary treatment program for youth of multi-problem families, which integrates formal and informal care to increase resilience and to prevent out-of-home placements. It aims to increase effectiveness of care compared to treatment

as usual in two ways. First, the approach differs from treatment as usual for multi-problem families (van Dam & Schwartz, 2020) in that it provides care by a multidisciplinary team consisting of professionals specialized in youth and family care, psychiatry, addiction care, and care for people with mild intellectual disabilities. The InConnection approach thus not only includes a case manager who coordinates care from different organizations or types of expertise, but also brings the different types of expertise and care together within one approach and team. This approach offers families direct access to a wide range of specialized treatment possibilities, depending on the family's needs (van Dam & Verhulst, 2016). Examples are youth-focused treatments, such as cognitive behavioral therapy and psychomotor therapy; caregiver and family-focused treatments, such as parent training and trauma therapy; and multisystem treatments, such as multisystemic therapy. Despite the different treatment forms, families experience continuity of care as treatments are coherently organized to meet the family's needs and preferences (Valentijn et al., 2013).

Second, InConnection utilizes the potential of the informal network by actively involving a youth-initiated mentor (YIM) from the youth's social network (van Dam et al., 2017; van Dam & Verhulst, 2016). In the first phase of treatment, youth nominate an informal mentor as their YIM from the supportive adults within their social network. The YIM is a confidant and spokesperson for the youth, and a partner for parents and professionals (Schwartz et al., 2013). During treatment all members of the client system, including the YIM, actively participate in the decision-making process by giving their perspectives on desired treatment goals and contributing to reaching these goals (van Dam & Verhulst, 2016). The active participation of the client system stimulated by the InConnection approach is assumed to make the approach more client-focused and strength-based than care as usual. Moreover, rather than directly addressing the problems in a family, the InConnection case manager guides and facilitates a collaborative process that contributes to sustainable improvements (van Dam & Schwartz, 2020; van Dam & Verhulst, 2016).

Effectiveness of the InConnection approach

The potential of integrated care and (youth-initiated) mentoring to enhance treatment effectiveness has been empirically supported. Integrating (mental) health care is considered to improve treatment effects and efficiency, quality of life, and client satisfaction in healthcare in general (Valentijn et al., 2013), and treatment for multi-problem families, specifically (Nooteboom, Kuiper, et al., 2020). Furthermore, YIM programs significantly improve youth functioning in different domains, such as academic and vocational functioning, social-emotional functioning and psychosocial problems for youth with different risk levels (Dantzer & Perry, 2022; van Dam et al., 2020). In addition, preliminary positive results of the InConnection approach have been found. In two studies with a total of 138 youth of multi-problem families, approximately 80% to 90% of youth continued to receive outpatient treatment only, despite a prior indication for out-of-home placement (van Dam et al., 2017; van Dam, Klein Schaarsberg, et al., 2018). Yet, both studies have methodological limitations, such as the lack of a control group (van Dam, Klein Schaarsberg, et al., 2018) and a retrospective quasi-experimental case-file-analysis design without measures of youth adaptivity (van Dam et al., 2017). Therefore, the current study examined the treatment effects and mediators of the InConnection approach in a more rigorous, quasi-experimental design (Koper et al., 2020).

Mediators of treatment effects

Treatment mediators or intermediate outcomes determine how treatments work (Kraemer et al., 2002). Three potential mediators are assumed to explain how the InConnection approach

improves youth resilience and well-being: social resourcefulness, shared decision making and treatment motivation.

The experience of a supportive relationship with a YIM may increase youth's social resourcefulness (van Dam & Schwartz, 2020), or the ability to seek help and support from the social network. It is suggested that the positive relationship with a YIM provides a safe context for youth to practice and develop their relationship skills, allowing youth to benefit more from the social ties within their network (van Dam & Schwartz, 2020). Indeed, higher quality mentoring relationships are associated with improved relationships with other adults (Chan et al., 2013; Rhodes et al., 2005). Moreover, in a qualitative study (Schwartz et al., 2017) youth reported they felt more comfortable seeking help after participation in a school-based mentoring program, suggesting a link between mentoring relationships and social resourcefulness. Social resourcefulness was, in turn, found to be related to positive treatment outcomes in school-based settings, such as increased self-esteem, prosocial behaviors, and reductions in misconduct (Chan et al., 2013; Rhodes et al., 2005). Thus, we expect that InConnection is more effective than other programs, due to increased social resourcefulness associated with involving a YIM.

Integrated care and the collaboration with a YIM may increase shared-decision making with the client system (Nooteboom, Kuiper, et al., 2020; van Dam & Schwartz, 2020). Shared-decision making means that goals are set in collaboration with the client system (and its social network), which is thought to result into personal goals that are set for autonomous reasons (van Dam & Schwartz, 2020). Having personal or self-concordant goals has been associated with successful goal progress and achievement (Koestner et al., 2002), suggesting that shared-decision making may increase treatment effectiveness. As integrated care requires a dynamic treatment plan that changes according to clients' changing needs (Nooteboom, Kuiper, et al., 2020), InConnection actively involves the client system including the YIM in the treatment process and the development and evaluation of the treatment plan (van Dam & Schwartz, 2020). Thus, we expect that shared-decision making serves as a mediator of care effectiveness.

The InConnection approach may also contribute to treatment effectiveness through enhanced treatment motivation. It is long known that treatment motivation is an important factor for treatment effectiveness (Krause, 1966; Roest et al., 2022). YIMs encourage youth to participate in treatment and achieve challenging treatment goals (Spencer et al., 2016). Moreover, YIM-assisted care may support youth's sense of autonomy, competence and relatedness which are necessary ingredients of motivation (Ryan & Deci, 2000). Youth are supported to *autonomously* choose a YIM and participate in shared-decision making, therefore strengthening their sense of *competence* to choose what is right for them (van Dam & Schwartz, 2020). The positioning of a YIM increases the *relatedness* with a supportive figure (van Dam et al., 2019) and others (Chan et al., 2013; Rhodes et al., 2005). Thus, we expect that youth are more motivated to engage in a treatment program involving a YIM.

Current study

In conclusion, the InConnection approach is a promising treatment for youth of multi-problem families, but its effectiveness in comparison to treatment as usual and potentially important mediators have not been investigated yet in a controlled, prospective multi-informant study. This knowledge is assumed to be essential for enhancing treatment effects. Therefore, the current study tested the effectiveness of InConnection in a quasi-experimental design (Koper et al., 2020). We expected that InConnection was more effective than care as usual in promoting youth resilience (*primary outcome*), youth mental health, parent-child relationship quality, and

parental functioning; and in reducing the risk of child unsafety and the occurrence of out-of-home placements (*secondary outcomes*). Moreover, we hypothesized that InConnection was more effective in increasing social resourcefulness, treatment motivation, and shared decision making (*intermediate outcomes*), and that these intermediate outcomes would mediate the treatment effects.

Methods

Design and procedure

The effectiveness of the InConnection approach was examined in a quasi-experimental trial with two conditions: the InConnection approach and treatment as usual. Allocation to care programs was non-random, as it depended on the availability of care within a specific program (sometimes programs had a waiting list and clients were therefore allocated to the other form of care) and the client's preference for the content and methods of one care program over the other.

Families with multiple, complex problems registered for intensive youth care at one of the five participating organizations were eligible to participate. These organizations were situated in urban areas in the Netherlands, and were selected because they offer a variety of youth and family care for multi-problem families. Each organization offered the InConnection approach and one or more other approaches for systemic outpatient care (treatment as usual). Upon registration for one of the treatment modalities, families were approached for participation in this study if: 1) families consisted of at least one youth aged 10 to 23 years; 2) families experienced problems such as school drop-out, divorce, trauma, antisocial behavior, and substance use that are considered complex, multiple and severe, and/or previous treatments had not yielded the intended effects, and/or youth had an indication for an out-of-home placement; 3) families had sufficient Dutch proficiency.

To assess changes in outcomes during treatment, four multi-informant (youth, parent, YIM, and case manager) assessments using Dutch-language questionnaires were conducted between January 2019 and January 2022: 1) at the start of treatment (T1); 2) after three months (T2); 3) after nine months (T3); and 4) after 15 months (T4). At the first assessment, youth, parents and mentors completed questionnaires at a chosen location, often at home, in the presence of a researcher who assisted participants in answering the questions. If the participant was 16 years or older and did not experience problems in answering the questions, the subsequent assessments were completed online. To comply with the measures against the coronavirus taken by the Dutch government, we replaced home visits by phone and video calls from March 2020 onwards. Case managers individually completed online questionnaires at all assessments. Each assessment took approximately 30 minutes to complete. Participants gave active informed consent for their own participation. For youth under the age of 16, active informed consent for their participation was also received from one parent or legal guardian. Participants received a financial reward of €50 for completion of the four questionnaire assessments. This trial has been approved by the ethical review board of the Faculty of Social and Behavioral Sciences of Utrecht University (FETC-18-093), and is registered at the Netherlands Trial Register (NL7565; for protocol, see Koper et al., 2020).

Participants

At baseline the current study included a sample of 107 families of which 66 (62.7%) were in the intervention group and 41 (38.3%) were in the control group (see Figure 1 for the participant flow). In these families, there were 115 youth receiving treatment (cases). We were able to recruit participants for the intervention group from all five organizations for youth and family care, but for the control group only from three organizations (in one organization because there was no

suitable control group, and in the other organization because none of the families wanted to participate). Families started treatment between December 18th, 2018 and September 2nd, 2020. Unexpectedly, the allocated treatment continued after the final assessment (i.e., 15 months after starting treatment) in most cases (66.0%), which did not differ between conditions, $c^2(1) = 0.61$, $p = .434$. The average duration of completed treatments was 298 days ($SD = 133.99$, range = 40–574), which also did not differ between conditions, $t(36) = 0.72$, $p = .476$. Although we aimed to collect data among youth, parents and case managers for each family, only one person per family needed to participate. Hence, different compositions of informants were possible.

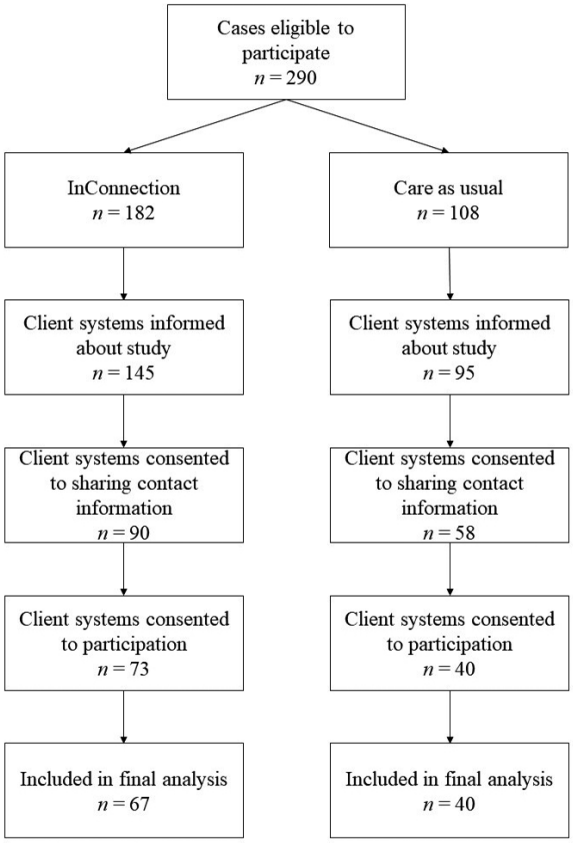

Figure 1. *Participant Flow per Treatment Condition*

In total 102 youth (46.1% female), 85 parents (78.8% female), and 58 case managers (70.7% female) reporting on 107 youth participated in the study. Of the youth, 70 (68.6%) were in the intervention group. Youth were on average 15.59 years old ($SD = 1.73$; range = 10.47–18.14) at the start of treatment. Most youth were born in the Netherlands (87.3%) and primarily identified as Dutch (70.6%). At the first measurement occasion, 89.2% of youth attended school, and their living situation was diverse: 47.1% of youth lived with (one of) their parents, 5.9% lived in a foster

family, 32.4% lived in an institution, 2.9% lived independently, and 7.8% lived elsewhere (e.g., with family members). Most youth (64%) had experienced an out-of-home placements before starting treatment (range = 1–6 or more).

Fifty-four parents (63.5%) were in the intervention group. At baseline, parents were on average 46.58 (*SD* = 7.23; range = 28.99–64.05) years old. Most parents were born in the Netherlands (80%) and primarily identified as Dutch (88%). More than half of parents completed tertiary education (54%), of which most completed higher education (67%). Other parents completed only primary education (2%), secondary education (27%), a different education (8%), or no education at all (6%). Marital status of parents was diverse: 31% of parents was married, 16% lived together, 27% was divorced, 23% has never been married, and 3% was widowed. See Table 1 for more detailed demographics, including demographics per condition.

Table 1. *Demographic Characteristics of Participants and Statistical Differences between Conditions*

	Total		InConnection		Control		Log. regr.
	n	%	*n*	%	*n*	%	*p*
Youth	102		70		32		
Gender: Female	47	46.1%	35	50.0%	12	37.5%	.242
Ethnic identity: Dutch	72	70.6%	50	71.4%	22	68.8%	.728
School: Yes	91	89.2%	65	92.9%	26	81.3%	.431
Education level: None/primary	6	5.9%	4	5.7%	2	6.3%	.112
Education level: Secondary	81	79.4%	60	85.7%	21	65.6%	
Education level: Tertiary	4	3.9%	1	1.4%	3	9.4%	
Liv. sit.: Both parents	19	18.6%	11	15.7%	8	25.0%	.268
Liv. sit.: Alternately both parents	2	2.0%	2	2.9%	0	0.0%	
Liv. sit.: Mother	22	21.6%	18	25.7%	4	12.5%	
Liv. sit.: Father	5	4.9%	4	5.7%	1	3.1%	
Liv. sit.: Foster care	6	5.9%	5	7.1%	1	3.1%	
Liv. sit.: Professional care	33	32.4%	20	28.6%	13	40.6%	
Liv. sit.: Independently	3	2.9%	1	1.4%	2	6.3%	
Liv. sit.: Other (e.g. with family)	8	7.8	8	11.4%	0	0.0%	
Parents	85		54		31		
Gender: Female	67	78.8%	42	77.8%	25	80.6%	.756
Ethnic identity: Dutch	75	88.2%	50	92.6%	25	80.6%	.064
Education level: None/primary	7	8.2%	6	11.1%	1	3.2%	.411
Education level: Secondary	23	27.1%	12	22.2%	11	35.5%	
Education level: Vocational	15	17.6%	8	14.8%	7	22.6%	
Education level: Higher	31	36.5%	22	40.7%	9	29.0%	
Income: Lowest 10%[1]	52	61.2%	38	70.4%	14	45.2%	.071
Biological parent: Yes	72	84.7%	46	85.2%	26	83.9%	.998
Marital status: With partner	39	45.9%	24	44.4%	15	48.4%	.783
Living with children: Yes	74	87.1%	47	87.0%	27	87.1%	.829

Note. Log. regr. = Logistic regression; Liv. sit = Living situation. [1] The number of people in the lowest 10% of Dutch adults (Central Bureau for Statistics, 2021).

Condition differences in demographic characteristics

To determine the demographic equivalence between conditions, we used logistic regressions to examine whether youth and parents in the intervention group differed from those in the control group. As shown in Table 1, we found no demographic differences between the conditions for youth or parents.

Initially, we aimed to include 300 families with a 3:1 ratio to allow for propensity score matching (Koper et al., 2020). Since the final sample eligible for analyses turned out to be less than half its aim, we chose not to apply this strategy as this would decrease our sample size even further, making it inappropriate for the analyses planned. This decision was justified by the results indicating no demographic differences between the treatment conditions.

Missing data

All 102 youth (100.0%) completed the first measurement occasion, 76 (74.5%) completed the second and third measurements, and 74 (72.5%) completed the fourth measurement. Of the 85 parents, 84 (98.8%) completed the first measurement, 60 (70.6%) completed the second measurement, 72 (84.7%) completed the third measurement, and 66 (77.6%) completed the fourth measurement. Case managers reported about 107 youth (100.0%) at the first measurement occasion, about 76 youth (71.0%) at the second and third measurements, and about 57 youth (53.5%) at the fourth measurement. Overall, non-completion was 46.1% for youths, 40.0% for parents, and 62.6% for case managers, indicating that these informants did not complete all four waves. Non-completion was highest for case managers because they were only invited to participate if the youth were still receiving the allocated treatment. If regarding only the assessments in which case managers were invited to participate, non-completion among case managers was 36.5%.

Logistic regressions were used to examine differences between participants who completed all waves (completers) and participants who did not (non-completers) on both demographic variables (i.e., organization, condition, and gender for all informants; ethnic identity, living situation, and education level for youth and parents; going to school for youth only; and relationship type, income, and marital status for parents only) as well as study variables at the first measurement occasion. Regarding youth and case managers, the analyses revealed that completers and non-completers did not significantly differ on demographic variables nor study variables, $ps > .136$, and $ps > .593$, respectively. Regarding parents, completers and non-completers significantly differed on gender, $p = .044$, and parent-reported youth emotional and behavioral problems. Mothers, and parents of children with more problems were more likely to complete all waves. Other variables did not significantly predict completion for parents ($ps > .232$).

Missing data of study variables were also analyzed on item level. Little's Missing Completely at Random (MCAR) test (Little & Rubin, 1989, 2002) showed that data were missing completely at random ($p = 1.000$ across informants). Moreover, we found a normed chi-square (c^2/df) of 0.05 for youths, 0.24 for parents, and 0.10 for case managers, suggesting a good fit between the sample scores with and without imputation (Bollen, 1989). Hence, all participants were included in the analyses to allow all available data to be used.

Conditions

InConnection approach

The InConnection approach is a multidisciplinary systemic outpatient alternative to out-of-home care for youth of multi-problem families. Treatment consists of four phases: 1) *who*, 2) *what*, 3)

how, and 4) *adaptivity* (van Dam & Verhulst, 2016). In contrast to most other treatment programs, the InConnection team does not start with an analysis of problems. Instead, in the *who* phase, the case manager opens the conversation on the value of a YIM and its implications for the family and the professional. The case manager explains that a YIM is someone who is trusted by the youth, someone they can go to for support or advice, and/or someone who inspires them. Youth are asked to think about who could be this person for them. If necessary, the case manager provides more support in identifying a potential YIM, for example by making a social network map. Once youth have identified a potential YIM, this person is nominated by the youth and invited for a meeting with the case manager. The case manager explains what the positioning of a YIM means. If the YIM accepts the position as YIM, all parties meet to discuss issues of confidentiality, privacy, contact frequency, boundaries, and a worst-case scenario, which are laid down in a plan of action. The YIM is officially installed when all parties have signed the plan of action (van Dam & Verhulst, 2016). The duration of this phase is on average one month.

In the *what* phase, all parties give their opinion on what they would like to see changed. Case managers motivate youth, parents, and YIM to discuss the ideal situation. The case manager uses this information to develop a problem analysis and potential solutions. In the *how* phase all parties work together on formulating a plan of action based on the input from the previous phase. The plan of action documents the treatment goals and the support offered by professionals (e.g., specialized treatment) and the informal network. This plan of action is executed in this phase and evaluated with all parties every two months. The final *adaptivity* phase starts when treatment goals have been met and/or all parties feel that the current professional support is no longer needed. The case manager poses several questions to the youth, parents, and YIM, such as 'what changes when professional support ends?' and 'what happens to the position of the YIM?'. Once all parties agree on how the family will proceed without professional support, the treatment is concluded (van Dam & Verhulst, 2016).

As treatment is tailored to the needs of a family, the treatment varies in duration and content. That is, for youth with more complex needs, the treatment may take 12 months or more, whereas for others the treatment may only take 6 months. To tailor the content to the family's needs, the treatment teams consist of professionals with different types of expertise: youth and family care, psychiatry, addiction care, and care for people with mild intellectual disabilities. These professionals are trained in delivering the treatment according to the InConnection approach to enhance adherence to the guidelines. The number and combination of treatment techniques used differ across families. A few examples: youth with addiction problems can be offered specialized addiction care; parents who experienced trauma can be offered specialized trauma therapy; and families that experience interpersonal conflicts can be offered systemic counselling (van Dam & Verhulst, 2016).

Treatment fidelity

InConnection case managers completed a questionnaire concerning treatment fidelity at each measurement occasion. The questionnaire was developed for the purpose of this study, and consisted of 13 items reflecting the steps in the phases of the InConnection approach (i.e., five items for the *who* phase, two for the *what* phase, and three each for the *how* and *adaptivity* phases). An example item is: "We have described the cooperation agreements between the family, YIM and me as professional".

On average, case managers reported to have successfully completed about half of the steps (M = 7.49, SD = 4.54, range = 0–13) throughout treatment. Treatment fidelity varied greatly between

cases. In 5 cases (7.0%) case managers did not complete any of the steps. In 34 cases (47.8%) at least three quarters of steps were performed, of which all steps were performed in 14 cases (19.7%).

Care as usual

Care as usual included different outpatient treatment programs for youth of multi-problem families. All selected treatment programs are multi-modal systemic family care programs, such as versions of (intensive) family preservation programs. Team members collaborate with other professionals involved in the family (both from within the same organization and from other organizations). Families could thus be enrolled in several treatment programs at the same time. The average duration of the treatment programs is similar to the InConnection approach: approximately six to 12 months. Short-term interventions, such as crisis interventions, were not included.

Manipulation check

To test whether the condition manipulation was successful, case managers reported on the implemented treatment characteristics using the Dutch Taxonomy of Interventions for Families with Multiple Problems (TIFMP), which is developed to register techniques used in the treatment of multi-problem families (Visscher et al., 2017, 2018). The TIFMP included 53 techniques divided over eight domains: A) assessment and organization of information; B) planning and evaluation; C) working on change; D) teaching parenting skills; E) task support; F) activation of the social network; G) activation of the professional network; and H) maintaining the collaboration. Case managers indicated whether a technique was used in the period between assessments. If relevant, case managers indicated to whom the technique was directed (youth, parent, family, or environment). The TIFMP was developed and tested in the Netherlands and showed sufficient interrater reliability (Visscher et al., 2018).

Logistic regression analyses revealed that InConnection did not differ from care as usual in the use of techniques from the domain activation of the social network, $p = .928$. However, when looking at whom techniques were targeted to across all domains, intervention techniques used in InConnection were directed at the environment more often compared to the control condition ($p = .010$). Reports from youth revealed that 81.4% of youth from the intervention group positioned a YIM, similar to previous research (van Dam et al., 2017; van Dam, Klein Schaarsberg, et al., 2018).

Measurements

Primary outcome: Youth resilience

Resilience of youth was measured by the self-reported Child and Youth Resilience Measure–Short form (CYRM-12), which consists of 12 items (Liebenberg et al., 2013; Ungar & Liebenberg, 2013b). The CYRM-12 assesses the individual, relational, communal and cultural resources available to individuals that may sustain their resilience. Items (e.g., "I have people I look up to") are rated on a 5-point scale from 1=*does not describe me at all* to 5=*describes me a lot*. Higher scores reflect higher levels of resilience. The CYRM-12 showed sufficient content validity to be used as a cross-cultural screener of resilience, and internal consistency was satisfactory in the original Canadian sample (Liebenberg et al., 2013) and a Dutch sample (Broekhoven, 2015). In the current sample, internal consistency was satisfactory to good across measurement occasions, α=.73–.84.

Secondary outcomes

Well-being

Youth and parental well-being was measured using the self-reported World Health Organization Well-Being Index (WHO-5) (WHO, 1998). Youth and parents rated 5 items (e.g., "I have felt calm and relaxed") on a 6-point scale from 0=*none of the time* to 5=*all the time*. Higher scores reflect higher levels of well-being. The measure is deemed appropriate for cross-cultural screening purposes and to be used in clinical trials (Topp et al., 2015). The internal consistency and validity were satisfactory in a variety of samples (Topp et al., 2015), including a Dutch sample (Hajos et al., 2013). Internal consistencies were good to excellent across measurement occasions, α=.86–.91 for youth, and α=.82–.91 for parents.

Youth emotional and behavioral problems

Youth emotional and behavioral problems were measured using the multi-informant Brief Problems Monitor (BPM). The BPM is the abbreviated version of the Child Behavior Checklist and monitors children's emotional and behavioral functioning (Piper et al., 2014; Verhulst & Van der Ende, n.d.). Youth filled out the self-report version (BPM-Y) and parents filled out the parent version (BPM-P). Both versions consist of 19 items (e.g., "I argue a lot" and "Argues a lot"), which are rated on a 3-point scale from 0=*not true* to 2=*very true*. Higher scores reflect more problems. Psychometric properties of the BPM-Y (Richter, 2015) and BPM-P (Piper et al., 2014; Richter, 2015) were adequate in American and Norwegian samples: Internal consistency was high and validity was satisfactory. The internal consistencies were good at all measurement occasions, α=.83–.88 for youth, and α=.86–.89 for parents.

Risk of child unsafety

Risk of child unsafety was measured using the Actuarial Risk Assessment Tool for Protection of Juveniles (ARIJ), a Dutch assessment tool for professionals to assess the future risk of unsafety of children and youth (van der Put et al., 2015). Case managers rated 32 items on a 3-point scale with 1=*yes*, 2=*no*, and ?=*unknown*. (The item "young child, <5 years old" of the original ARIJ has been excluded in this study, as youth participating in our study are 10 years or older.) We created sum scores of the 12 dynamic items (e.g., "Concerns about parenting and care: Protection and safety") to assess the risk of child unsafety across measurement occasions. Higher scores reflect a higher risk of child unsafety. The ARIJ was developed and tested in the Dutch context, and has adequate interrater and intrarater reliability (Vial et al., 2019). In the current sample, the internal consistency was satisfactory to good across measurement occasions, α = .73–.85.

Out-of-home placements

Youth reported on whether an out-of-home placement took place during the study at the second, third and fourth assessment (yes or no).

Parent-child relationship quality

Parent-child relationship quality was measured using the Psychological Availability and Reliance on Adult (PARA), which is designed to measure relationship quality in asymmetrical relationships from an attachment perspective. It measures three aspects of the relationship: availability, reliance, and affective bond (Zegers, 2007; Zegers et al., 2006). Youth reported on the relationship with mothers and fathers separately. Parents individually reported on the relationship with their child. Three items of the original affectional bond scale have been deleted, as they were not

deemed appropriate for the parent-child relationship (e.g., "You dread knowing you may have another [father/mother] in the future"), resulting in a 16-item scale. Items (e.g., "My parent is warm and understanding" and "I am warm and understanding") were rated on a 4-point scale from 1=*disagree* to 4=*agree*. Higher scores reflect higher levels of parent-child relationship quality. Internal consistency and validity were satisfactory for most scales in a Dutch sample (Zegers, 2007). The internal consistencies were good to excellent at all measurement occasions, α=.81–.99 for youth, and α=.85–.90 for parents.

Parental resilience

Parental resilience was measured with the self-reported Adult Resilience Measure – Short form (ARM-12) consisting of 12 items (Ungar & Liebenberg, 2013a). The ARM-12 is an adapted version of the CYRM-12 (Liebenberg et al., 2013) for use with adults. In contrast to the CYRM-12, psychometric properties of the ARM-12 have not been examined yet. In the current sample, the internal consistency was satisfactory to good across measurement occasions, α=.78–.86.

Parental empowerment

Parental empowerment was measured using the Family scale of the self-reported Family Empowerment Scale (FES), which measures empowerment in parenting situations in families with children who have emotional, behavioral or mental disorders (Koren et al., 1992). Parents rated 12 items (e.g., "When dealing with my child, I focus on the good things as well as the problems") on a 5-point scale from 1=*never* to 5=*always*. Higher scores reflect greater empowerment. Validity of the Family scale was good in American (Koren et al., 1992; Singh et al., 1995) and Dutch (Segers, 2017) samples. The internal consistency has only been examined in an American sample, and was excellent (Singh et al., 1995). In the current sample, the internal consistency was good to excellent across measurement occasions, α=.89–.92.

Parenting behavior

Parenting behaviors were measured using the self-reported Alabama Parenting Questionnaire – Short form (APQ-9). The APQ-9 measures three main parenting practices in response to child behavioral problems: positive parenting, inconsistent discipline, and poor supervision (Elgar et al., 2007). Parents reported their parenting behavior using the 9 items (e.g., "You praise your child if he/she behaves well") that are rated on a 5-point scale from 1=*never* to 5=*always*. Higher scores reflect higher levels of parenting practices in a certain domain. Validity of the APQ-9 was good, but the internal consistency was low in an Australian sample (Elgar et al., 2007). Yet, a low internal consistency is not necessarily problematic when the purpose is to measure a broad concept using few items, like in the APQ-9. Internal consistency of the extended APQ were low to good in a Dutch sample (Menting et al., 2014). Similarly, the internal consistencies were low to excellent across measurement occasions in the current sample, ƒ=.83–.92 for positive parenting, α=.65–.77 for inconsistent discipline, and α=.51–.67 for poor supervision. We dropped one item of the poor supervision scale as it is considered outdated and parents expressed issues with the item ("Your child fails to leave a note or to let you know where he/she is going"). The internal consistency increased to α=.62–.79.

Intermediate outcomes

Social resourcefulness

Youth's level of social resourcefulness was assessed using the subscale Seeking Social Support of the Dutch questionnaire Utrecht Coping List (UCL). This subscale measures the extent to

which youth seek comfort and understanding from others, tell someone about their concerns or ask for help (Schreurs et al., 1993). Youth rated the 6 items (e.g., "Share your worries with someone") on a 4-point scale from 1=*rarely or never* to 4=*very often*. Higher scores reflect more social resourcefulness. The internal consistency and validity of the UCL were good in a Dutch sample (Schreurs et al., 1993). In the current sample, the internal consistencies were good across measurement occasions, α=.84–.89.

Shared-decision making

Shared-decision making was measured using the second and third of the Session Rating Scale (SRS), which is a brief four-item measure of therapeutic alliance. These items tap into agreement on the treatment goals and treatment tasks (Duncan et al., 2015). Youth and parents rated the items on a continuous scale of 10 cm, where the left side indicates a more negative response (e.g., "We did not work on or talk about what I wanted to work on and talk about") and the right side indicates a more positive response (e.g., "We worked on and talked about what I wanted to work on and talk about"). Thus, higher scores reflect higher levels of shared-decision making. The internal consistency and validity of the SRS including all four items were satisfactory to good in American (Duncan et al., 2015) and Dutch (Boezen-Hilberdink et al., 2014) samples. In the current sample, the internal consistencies were good to excellent across measurement occasions, α=.88–.91 for youth and α=.82–.94 for parents.

Treatment motivation

Youth's treatment motivation was assessed using the subscale Motivation to Engage in the Treatment of the self-reported Treatment Motivation Scales for Forensic Outpatient Treatment (TMS-F) (Drieschner & Boomsma, 2008). Youth rated the 16 items (e.g., "If I saw little change in my life, I would end the treatment") on a 5-point scale from 1=*strongly disagree* to 5=*strongly agree*. Higher scores reflect greater treatment motivation. Internal consistency and validity were satisfactory in a Dutch adult sample (Drieschner & Boomsma, 2008). Psychometric properties have not yet been studied in youth samples. In the current sample, the internal consistency was good to excellent across measurement occasions, α=.83–.94.

Statistical analyses

Descriptive statistics were obtained through SPSS version 26 to gain insight in the means, standard deviations and correlations of the variables. All other analyses were performed in Mplus 8.7 (Muthén & Muthén, n.d.). Data were analyzed following the intention-to-treat principle, meaning that participants were grouped according to their allocated treatment, regardless of whether treatment was completed or not. Because missing data were missing completely at random, the default setting in Mplus for handling missing data (i.e., full information maximum likelihood) was used. We performed multilevel analyses to account for the nested structure of our data, thus providing unbiased estimates. More specifically, three-level models were examined in which measurement occasions (Level 1) were nested within participants (Level 2), and participants were nested in families (Level 3). Change across time in the outcomes was assessed with latent growth models.

The fit of the models was evaluated using the following cutoff scores (Kline, 2005). First, for the comparative fit index (CFI), values ≥ .90 would indicate acceptable fit and values ≥ .95 would indicate good fit. Second, for the root-mean-square error of approximation (RMSEA) and the standardized root-mean-squared residual (SRMR) values ≤ .08 would indicate acceptable fit and values ≤ .05 would indicate good fit.

To evaluate the direct effect of condition on the outcome and intermediate measures, we specified separate models for each measure to prevent loss of power due to a high number of parameters. For each measure, we first fitted a linear growth model including a latent intercept and a latent slope factor with factor loadings corresponding to the number of months between assessments (0, 1, 3, 5). Then, we regressed the intercept and linear slope on a condition variable that was dummy coded with 1 = intervention group and 0 = control group.

Indirect or mediation effects were only examined for intermediate outcomes that were significantly predicted by condition. To evaluate the indirect effects, we specified separate models per intermediate outcome and outcome measure for each combination of variables. Then, we specified the three direct regression paths, that is, 1) condition on the slope of the outcome, 2) condition on the slope of the intermediate outcome, and 3) the slope of the intermediate outcome on the slope of the outcome. Finally, we specified the indirect effect of condition on the slope of the outcome through the slope of the intermediate outcome.

Sensitivity analyses

We conducted two types of sensitivity analyses to check the robustness of our results. First, we reran analyses after excluding participants without YIMs from the intervention group. Second, we reran analyses after removing participants from the intervention group who received treatment with a low level of treatment fidelity (i.e., <75% of steps performed).

Results

Participant flow

During the recruitment period, 290 youth started treatment at one of the participating treatment modalities, of which 182 at InConnection. Of these, 240 (83%) youth and their parents or caregivers (i.e., client system) were informed about the study by their case manager and asked if they consented to sharing their contact information with the independent research team, to which 148 (51%) of client systems agreed. Client systems were then approached by the research team, and 113 (39%) consented to participate in the study. Six client systems did not participate, resulting in 107 participating families of which 66 were in the intervention group. Consent and participation of individuals resulted in the final sample of $n = 102$ youth and $n = 85$ parents eligible for analyses. See Figure 1 for the participant flow per treatment condition.

Descriptive statistics

The means and standard deviations of all study variables are presented in Table 2. Correlations between study variables from the same informant are shown in Table 3.

Condition differences in study variables

In addition to equivalence on demographic factors between the treatment conditions (see Table 1), we also examined whether there were differences between the conditions on the outcome measures of this study at the first measurement occasion by examining the effect of condition on the intercepts. We found two significant differences, namely for youth-reported resilience and youth-reported shared-decision making, $p = .002$, and $p = .028$, respectively. In both cases, youth reported higher levels in the intervention group than in the control group. No differences were found for parent-reported and case manager-reported outcomes (see Table 4).

Table 2. *Descriptive Statistics of Study Variables in both Treatment Conditions at all Measurement Occasions*

	T1 – Baseline		T2 – 3 months after		T3 – 9 months after		T4 – 15 months after	
	n	*M* (*SD*) / %	*n*	*M* (*SD*) / %	*n*	*M* (*SD*) / %	*n*	*M* (*SD*) / %
Youth resilience (Y)	98	3.76 (0.53)	77	3.73 (0.56)	76	3.68 (0.63)	74	3.66 (0.62)
Care as usual	29	3.52 (0.48)	27	3.54 (0.68)	25	3.38 (0.76)	24	3.38 (0.68)
InConnection	69	3.87 (0.51)	50	3.82 (0.45)	51	3.82 (0.51)	50	3.80 (0.55)
Youth well-being (Y)	98	2.73 (1.17)	77	2.79 (1.17)	76	2.72 (1.24)	74	2.59 (1.24)
Care as usual	29	2.57 (1.28)	27	2.47 (1.36)	25	2.50 (1.26)	24	2.23 (1.25)
InConnection	69	2.79 (1.13)	50	2.96 (1.03)	51	2.82 (1.23)	50	2.76 (1.20)
Youth emotional/behavioral problems (Y)	98	0.68 (0.39)	77	0.62 (0.33)	76	0.62 (0.34)	74	0.62 (0.36)
Care as usual	29	0.69 (0.38)	27	0.68 (0.36)	25	0.72 (0.38)	24	0.67 (0.38)
InConnection	69	0.68 (0.40)	50	0.59 (0.31)	51	0.57 (0.30)	50	0.59 (0.35)
Youth emotional/behavioral problems (P)	85	1.00 (0.43)	63	0.92 (0.38)	73	0.91 (0.37)	66	0.87 (0.40)
Care as usual	31	0.91 (0.41)	22	0.89 (0.44)	28	0.92 (0.33)	26	0.95 (0.34)
InConnection	54	1.05 (0.44)	41	0.93 (0.35)	45	0.90 (0.39)	40	0.82 (0.44)
Risk of child unsafety (C)	105	5.07 (2.96)	72	4.78 (3.40)	77	4.23 (3.19)	51	3.43 (2.60)
Care as usual	34	4.65 (3.20)	25	5.00 (3.63)	26	4.31 (3.67)	15	2.67 (2.82)
InConnection	71	5.27 (2.84)	47	4.66 (3.30)	51	4.20 (2.96)	36	3.75 (4.00)
Out-of-home placements: Yes (Y)	-	-	76	14.5%	75	13.3%	74	12.2%
Care as usual	-	-	26	15.4%	25	8.0%	24	20.8%
InConnection	-	-	50	14.0%	50	16.0%	50	8.0%
Parent-child relationship quality (Y)	93	2.85 (0.67)	73	2.94 (0.64)	72	2.87 (0.61)	68	2.83 (0.70)
Care as usual	26	2.75 (0.72)	24	2.88 (0.71)	25	2.75 (0.60)	22	2.88 (0.62)
InConnection	67	2.89 (0.65)	49	2.96 (0.61)	47	2.93 (0.61)	46	2.80 (0.75)

	T1 – Baseline		T2 – 3 months after		T3 – 9 months after		T4 – 15 months after	
	n	*M* (*SD*) / %	*n*	*M* (*SD*) / %	*n*	*M* (*SD*) / %	*n*	*M* (*SD*) / %
Parent-child relationship quality (P)	85	3.11 (0.47)	63	3.01 (0.61)	73	3.16 (0.49)	67	3.08 (0.56)
Care as usual	31	3.09 (0.49)	22	3.11 (0.55)	28	3.12 (0.56)	26	3.06 (0.54)
InConnection	54	3.12 (0.46)	41	3.00 (0.64)	45	3.19 (0.46)	41	3.10 (0.57)
Parental resilience (P)	83	4.08 (0.52)	60	4.02 (0.49)	71	4.02 (0.49)	66	4.05 (0.55)
Care as usual	30	4.12 (0.54)	21	4.06 (0.50)	26	4.06 (0.50)	25	4.04 (0.54)
InConnection	53	4.06 (0.51)	39	4.00 (0.49)	45	3.99 (0.50)	41	4.06 (0.57)
Parental well-being (P)	63	2.93 (1.20)	52	2.97 (1.04)	71	2.95 (1.05)	63	2.72 (0.93)
Care as usual	29	2.98 (1.17)	21	3.04 (1.06)	26	2.96 (0.99)	25	2.78 (0.73)
InConnection	34	2.88 (1.24)	31	2.92 (1.04)	45	2.95 (1.10)	38	2.67 (1.05)
Parental empowerment (P)	80	3.90 (0.59)	59	3.85 (0.49)	70	3.91 (0.50)	65	3.91 (0.58)
Care as usual	29	3.84 (0.76)	21	3.77 (0.53)	26	3.80 (0.55)	25	3.71 (0.66)
InConnection	51	3.94 (0.48)	38	3.90 (0.46)	44	3.98 (0.45)	40	4.03 (0.49)
Positive parenting (P)	87	4.05 (0.60)	65	4.00 (0.69)	75	4.17 (0.59)	69	4.13 (0.55)
Care as usual	33	4.15 (0.60)	24	4.04 (0.49)	30	4.09 (0.62)	28	4.04 (0.51)
InConnection	54	3.99 (0.60)	41	3.98 (0.78)	45	4.23 (0.56)	41	4.20 (0.57)
Poor supervision (P)	87	2.34 (1.04)	64	2.34 (1.20)	75	2.39 (1.13)	66	2.42 (1.02)
Care as usual	33	2.26 (1.02)	24	2.73 (1.32)	30	2.67 (1.27)	28	2.59 (1.03)
InConnection	54	2.39 (1.05)	40	2.10 (1.08)	45	2.20 (1.01)	38	2.29 (1.01)
Inconsistent discipline (P)	86	2.71 (0.90)	65	2.58 (0.77)	75	2.50 (0.82)	66	2.55 (0.79)
Care as usual	32	2.69 (0.79)	24	2.54 (0.67)	30	2.46 (0.72)	28	2.58 (0.77)
InConnection	54	2.72 (0.96)	41	2.60 (0.82)	45	2.53 (0.88)	38	2.52 (0.81)
Social resourcefulness (Y)	98	2.11 (0.67)	76	2.24 (0.63)	75	2.13 (0.70)	73	2.16 (0.69)
Care as usual	29	2.02 (0.61)	26	2.22 (0.70)	25	1.99 (0.75)	23	2.18 (0.81)
InConnection	69	2.14 (0.70)	50	2.25 (2.59)	50	2.20 (0.67)	50	2.16 (0.64)

	T1 – Baseline		T2 – 3 months after		T3 – 9 months after		T4 – 15 months after	
	n	*M* (*SD*) / %	*n*	*M* (*SD*) / %	*n*	*M* (*SD*) / %	*n*	*M* (*SD*) / %
Shared-decision making (Y)	91	6.88 (2.47)	74	6.80 (2.11)	58	7.26 (2.29)	53	6.78 (2.27)
Care as usual	28	5.81 (3.10)	26	6.21 (2.67)	16	6.91 (2.45)	18	5.97 (2.95)
InConnection	63	7.35 (1.99)	48	7.11 (1.68)	42	7.39 (2.24)	35	7.20 (1.74)
Shared-decision making (P)	77	7.47 (1.98)	36	6.74 (1.87)	50	7.80 (1.85)	17	7.24 (1.59)
Care as usual	28	7.82 (2.09)	18	7.00 (1.89)	20	7.80 (2.01)	6	7.75 (1.89)
InConnection	49	7.27 (1.91)	18	6.47 (1.87)	30	7.80 (1.77)	11	6.95 (1.42)
Treatment motivation (Y)	96	3.58 (0.65)	74	3.56 (0.72)	57	3.49 (0.88)	54	3.53 (0.82)
Care as usual	29	3.74 (0.71)	26	3.76 (0.87)	16	3.42 (0.97)	18	3.65 (0.95)
InConnection	67	3.51 (0.61)	48	3.45 (0.61)	41	3.52 (0.85)	36	3.47 (0.76)

Note. Y = reported by youth; P = reported by parents; C = reported by case managers.

Table 3. *Correlations between Study Variables Within Informants at Baseline*

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1. Resilience	-	.28*	-.08	-.11	.29**	.06	.06	-.17	-	.36**	-
2. Well-being	.54**	-	-.16	.31*	.39**	.26*	-.22	-.10	-	.07	-
3. Emotional/behavioral problems	-.09	-.12	-	-.30**	.03	-.09	.26*	.22*	-	-.01	-
4. Parent-child relationship quality	.52**	.35**	-.22*	-	.37**	.38**	-.21*	.15	-	-.13	-
5. Parental empowerment	-	-	-	-	-	.44**	-.03	.06	-	.23*	-
6. Positive parenting	-	-	-	-	-	-	.01	.01	-	-.01	-
7. Poor supervision	-	-	-	-	-	-	-	.03	-	.08	-
8. Inconsistent discipline	-	-	-	-	-	-	-	-	-	-.08	-
9. Social resourcefulness	.16	.07	.09	.23*	-	-	-	-	-	-	-
10. Shared-decision making	.22*	.31**	.19	.14	-	-	-	-	.16	-	-
11. Treatment motivation	-.05	-.22*	-.11	.06	-	-	-	-	-.05	-.34**	-

Note. The panels below the diagonal (bottom left) show the correlations between youth-reported variables, and the panels above the diagonal (top right) show the correlations between parent-reported variables. We did not report cross-informant correlations due to the small number of cases in which multiple informants from one family participated.
* $p < .05$, ** $p < .01$

Table 4. *Results of the Latent Growth Model Analyses Comparing the Treatment Effectiveness of InConnection to Care as Usual*

	Intercept			Slope			Model fit indices		
	M	σ^2	*b* (*SE*)	*M*	σ^2	*b* (*SE*)	CFI	RMSEA	SRMR
Youth resilience (Y)	3.51**	0.15**		-0.03	0.01**		1.000	0.000	0.074
Effect of condition			0.35 (0.11)**			0.02 (0.03)			
Youth well-being (Y)	2.52**	0.54**		-0.04	0.02		1.000	0.000	0.031
Effect of condition			0.37 (0.24)			0.02 (0.06)			
Youth emotional/behavioral problems (Y)[1]	0.70**	0.09**		-0.01	0.00		1.000	0.000	0.044
Effect of condition			-0.07 (0.08)			-0.01 (0.01)			
Youth emotional/behavioral problems (P)	0.89**	0.12**		0.00	0.00		0.958	0.076	0.083
Effect of condition			0.13 (0.10)			-0.05 (0.02)*			
Risk of child unsafety (C)	5.20**	7.31**		-0.32**	0.10		0.972	0.064	0.079
Effect of condition			-0.45 (0.66)			-0.02 (0.14)			
Out-of-home placements (Y)[1]	0.14	0.05		0.01	0.00		0.851	0.075	0.095
Effect of condition			0.04 (0.09)			-0.02 (0.02)			
Parent-child relationship quality (Y)	2.77**	0.32**		0.02	0.00		0.972	0.073	0.077
Effect of condition			0.16 (0.15)			-0.02 (0.03)			
Parent-child relationship quality (P)[1]	3.16**	0.15**		-0.01	0.00		0.921	0.093	0.212
Effect of condition			-0.07 (0.12)			0.03 (0.03)			
Parental resilience (P)	4.12**	0.18**		-0.03	0.00		0.999	0.015	0.117
Effect of condition			-0.10 (0.11)			0.03 (0.02)			
Parental well-being (P)	3.02**	1.04**		-0.04	0.02		1.000	0.000	0.038
Effect of condition			-0.03 (0.28)			-0.01 (0.06)			
Parental empowerment (P)[1]	3.87**	0.14**		-0.02	0.00		0.989	0.039	0.064
Effect of condition			0.02 (0.13)			0.05 (0.03)			

	Intercept			Slope			Model fit indices		
	M	σ^2	*b* (*SE*)	*M*	σ^2	*b* (*SE*)	CFI	RMSEA	SRMR
Positive parenting (P)	4.18**	0.27**		-0.03	0.01*		1.000	0.000	0.070
Effect of condition			-0.16 (0.15)			0.09 (0.03)**			
Poor supervision (P)	2.40**	0.75**		0.05	0.01		0.978	0.067	0.075
Effect of condition			-0.04 (0.27)			-0.06 (0.04)			
Inconsistent discipline (P)	2.65**	0.44**		-0.03	0.01		1.000	0.000	0.061
Effect of condition			0.03 (0.18)			-0.02 (0.04)			
Social resourcefulness (Y)[1]	2.07**	0.30**		0.01	0.00		0.991	0.030	0.127
Effect of condition			0.11 (0.13)			0.00 (0.03)			
Shared-decision making (Y)[1]	6.04**	2.00**		0.01	0.00		1.000	0.000	0.079
Effect of condition			1.23 (0.56)*			-0.03 (0.13)			
Shared-decision making (P)[1,2]	7.71**	2.60*		-0.07	0.00		0.828	0.118	0.058
Effect of condition			-0.50 (0.46)			0.28 (0.19)			
Treatment motivation (Y)	3.76**	0.32**		-0.01	0.02*		1.000	0.000	0.072
Effect of condition			-0.25 (0.15)			0.01 (0.15)			

Note. *M* = mean of intercept or slope; σ^2 = variance of intercept or slope; *b* (*SE*) = regression coefficient (and standard error) of condition on intercept or slope; CFI = comparative fit index; RMSEA = root mean square error of approximation; SRMR = standardized root mean square residual; Y = reported by youth; P = reported by parents; C = reported by case managers. Control group is the reference category (0).

[1] Due to negative slope variance, we constrained the slope variance (>0). The negative slope variance indicates that there is no variance to be explained by condition. Thus, we could not reliably estimate the influence of condition on the slope in these models, and any significant effects are ignored.

[2] Due to the low number of parents at T4, we estimated this model using only T1, T2 and T3.

* $p < .05$, ** $p < .01$

Intervention effects

Direct effects on primary and secondary outcomes

To evaluate the direct effects on the primary and secondary outcomes, we conducted separate models in which the linear slope of an outcome measure was regressed on the condition variable. Results indicated few significant treatment effects. Overall, youth and parents did not experience changes over time in any of the outcomes variables, indicated by insignificant slope values. Case managers from both conditions, however, did report decreases in child unsafety, $p < .001$. When looking at the effect of condition on the slopes, which would indicate differences in effectiveness between conditions, we did not find any treatment effects on self-reported youth outcomes ($ps > .229$) nor for child unsafety reported by case managers ($p = .901$). However, we found a significant treatment effect on parent-reported youth emotional and behavioral problems (see Figure 2), $b = -0.05$, $SE = 0.02$, $p = .013$, $\beta = -0.76$. Concerning parents' self-reported outcomes, we found one significant treatment effect on positive parenting (see Figure 3), $b = 0.09$, $SE = 0.03$, $p = .003$, $\beta = 0.42$. Thus, on average, parents in the intervention condition reported improvements in youth's emotional and behavioral problems and their own positive parenting over time, whereas control parents did not experience changes in these outcomes. No treatment effects were found for the other parent-reported outcome measures ($ps > .112$). Most models had acceptable to good fit. See Table 4 for detailed model results.

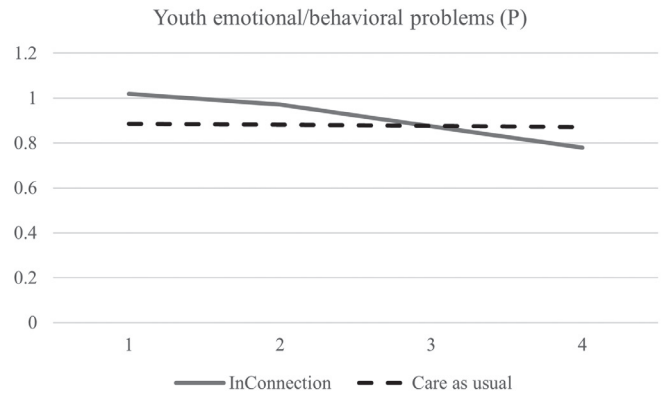

Figure 2. *Graph with Results from the Latent Growth Model for Parent-reported Youth Emotional/Behavioral Problems*

Note. This figure shows the significant treatment effect of InConnection compared to care as usual on parent-reported youth emotional/behavioral problems, $p = .013$. InConnection: $b = -0.05$; care as usual: $b = 0.00$.

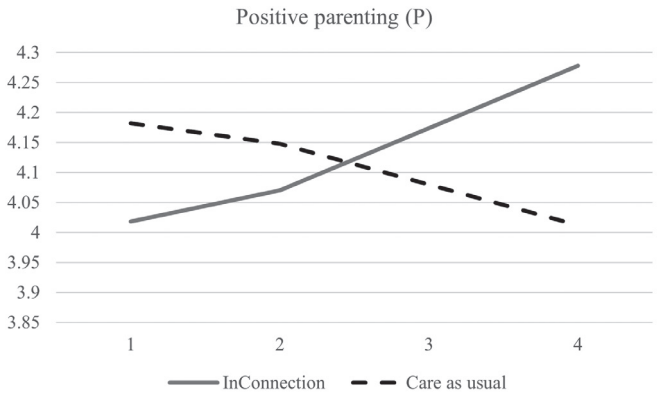

Figure 3. *Graph with Results from the Latent Growth Model for Parent-reported Positive Parenting*

Note. This figure shows the significant treatment effect of InConnection compared to care as usual on parent-reported positive parenting, $p = .003$. InConnection: $b = 0.05$; care as usual: $b = -0.03$.

Direct effects on intermediate outcomes

To examine the treatment effects on the four intermediate outcomes, we conducted similar separate models to the analyses presented above. Youth and parents did not report any significant changes in the intermediate outcomes over time. We also did not find any effect of condition on change for youth nor parents, $ps > .850$ and $p = .568$, respectively. Therefore, we did not perform mediation analyses. Most models had acceptable to good fit. See Table 4 for detailed results of all models.

Sensitivity analyses

We conducted two types of sensitivity analyses to check the robustness of our results concerning the treatment effects on the primary, secondary and intermediate outcomes. We reran analyses after excluding $n = 41$ cases from the intervention group without YIMs, and after excluding $n = 40$ cases with low levels of treatment fidelity. The results (see Appendix A) were similar to those from the initial analyses, giving us confidence in the accuracy of our results. We found significant treatment effects in both sensitivity analyses on positive parenting ($p = .020$, $\beta = 0.41$, and $p = .001$, $\beta = 0.75$, for sensitivity analyses excluding cases without YIMs, and cases with low treatment fidelity, respectively). For parent-reported youth emotional and behavioral problems, we found one significant and one marginally significant treatment effect. The treatment effect on parent-reported youth emotional and behavioral problems was significant in the analyses excluding cases without YIMs ($p = .004$, $\beta = -0.52$), and marginally significant in the analyses excluding cases with low treatment fidelity ($p = .050$, $\beta = -0.69$). None of the other sensitivity analyses yielded significant results.

Discussion

This study investigated the effectiveness of the InConnection approach, a multidisciplinary treatment for youth with mental health needs from multi-problem families that utilizes the

youth's social network by collaborating with a YIM. Results showed that, in general, families neither reported improvements nor declines in their functioning over the study period. Yet, case managers in both conditions reported decreases in child unsafety, suggesting that both treatment conditions may have decreased the very serious problem of the risk of child maltreatment, but not other problems, although this decrease could be an effect of time rather than a treatment effect. The InConnection approach did not outperform care as usual on most outcome variables, including the primary outcome resilience. Yet, two treatment effects should be noted. That is, parents in the InConnection condition reported reductions in their children's emotional and behavioral problems, and improvements in their own positive parenting, whereas control parents did not report any changes. We found no effects on the intermediate outcomes, which might implicate that social resourcefulness, shared-decision making and treatment motivation may not be working mechanisms specific to the InConnection approach.

The results failed to confirm our hypotheses that the InConnection approach would yield greater effects than care as usual on self-reported youth functioning, including resilience, although treatment effects were found on parent-reported youth emotional and behavioral problems. Congruent with this finding, recent meta-analyses also demonstrated that psychological care in general (Howick et al., 2022), and treatment programs for youth with multiple problems specifically (Weisz et al., 2017), are generally not effective in improving youth functioning. Yet, youth functioning in both treatment conditions was not reduced, which demonstrates that neither of the two treatment conditions had harmful effects. The stability in functioning could potentially be a result of successful treatment. That is, due to the complexity and seriousness of problems in this sample (Bodden & Deković, 2016; Tausendfreund et al., 2016), we may expect declines in functioning had these families not received treatment (Dekkers et al., 2022). However, an experimental design with a group that does not receive treatment is needed to confirm or reject this hypothesis.

Interestingly, the two treatment effects that we found were both reported by parents, while the two unique elements of the InConnection approach are aimed at youth. That is, the integration of care is primarily focused on youth, and the YIM is positioned to support youth (van Dam & Verhulst, 2016). Yet, the integration of care also allows parents to receive different forms of treatment, including elements of parenting programs. Improving parenting is a beneficial pathway to enhance the well-being of their children. Notably, treatment programs that positively impact parents, such as parenting programs, have been shown to result in improvements in their children (Chen & Chan, 2016; Sanders et al., 2014). It is possible that it takes longer for youth to benefit from the InConnection approach (i.e., sleeper effects) and that the study duration was too short to detect improvements (van Aar et al., 2017), especially since treatment had not ended yet in most cases in the current study. Future research should aim to include follow-up assessments to examine whether youth benefit from InConnection in the long run, and whether these treatment effects are mediated by treatment effects on parents. It is also possible that parents in the InConnection condition reported improvements in youth's emotional and behavioral problems, whereas youth themselves did not, due to the context about which they were reporting. As parents mostly report about their children's behavior at home, whereas youth themselves report about their behavior across different contexts, this could suggest that InConnection improved youth's behavior at home, but not in other contexts.

Another explanation for the limited treatment effects may be the Covid-19 pandemic, which started approximately one year after the start of this quasi-experimental study. This potentially influenced treatment effectiveness in several ways. First, the pandemic potentially extended

treatment durations as appointments were postponed or done online due to lockdowns and social distancing measures. In fact, only one-third of treatments were completed by the final assessment (i.e., 15 months after starting treatment), whereas treatments in both conditions were supposed to last six to twelve months. Second, the pandemic has likely impacted the availability and stability of professional support due to social distancing measures and an increase in sick leave among professionals as a result of illness and increased stress. Similarly, the imposed measures potentially also influenced the availability of other support systems (Prime et al., 2020), including YIMs. Third, both youth and parents have likely been directly affected by the imposed measures (Courtney et al., 2020; Power et al., 2020), such as school closure and working from home, as these measures caused shifts in family routines, daily functioning and social connectedness (Prime et al., 2020). Studies indeed demonstrated that the pandemic negatively affected youth and parents' well-being (Eales et al., 2021; Jones et al., 2021; Marchini et al., 2021; Rosen et al., 2021; Westrupp et al., 2021). Youth may have been particularly affected by the pandemic, since the imposed measures impacted social activities, which are particularly important during adolescence (Courtney et al., 2020; Power et al., 2020). Thus, the Covid-19 pandemic has potentially negatively affected overall treatment effects, especially in youth.

We did not find any effects over time on the intermediate outcomes, suggesting that social resourcefulness, shared-decision making and treatment motivation may not be working mechanisms specific to the InConnection approach. InConnection youth reported higher levels of shared-decision making throughout treatment compared to control youth, and this difference was already present at the first measurement occasion. As shared-decision making was assessed as the level of agreement with the professional on therapy goals and tasks, alternative to indicating a lack of random allocation to conditions, the effect might also reflect that suggesting to use InConnection as treatment and inviting youth to find and nominate a YIM provides these youth with more opportunities to experience shared-decision making during the intake phase. Notably, the initial high levels of perceived shared-decision making in InConneciton youth reduced the chance of finding an intervention effect. Therefore, both true pre-test assessments and a randomized controlled trial are warranted to examine shared-decision making and other mediators of InConnection, while controlling for selection effects and other potential biases (Hariton & Locascio, 2018).

Limitations and strengths

The current study has several limitations. First, our sample size was smaller than initially planned (Koper et al., 2020), as fewer families started treatment at one of the participating organizations than expected due to the dissolution of one organization (Juzt) and limited budget from the municipalities for youth care. The smaller sample size limited the possibility to examine the impact of moderators (e.g., demographic factors) and predictors (e.g., YIM relationship quality) of intervention effects. Additionally, due to the small sample, we had to run 18 separate analyses for the different measures. This multiplicity or multiple testing may have led to finding significant results solely by chance (Streiner & Norman, 2011). Therefore, the few significant results found in this study should be interpreted with caution. Yet, Streiner and Norman (2011) suggest not to correct for multiple testing if hypotheses are formulated, as we did in this study, since a priori hypotheses decrease the probability that results are due to chance. Second, this study has the limitations of a quasi-experimental design, such as selection effects (Hariton & Locascio, 2018). We demonstrated that the families in both conditions were similar in terms of demographics, yet, youth in the treatment group reported higher levels of resilience and shared-decision making at

the first measurement occasion, suggesting that the two groups were not completely comparable. Third, the duration of the study was not long enough to examine long-term effects. Although the fourth measurement occasion was meant as a follow-up assessment, most treatments were not completed yet. This limits our understanding of the effectiveness of the InConnection approach at and after completion of treatment. Fourth, treatment fidelity of the InConnection approach was quite low, and the treatment conditions were possibly more similar than intended, making the two conditions less suitable for comparisons. Yet, our sensitivity analysis excluding the low fidelity cases showed similar results, giving us more confidence in the accuracy of our results.

This study also has several strengths. First, the study was conducted under real-life circumstances, thus testing the effectiveness rather than the efficacy of the InConnection approach, which optimizes the ecological validity, and improves the generalizability to other real-life settings. Second, this study compared different active treatment conditions, which is considered to be a particularly rigorous standard of comparison (Spielmans et al., 2010; Weisz et al., 2017; Weisz, Kuppens, et al., 2013).

Future research

More research on the effectiveness of the InConnection approach is warranted, due to due to the impact of the problems of these families on their lives and society (Bodden & Deković, 2016; Tausendfreund et al., 2016), and the limited positive treatment effects of InConnection, despite the suboptimal conditions of this study. In general, there is a need for more robust, high-quality research examining the effectiveness of InConnection. Randomized-controlled trials (RCT) are considered the golden standard of intervention research because randomization reduces selection bias (Hariton & Locascio, 2018). Therefore, future studies should aim to conduct RCTs with sample sizes that are sufficiently large to advance our understanding of for whom and under what circumstances these types of care programs work by examining moderators of treatment effects (Kraemer et al., 2002). For example, research could investigate whether some treatment techniques used in InConnection work better than others. That is, behavioral treatments, including cognitive-behavioral therapy, have been found to be more effective for improving a wide range of psychological problems in other at-risk populations (McCart et al., 2006; Öst & Ollendick, 2017; Sukhodolsky et al., 2004) than non-behavioral and multisystem treatment approaches (Weisz et al., 2017). Since families in this study were offered all types of treatments, the InConnection approach could potentially be enhanced by selecting evidence-based treatment elements and techniques.

Future research could also investigate whether the treatment offered in the InConnection approach meets families' needs, which is an important element contributing to effectiveness according to youth and parents from multi-problem families (Visscher et al., 2022). Although the InConnection manual states that treatment elements should be selected according to families' needs (van Dam & Verhulst, 2016), no studies have examined yet whether this is the case.

Conclusion

In sum, the InConnection approach outperforms care as usual only in two parent-reported outcomes: youth emotional and behavioral problems and positive parenting. Although the positive effects compared to care as usual are small in number, the absence of negative effects and the positive views families have of this treatment (Koper et al., 2021) suggest that the InConnection approach can be a valuable treatment for multi-problem families, especially until more effective treatment programs or elements have been developed, which could be used to enhance or replace existing treatments.

Appendix A: Results from the sensitivity analyses

Table 1. *Sensitivity Results of the Latent Growth Model Analyses Comparing the Treatment Effectiveness of InConnection to Care as Usual for Youth with a YIM*

	Intercept			Slope			Model fit indices		
	M	σ^2	*b* (*SE*)	*M*	σ^2	*b* (*SE*)	CFI	RMSEA	SRMR
Youth resilience (Y)	3.50**	0.16**		-0.02	0.01**		0.975	0.077	0.126
Effect of condition			0.43 (0.12)**			-0.02 (0.03)			
Youth well-being (Y)	2.51**	0.67**		-0.04	0.02		1.000	0.000	0.081
Effect of condition			0.45 (0.26)			-0.02 (0.06)			
Youth emotional/behavioral problems (Y)[1]	0.70**	0.10**		-0.01	0.00		1.000	0.000	0.054
Effect of condition			-0.04 (0.09)			-0.01 (0.01)			
Youth emotional/behavioral problems (P)	0.89**	0.14**		0.00	0.00		0.985	0.052	0.141
Effect of condition			0.11 (0.11)			-0.06 (0.02)**			
Risk of child unsafety (C)	5.06**	5.42**		-0.31**	0.07		0.971	0.064	0.091
Effect of condition			-0.12 (0.99)			0.15 (0.18)			
Out-of-home placements (Y)[1]	0.12	0.01		0.01	0.00		1.000	0.000	0.084
Effect of condition			0.01 (0.09)			-0.02 (0.03)			
Parent-child relationship quality (Y)	2.77**	0.29**		0.02	0.00		0.977	0.061	0.085
Effect of condition			0.20 (0.16)			-0.01 (0.03)			
Parent-child relationship quality (P)[1]	3.17**	0.17**		-0.01	0.00		0.969	0.062	0.218
Effect of condition			-0.05 (0.14)			0.05 (0.03)			
Parental resilience (P)	4.12**	0.17**		-0.03	0.00		1.000	0.000	0.080
Effect of condition			-0.08 (0.11)			0.03 (0.02)			
Parental well-being (P)	3.03**	1.16**		-0.04	0.02		1.000	0.000	0.065
Effect of condition			0.04 (0.34)			-0.04 (0.07)			

	Intercept			Slope			Model fit indices		
	M	σ^2	*b* (*SE*)	*M*	σ^2	*b* (*SE*)	CFI	RMSEA	SRMR
Parental empowerment (P)[1]	3.87**	0.12*		-0.02	0.00		1.000	0.000	0.091
Effect of condition			0.00 (0.13)			0.05 (0.03)			
Positive parenting (P)	4.18**	0.26**		-0.03	0.01		1.000	0.000	0.065
Effect of condition			-0.14 (0.16)			0.08 (0.03)*			
Poor supervision (P)	2.41**	0.62**		0.05	0.00		0.987	0.053	0.094
Effect of condition			-0.36 (0.29)			-0.01 (0.04)			
Inconsistent discipline (P)	2.65**	0.37**		-0.03	0.01		1.000	0.000	0.079
Effect of condition			0.15 (0.19)			-0.03 (0.05)			
Social resourcefulness (Y)	2.06**	0.25**		0.01	0.00		0.988	0.032	0.127
Effect of condition			0.06 (0.14)			0.00 (0.03)			
Shared-decision making (Y)	6.04**	3.00**		-0.03	0.15		1.000	0.000	0.123
Effect of condition			1.55 (0.57)**			-0.05 (0.14)			
Shared-decision making (P)[2]	7.62**	1.55		0.00	0.07		0.113	0.226	0.082
Effect of condition			0.08 (0.45)			0.10 (0.22)			
Treatment motivation (Y)	3.76**	0.37**		-0.01	0.03*		1.000	0.000	0.058
Effect of condition			-0.29 (0.16)			0.04 (0.06)			

Note. *M* = mean of intercept or slope; σ^2 = variance of intercept or slope; *b* (*SE*) = regression coefficient (and standard error) of condition on intercept or slope; CFI = comparative fit index; RMSEA = root mean square error of approximation; SRMR = standardized root mean square residual; Y = reported by youth; P = reported by parents; C = reported by case managers. Control group is the reference category (0).

[1] Due to negative slope variance, we constrained the slope variance (>0). The negative slope variance indicates that there is no variance to be explained by condition. Thus, we could not reliably estimate the influence of condition on the slope in these models, and any significant effects are ignored.

[2] Due to the low number of parents at T4, we estimated this model using only T1, T2 and T3.

* $p < .05$, ** $p < .01$

Table 2. *Sensitivity Results of the Latent Growth Model Analyses Comparing the Treatment Effectiveness of InConnection to Care as Usual for Cases with High Treatment Fidelity*

	Intercept			Slope			Model fit indices		
	M	σ^2	*b* (*SE*)	*M*	σ^2	*b* (*SE*)	CFI	RMSEA	SRMR
Youth resilience (Y)	3.51**	0.17**		-0.02	0.01**		0.943	0.121	0.192
Effect of condition			0.36 (0.13)**			0.04 (0.03)			
Youth well-being (Y)	2.51**	0.71**		-0.04	0.01		0.916	0.096	0.123
Effect of condition			0.28 (0.28)			0.07 (0.06)			
Youth emotional/behavioral problems (Y)[1]	0.69**	0.10**		0.00	0.00		1.000	0.000	0.061
Effect of condition			-0.06 (0.09)			-0.02 (0.01)			
Youth emotional/behavioral problems (P)	0.88**	0.15**		0.00	0.00		0.976	0.064	0.116
Effect of condition			0.08 (0.12)			-0.04 (0.02)			
Risk of child unsafety (C)[1]	5.02**	7.50**		-0.35**	0.00		1.000	0.000	0.083
Effect of condition			-0.25 (0.72)			0.01 (0.15)			
Out-of-home placements (Y)[1]	0.13	-0.03		0.01	0.00		1.000	0.000	0.108
Effect of condition			-0.02 (0.10)			0.00 (0.03)			
Parent-child relationship quality (Y)[1]	2.76**	0.29**		0.02	0.00		1.000	0.000	0.122
Effect of condition			0.09 (0.17)			0.01 (0.03)			
Parent-child relationship quality (P)[1]	3.16**	0.16**		-0.01	0.00		1.000	0.000	0.166
Effect of condition			0.02 (0.13)			0.03 (0.03)			
Parental resilience (P)	4.12**	0.17**		-0.03	0.00		1.000	0.000	0.120
Effect of condition			-0.05 (0.12)			0.03 (0.02)			
Parental well-being (P)	3.02**	1.08**		-0.03	0.01		1.000	0.000	0.058
Effect of condition			0.21 (0.34)			-0.09 (0.08)			
Parental empowerment (P)[1]	3.88**	1.14*		-0.02	0.00		0.938	0.108	0.197
Effect of condition			0.11 (0.14)			0.06 (0.02)			

	Intercept			Slope			Model fit indices		
	M	σ^2	*b* (*SE*)	*M*	σ^2	*b* (*SE*)	CFI	RMSEA	SRMR
Positive parenting (P)	4.17**	0.28*		-0.03	0.00		1.000	0.000	0.060
Effect of condition			-0.19 (0.17)			0.11 (0.03)**			
Poor supervision (P)	2.40**	0.74**		0.05	0.02		0.921	0.132	0.115
Effect of condition			-0.30 (0.32)			-0.03 (0.06)			
Inconsistent discipline (P)	2.66**	0.36**		-0.03	0.01		1.000	0.000	0.065
Effect of condition			0.01 (0.20)			0.00 (0.06)			
Social resourcefulness (Y)	2.07**	0.24**		0.01	0.00		0.978	0.044	0.131
Effect of condition			0.20 (0.16)			-0.01 (0.04)			
Shared-decision making (Y)	6.12**	2.80**		0.00	0.03		0.968	0.059	0.070
Effect of condition			1.07 (0.61)			0.08 (0.15)			
Shared-decision making (P)[1,2]	7.72**	2.92*		-0.09	0.00		0.588	0.208	0.087
Effect of condition			0.34 (0.57)			0.20 (0.23)			
Treatment motivation (Y)	3.76**	0.32**		-0.02	0.03*		1.000	0.000	0.082
Effect of condition			-0.29 (0.15)			0.01 (0.06)			

Note. *M* = mean of intercept or slope; σ^2 = variance of intercept or slope; *b* (*SE*) = regression coefficient (and standard error) of condition on intercept or slope; CFI = comparative fit index; RMSEA = root mean square error of approximation; SRMR = standardized root mean square residual; Y = reported by youth; P = reported by parents; C = reported by case managers; Youth E/B problems = Youth emotional/behavioral problems. Control group is the reference category (0).

[1] Due to negative slope variance, we constrained the slope variance (>0). The negative slope variance indicates that there is no variance to be explained by condition. Thus, we could not reliably estimate the influence of condition on the slope in these models, and any significant effects are ignored.

[2] Due to the low number of parents at T4, we estimated this model using only T1, T2 and T3.

* $p < .05$, ** $p < .01$

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Van Dam obtained funding for the study. All authors contributed to the design of the study. Koper coordinated the recruitment of participants and data collection during the study. Creemers and van Dam supervised the process. Koper wrote the manuscript in close collaboration with all other authors. All authors read and approved the final manuscript.

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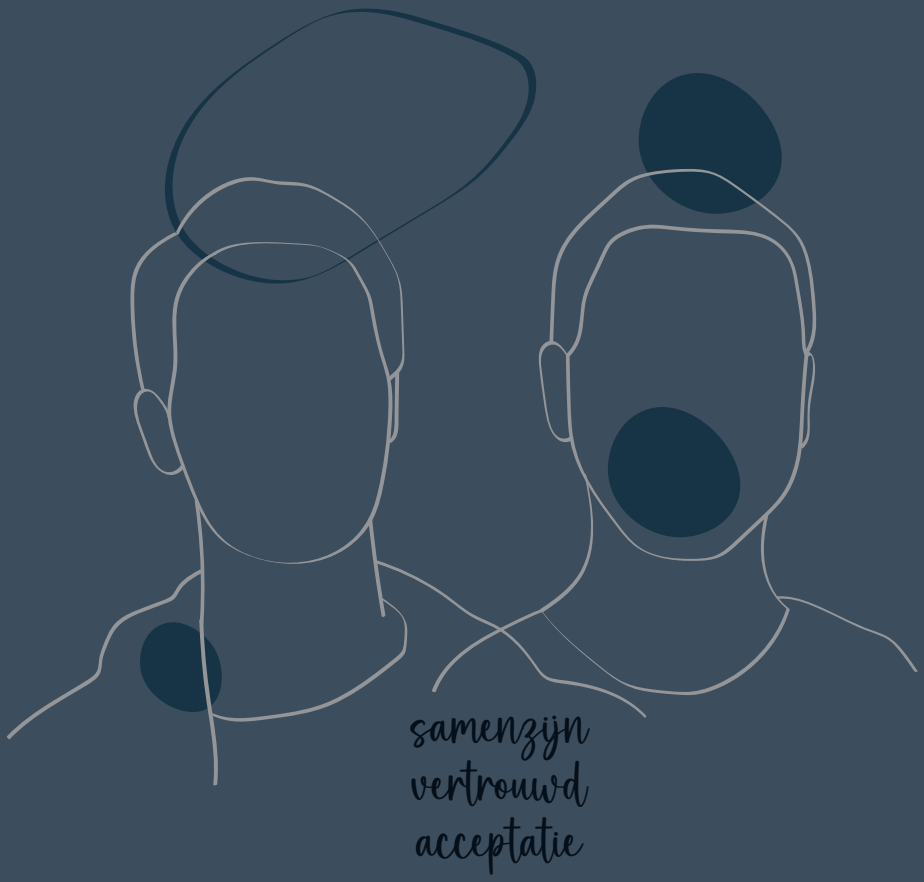
Chapter 6

RESILIENCE, WELL-BEING AND INFORMAL AND FORMAL SUPPORT IN MULTI-PROBLEM FAMILIES DURING THE COVID-19 PANDEMIC



Abstract

Background: The Covid-19 pandemic may have had negative effects on youth and parental mental health, especially in high-risk populations such as multi-problem families (i.e., families that experience problems in multiple domains, such as mental health and social network problems). Using one to four assessments during all phases of the Covid-19 pandemic up until January 2022, we examined the associations between pandemic-related stress and mental health (resilience and well-being) of youth and parents from multi-problem families. We also investigated whether experienced informal (i.e., youth informal mentoring) and formal support (i.e., therapist support) served as protective factors in this association. **Methods:** A total of 92 youth aged 10-19 years (46.7% girls; M_{age} = 16.00 years, SD_{age} = 1.73) and 78 parents (79.5% female; M_{age} = 47.17 years, SD_{age} = 7.33) filled in one to four questionnaires (between March 2020 and January 2022). Multi-level analyses were conducted to account for the nested structure of the data. **Results:** For youth, pandemic-related stress was associated with lower well-being, but not with resilience. Perceived support from both mentors and therapists was positively associated with youth mental health. Furthermore, high perceived therapist support protected youth from the negative effect of pandemic-related stress on resilience. For parents, pandemic-related stress was not related to mental health, irrespective of therapist support. Yet, therapist support was directly and positively associated with parental mental health. **Conclusions:** Youth from multi-problem families who experience pandemic-related stress are at risk of (elevated) mental health problems during the pandemic, specifically if they have no or weak therapist support. The mental health of parents, however, was minimally affected by pandemic-related stress, indicating strength and flexibility. Youth and parents who experienced support during the pandemic reported higher levels of resilience and well-being, demonstrating the importance of support for individuals' mental health during stressful times such as a pandemic.

Keywords: Covid-19, informal mentoring, multi-problem families, pandemic, parents, resilience, support, therapeutic alliance, well-being, youth

The coronavirus (Covid-19) pandemic pushed governments all over the world to take extraordinary and severe measures to fight the virus. Despite the effectiveness of measures such as lockdowns and physical distancing to restrain the spreading of the virus, there may have been be a negative impact of the pandemic and related measures on individuals' mental health (Brooks et al., 2020; Jones et al., 2021). As a result of the imposed restrictions, many youth and their parents were forced to spend most of their time at home and less time with extended family and friends, potentially limiting the possibilities for support from their informal (i.e., social) and formal (i.e., professional) networks.

Results of studies on the impact of the Covid-19 pandemic on youth are heterogeneous, and suggest that for a sizable group (but not for everyone) the imposed restrictions during the pandemic negatively affected youth mental health (Brooks et al., 2020; Jones et al., 2021), mediated by increased stress (Achterberg et al., 2021). People who already were vulnerable before the pandemic tended to suffer more (Kim & Laurence, 2020; Weeland et al., 2021). Yet, research on the mental health of multi-problem families or multi-problem families, i.e., families who experience problems on several life domains, including mental health and social network problems (Bodden & Deković, 2016; Tausendfreund et al., 2016), during the Covid-19 pandemic seems lacking.

Mental health during the Covid-19 pandemic

Both youth and parents have likely been affected by the imposed measures (Courtney et al., 2020; Power et al., 2020), such as school closure and working from home, as these measures caused shifts in family routines, daily functioning and social connectedness (Prime et al., 2020). Since the start of the Covid-19 pandemic, there has been continued interest in monitoring individuals' mental health changes. Resilience and well-being are two important and relevant factors of mental health during a pandemic. Resilience is the capacity to cope with adversity and protects individuals from negative consequences of stressful events (Masten, 2021; Ungar, 2011), including the Covid-19 pandemic (Beames et al., 2021; Li et al., 2022). Well-being refers to individuals' subjective, psychological well-being, and is an important general indicator for mental health (Topp et al., 2015). Some studies indeed demonstrated that the pandemic negatively affected youth and parents' well-being (Eales et al., 2021; Jones et al., 2021; Marchini et al., 2021; Rosen et al., 2021; Westrupp et al., 2021).

Differential impact of the Covid-19 pandemic on mental health

The pandemic seems to not have affected all youth and parents equally. That is, whereas some families experienced difficulties adjusting during the pandemic, others were able to cope relatively well (Weeland et al., 2021), suggesting that some were more resilient than others. Several risk and resilience factors might explain why some families are more severely impacted by the pandemic than others (Fegert et al., 2020; Weeland et al., 2021). Prepandemic risk factors, such as low socioeconomic status and mental health problems, seem to exacerbate the effects of the pandemic, placing already vulnerable families at even greater risk of experiencing stress and low mental health during the pandemic (Kim & Laurence, 2020; Sun et al., 2021). Multi-problem families face several problems in multiple domains, such as psychosocial functioning, family functioning, mental health, financial situation and functioning in their social networks. These problems are often chronic and intergenerational (Bodden & Deković, 2016; Tausendfreund et al., 2016). As a result, youth and parents from multi-problem families may be at increased risk for negative effects of the pandemic on their mental health.

Another factor that exacerbates the effects of the pandemic is perceived pandemic-related stress (Achterberg et al., 2021; Rosen et al., 2021). Pandemic-related stress is the experienced stress as a result of the pandemic, both due to the virus itself and imposed restrictions. For instance, people may experience pandemic-related stress due to isolation (Brooks et al., 2020), unpredictability and daily routine disruptions, increased exposure to information about threats to well-being (Prime et al., 2020), and illness, unexpected loss and grief (Mayland et al., 2020). Pandemic-related stress subsequently negatively affects mental health (Achterberg et al., 2021; Plenty et al., 2021; Rosen et al., 2021). Given the pre-existing risk factors in multi-problem families (Bodden & Deković, 2016; Tausendfreund et al., 2016), these families are more likely to experience pandemic-related stress (Kim & Laurence, 2020; Sun et al., 2021).

Support as protective factor during adversity

Support from friends, relatives and professionals can protect individuals from developing problems in stressful situations (Harandi et al., 2017), and is therefore considered an important protective factor against the impact of the Covid-19 pandemic (Grey et al., 2020; Jones et al., 2021). Support can be offered by many different individuals from one's social network, which can be broadly divided into the informal (i.e., natural) and the formal (i.e., professional) network. Informal networks consist of friends, family members, acquaintances and others with whom individuals have organically formed relationships. The informal network may also include nonparental adults who provide youth with support by offering help and advice, thereby promoting their mental health (DuBois & Silverthorn, 2005; Sterrett et al., 2011; e.g., van Dam, Smit, et al., 2018). The benefits of these mentoring relationships can last into adulthood, even for youth who experienced childhood adversities (Hagler & Rhodes, 2018), and preliminary evidence suggests that mentors may also play a crucial role in offering support to youth during the Covid-19 pandemic (Koning et al., 2022). Particularly when the perceived relationship quality is high, youth are likely to experience benefits from informal mentors (Lyons et al., 2019; van Dam, Smit, et al., 2018).

Formal networks consist of professionals who are involved in the lives of youth and parents, such as teachers, counsellors, and therapists. Given that mental health needs may have increased as a result of the pandemic (Marchini et al., 2021; Markoulakis et al., 2022), therapists may play an important role in offering support to families during the Covid-19 pandemic. As for informal support, perceived relationship quality, or therapeutic alliance, seems to determine the effectiveness of formal support (Flückiger et al., 2020; Horvath, 2005). However, the pandemic has led to therapy disruptions (Wan Mohd Yunus et al., 2022) and changes in therapy delivery from physical appointments to videoconferencing or telephone consultations, which negatively affected the therapeutic alliance for some clients (Lange et al., 2021; Markoulakis et al., 2022).

In sum, there is evidence suggesting that experienced support from informal mentors and therapists can protect youth and parents from (elevated) mental health problems, and may buffer against the negative impact of stress resulting from the Covid-19 pandemic. Multi-problem families tend to have unstable informal networks (Sousa, 2005) and often experience interrupted and fragmented formal support (Sousa & Eusébio, 2007), making it more likely that they experience low levels of support, increasing the risk for mental health problems, especially during a pandemic. Therefore, it is particularly important to examine whether support can protect youth and parents from mental health problems during the Covid-19 pandemic.

Present study

In this study we examined the associations between pandemic-related stress, support and mental health in multi-problem families during the Covid-19 pandemic. More specifically, we tested three hypotheses: 1) pandemic-related stress is negatively associated with youth and parental mental health; 2) support is positively associated with youth and parental mental health; and 3) support is a protective factor minimizing the negative effects of pandemic-related stress on youth and parental mental health. We aimed to give deeper insight into mental health and the functioning of support structures in the vulnerable population of multi-problem families during the pandemic. To meet this aim, we performed multi-level regression analyses and included several covariates to control for the potential confounding influence on youth and parents' mental health: demographics, treatment duration, and treatment condition. We also included pandemic duration and severity level of imposed pandemic measures as predictors of mental health. This study was preregistered at OSF Registries (osf.io/z7wvr).

Methods

Procedure

The GRIP study is registered at the Netherlands Trial Register (NL7565). The design of the study is in accordance with the guidelines of Helsinki (1964) and its later amendments, and approved by the faculty ethical review board of the Faculty of Social and Behavioral Sciences of Utrecht University (FETC-18-093). The current study is preregistered at OSF Registries (osf.io/z7wvr).

Participants were multi-problem families receiving youth and family care who participated in a quasi-experimental multi-site study called *Growth in personal environment* (GRIP) (Koper et al., 2020). Data for GRIP were collected from December 2019 to January 2022 at five organizations for youth and family care located in urban areas in the Netherlands. The aim of the GRIP study is to investigate the effectiveness of the InConnection approach, an outreaching, systemic approach for multi-problem families in which youth nominate an informal mentor according to the Youth-Initiated Mentoring (YIM) approach (Schwartz et al., 2013; van Dam et al., 2020). The effects are compared with a control group, which received care as usual including several multi-modal outpatient systemic treatment programs for multi-problem families without YIM (for more information on the conditions, see Koper et al., 2020).

Families that started treatment in one of the treatment groups in the GRIP study were informed about this study by an employee of the care providing organization, often the case manager. The employee asked verbal permission from the client system to share their contact details with the independent research team. A member of the research team then contacted the client system, informed them of the study, and suggested to schedule an appointment. Active informed consent for participation in the GRIP study was received from youth and parents for their own participation. For youth under the age of 16, active informed consent for their participation was also obtained from one parent or guardian (Koper et al., 2020).

The GRIP study aimed to assess changes in outcomes during youth and family care by using four multi-informant assessments including questionnaires: 1) at the start of treatment; 2) after three months; 3) after nine months; and 4) after 15 months. At the first assessment, the youth and parents completed questionnaires at a chosen location, often at home, in the presence of a member of the research team who assisted participants in answering the questions if problems, such as reading problems, were present. If the participant did not experience problems in answering the questions, subsequent assessments were completed independently online. To comply with the measures against the coronavirus taken by the Dutch government, we

temporarily replaced home visits by phone and video calls during various phases of the pandemic. Participants received a financial reward of €50 for completion of the four assessments. For this study, we used all available assessments during the pandemic per participant. We set the starting date of the Covid-19 pandemic in the Netherlands at March 23, 2020, which was when the first lockdown was announced by the Dutch government.

Participants

Families were approached for participation in this study if: 1) families consisted of at least one youth aged 10 to 23 years; 2) families experienced problems, such as school drop-out, divorce, trauma, antisocial behavior, and substance use, that are considered complex, multiple and severe, and received indicated intensive treatment from specialized youth and family care organizations for these problems; 3) previous treatments have not yielded the intended effects, and/or youth have an indication for an out-of-home placement; 4) families had sufficient Dutch proficiency.

The GRIP study included 102 youth and 86 parents, of which 92 youth and 78 parents were selected for the current study, because they completed one to four assessments during the pandemic. Of these youth, 59 were in the intervention group (64.1%), and the remaining 33 in the control group (35.9%). For the current study, both treatment groups were combined. Mean age of the youth was 16.00 years at the start of the pandemic (*SD* = 1.73, range = 10.59–19.19 years), and 43 were girls (46.7%). Most youth were attending school at the first measurement occasion during the Covid-19 pandemic (87.0%), and more than half followed preparatory secondary vocational education (59.8%). Most youth identified as Dutch (73.9%) or partly Dutch (5.4%); the others identified as Surinam (3.3%), Antillean (1.1%), or other (12.0%). At the start of the pandemic, 42 youth lived with their parents: 27 lived with one of their parents or alternately with either parent (29.3%), and 15 lived with both parents (16.3%). Three lived by themselves (3.3%), 31 lived in a residential facility (33.8%), six with friends or family (6.5%), and six in a foster home (6.5%). Most youth received youth and family care for the entire duration of the pandemic (78.2%). Three youth did not receive any care during the pandemic (3.3%). The others received care for some time during the pandemic (18.5%). Most youth had an informal mentor (56.5%) during the pandemic, which was most often a family member (44.2%).

Of the 78 participating parents, biological parents participated most often (85.9%), and adoptive parents, foster parents and stepparents were less common (14.1%). In most families one parent participated (74.4% of parents), in the remaining 10 families, two parents participated (25.6% of parents), which were mostly two biological parents. Forty-six parents were in the intervention group (59.0%), and the remaining 32 were in the control group (41.0%). On average, parents were 47.17 years old at the start of the pandemic (*SD* = 7.33, range = 28.84–64.35) and 62 parents were female (79.5%). Most parents were married or living together with a partner (45.5%), 20 were divorced or separated (26.0%), 20 were unmarried (26.0%), and two were widowed (2.6%). Most parents lived with children (84.0%), and identified as Dutch (90.9%) or partly Dutch (1.3%), the others identified as Surinam (2.6%), Antillean (1.3%), or other (3.9%). Five parents finished no formal education or primary education only (6.6%), 22 finished secondary education (28.9%), 16 finished vocational education (21.1%), 26 finished higher education (34.2%), and 7 finished another type of education (9.2%). For the majority of parents the net monthly income (NMI) was in the lowest 10% of Dutch adults (Central Bureau for Statistics, 2021): 29 parents (41.4%) had a NMI of less than €1.600, and 17 parents (24.3%) had a NMI of €1.601-€2.100. Most parents received youth and family care for the entire duration of the pandemic (69.2%) or for

some time during the pandemic (20.5%), and some parents did not receive care at any time point during the pandemic (10.3%).

Missing data

On average, youth and parents reported on two measurements during the pandemic (n_{youth} = 23 and $n_{parents}$ = 22 on one measurement, n_{youth} = 29 and $n_{parents}$ = 25 on two measurements, n_{youth} = 12 and $n_{parents}$ = 8 on three measurements, and n_{youth} = 28 and $n_{parents}$ = 23 on four measurements). Thus, non-completion was high: 69.6% for youth and 70.5% for parents. Non-completion was most often due to the design of the GRIP study: Participants filled out questionnaires four times and many had already been completed before the pandemic started. Non-completion due to design occurred in 45 cases in youth (48.9%) and 42 cases in parents (53.8%). Logistic regression revealed two differences in demographics between completers and non-completers: Youth differed in living situation (p = .037), indicating that completers were more likely to be living elsewhere than with their parents. Parents differed on ethnic identity (p = .020), showing that non-completers were more likely to identify as Dutch. Youth and parents who completed all four measurements did not differ from non-completers on other demographic variables (i.e., age, gender, ethnic identity, living situation, and going to school; ps > .134 for youth and ps > .383 for parents).

Missing data of study variables were also analyzed on item level. Little's missing completely at random (MCAR) test (Little & Rubin, 1989) showed that data were missing completely at random, $c^2(31) = 37.70$, p = .190 for youth, and $c^2(44) = 50.33$, p = .237 for parents. Hence, all participants were included in the analyses to allow all available data to be used.

Measurements

Resilience

Resilience of youth and parents, defined as the capacity of the individual and its social and physical environment to cope with adversity (Ungar, 2011), was measured at all assessments by age-appropriate self-reported resilience measures. Youth filled in the Child and Youth Resilience Measure – Short form (CYRM-12) and parents filled in the Adult Resilience Measure – Short form (ARM-12), both consisting 12 items (Liebenberg et al., 2013; Ungar & Liebenberg, 2013b, 2013a). Both versions assess the resources (individual, relational, communal and cultural) available to individuals that may sustain their resilience (e.g., "I know where to go in my community to get help" and "My family will stand by me during difficult times"). Items are rated on a 5-point scale from 1=*does not describe me at all* to 5=*describes me a lot*. To establish a score for resilience, a mean score is calculated using the 12 items of the CYRM-12 and ARM-12 (Liebenberg et al., 2013; Ungar & Liebenberg, 2013b, 2013a), for youth and parents respectively. Higher scores reflect higher levels of resilience. Internal consistency of the CYRM-12 was satisfactory in the original Canadian sample (Liebenberg et al., 2013) and a Dutch sample (Broekhoven, 2015) (α = .84 and α = .93, respectively). The CYRM-12 showed sufficient content validity to be used as a cross-cultural screener of resilience (Liebenberg et al., 2013). In contrast to the CYRM-12, psychometric properties of the ARM-12 have not been examined yet. The internal consistencies were good in the current samples (α = .82 for youth and α = .81 for parents).

Well-being

Youth and parental well-being was measured at each assessment using the self-reported World Health Organization Well-Being Index (WHO-5), which assesses subjective psychological well-being (WHO, 1998). Youth and parents rated five items (e.g., "I have felt cheerful and in good

spirits" and "I woke up feeling fresh and rested") on a 6-point scale from 0=*none of the time* to 5=*all the time*. To establish a score for well-being, we calculated the mean score of the five items of the WHO-5. Higher scores reflect higher levels of well-being. The internal consistency and validity were satisfactory in a variety of samples (Topp et al., 2015), including a Dutch sample (α = .91-.93) (Hajos et al., 2013). The internal consistencies were good in the current samples (α = .89 for youth and α = .87 for parents).

Pandemic-related stress

Experienced stress related to the Covid-19 pandemic by youth and parents was measured at each assessment using 12 or 11 statements, respectively. The items tap into different potential stressors during the pandemic, including health concerns, financial problems, and relationship and social issues (e.g., "The coronavirus crisis leads to money problems for me and/or my family" and "Due to the coronavirus crisis, I often argue with my family members"). The youth version contains an extra item concerning education ("I am afraid that my education will be delayed due to the coronavirus crisis"). See Appendix A for all items of this questionnaire. Both youth and parents rated the items using a 5-point scale ranging from 1=*totally disagree* to 5=*totally agree*. A score for pandemic-related stress was calculated using a mean score after recoding positively phrased items. Higher scores reflect more pandemic-related stress. The internal consistencies were adequate in the current samples (α = .79 for both youth and parents).

Informal support

Informal support was measured in youth and operationalized as the support from an informal mentor, which is an older or more experienced individual from the youth's informal network (Schwartz et al., 2013). Two variables were created: a dichotomous variable indicating the presence of an informal mentor (mentor/no mentor), and a continuous variable for perceived informal support, reflecting the quality of the relationship with the informal mentor. For perceived informal support, youth completed the Psychological Availability and Reliance on Adult (PARA) questionnaire, which is designed to measure relationship quality in asymmetrical relationships such as mentoring relationships from an attachment perspective. It measures three aspects of the relationship: availability, reliance, and affective bond (e.g., "You go to your informal mentor for support or advice" and "Your informal mentor listens to you in a sympathetic manner") (Zegers, 2007; Zegers et al., 2006). Two items of the original affectional bond scale were deleted, as they were not deemed appropriate for the informal mentoring relationship (e.g., "You dread knowing you may have another informal mentor in the future"), resulting in a 17-item scale. Youth rated items on a 4-point scale from 1=*disagree* to 4=*agree*. To establish a score for perceived informal support, mean scores were calculated based on the 17 items after recoding negatively phrased items. Participants who did not have an informal mentor at the time of the assessment did not fill out the PARA and received a score of 1, which is the lowest possible score. Higher scores reflect higher levels of perceived informal support. The internal consistency (α = .65-.81) and validity were satisfactory for most scales of the PARA in a Dutch sample (Zegers, 2007). The internal consistency was examined based on scores of youth with informal mentors, and was good in the current sample (α = .89).

Formal support

Formal support was operationalized as the support from a therapist youth and parents experienced. Two variables were created: a dichotomous variable indicating the presence of a

therapist (therapist/no therapist), and a continuous variable reflecting perceived formal support, that is, the therapeutic alliance. For perceived formal support, parents completed the Session Rating Scale (SRS), a four-item measure of therapeutic alliance, and youth completed the age-appropriate Child Session Rating Scale (CSRS). The (C)SRS taps into the relational bond between the therapist and client, agreement on the goals of therapy, agreement on the tasks of therapy, and the client's view of the sessions (e.g., "I felt heard, understood, and respected" for the SRS and "The therapist listened to me" for the CSRS) (Duncan et al., 2015). Both youth and parents rated the items on a visual analogue scale of 10 cm, where the left side indicates a more negative response and the right side indicates a more positive response. To establish a score for perceived formal support, mean scores were calculated based on the four items, resulting in a possible range of 1–10. Participants who did not receive treatment from one of the teams participating in the GRIP study (Koper et al., 2020) at the time of the assessment did not fill out the (C)SRS and were scored 1, which is the lowest possible score. Higher scores reflect higher satisfaction with formal support. The internal consistencies (α = .85-.95) and validity of the SRS were satisfactory to good in Dutch samples (Boezen-Hilberdink et al., 2014). The internal consistencies were adequate to good in the current samples (α = .95 for youth and α = .94 for parents).

Covariates

Several covariates were measured to control for potential confounding variables in the analyses: demographics, treatment duration, and treatment condition. We also included pandemic duration and severity level of imposed pandemic measures as predictors of mental health.

Background information regarding youth and parents was obtained with a basic demographics and family functioning form completed at each assessment. This form also included information on whether treatment was still offered to the families and whether youth were going to school at the time of the assessment. Demographics that were tested as covariates, were: age, gender (male/female), ethnic identity (Dutch/non-Dutch), living situation (for youth: with parents/elsewhere; for parents: with children/without children), and going to school (yes/no; for youth only).

Treatment duration was calculated to control for differences between participants receiving treatment. We calculated how many days the treatment endured at each assessment. If participants had already finished treatment at the time of the assessment, we included the total number of days the treatment had lasted for. Treatment condition was included to control for differences between the intervention and control groups.

Covid-19 pandemic duration was calculated to control for differences between individuals in duration of the pandemic at each assessment. We calculated how many days after the start of the pandemic (March 23, 2020) assessments took place.

Covid-19 pandemic measures severity level was determined to control for differences in the severity of measures between participants at each assessment. We established a severity level following the pandemic strategy of the Dutch government; four levels were specified based on the level of risk: 1=*vigilant*, 2=*worrisome*, 3=*serious*, and 4=*very serious*. Table 1 provides information on how the risk levels are determined. See Appendix B for a summary of the active measures during each risk level.

Table 1 *Determination of Risk Levels by the Dutch Government*

	1. Vigilant	2. Worrisome	3. Serious	4. Very serious
Positive tests per 100.000 inhabitants per week	< 35	35-100	100-250	>250
Hospital admissions (incl. IC) per 1.000.000 inhabitants per week	<4	4-16	16-27	>27

Note. Adapted from https://coronadashboard.rijksoverheid.nl/over-risiconiveaus. Copyright 2021 by Central Government of the Netherlands.

Statistical analyses

All analyses were performed in Mplus 8.7 (Muthén & Muthén, n.d.). Descriptive statistics were obtained to gain insight in the means and standard deviations of the variables, and univariate associations between each pair of variables. All continuous variables were centered to allow for interaction variables to be created. We created interaction variables using pandemic-related stress and the continuous informal and formal support variables.

We performed multilevel regression analysis (also referred to as hierarchical linear models) to account for the nested structure of our data. More specifically, two-level models were examined in which assessments (Level 1) were nested within participants (Level 2). Intraclass correlations (ICC) at Level 2 were 0.58 for youth resilience, 0.29 for youth well-being, 0.76 for parental resilience, and 0.36 for parental well-being.

We performed three sets of regression analyses. In Model 1, we added all potential covariates into the model to examine which were significantly related to the outcome. In the subsequent models we included only the significant covariates to create more parsimonious models. In Model 2, we tested whether pandemic-related stress (*hypothesis 1*) and informal and formal support (*hypothesis 2*) were related to resilience and well-being during the pandemic. That is, we examined whether individuals reported lower resilience and well-being at times when they reported more pandemic-related stress. We added both the dichotomous and continuous support variables in these analyses. In Model 3, we tested whether informal and formal support moderated the link between pandemic-related stress and resilience and well-being (*hypothesis 3*). These analyses were also conducted with both the continuous and dichotomous support variables. We performed separate analyses for youth and parents, for resilience and well-being, and for informal and formal support, resulting in six regression analyses (the analyses including informal support were performed for youth only).

By interpreting the results at Level 1, we looked at within-person correlated change. We used the $p < .05$ criterion to determine the significance of the effects. The effect sizes of models are reported using explained variance (R^2 values); 0.02 was considered small, 0.13 medium and 0.26 large (Cohen, 1988). Full information maximum likelihood estimation was used to deal with observations with incomplete or missing data. All models were saturated and therefore had a perfect fit, thus, fit statistics are not reported.

Results

Descriptive statistics

Descriptive statistics of youth and parental resilience, well-being, pandemic-related stress, and informal and formal support are shown in Table 2. Associations between all variables including covariates are presented in Table 3.

Table 2. *Descriptive Statistics of Youth and Parental Resilience, Well-being, Pandemic-related Stress, Informal and Formal Support, and Covariates*

	Youth			Parents		
	M (*SD*)	Range	%	*M* (*SD*)	Range	%
Resilience	3.69 (0.55)	1.84–4.83		4.02 (0.50)	2.67–4.92	
Well-being	2.75 (1.04)	0.20–4.60		2.90 (0.86)	0.70–5.00	
Pandemic-related stress	2.36 (0.63)	1.17–3.92		2.37 (0.64)	1.18–4.07	
Informal support	3.30 (0.46)	2.12–4.00		-	-	
Formal support	6.71 (2.04)	1.00–10.00		7.63 (1.82)	1.50–10.00	
Pandemic duration in days	229.61 (177.62)	1–674		231.11 (175.00)	1–634	
Pandemic measures severity level (*vigilant*)			26.6%			24.5%
Pandemic measures severity level (*worrisome*)			17.9%			16.0%
Pandemic measures severity level (*serious*)			23.1%			27.7%
Treatment duration in days	284.13 (164.01)	-13–710		288.31 (157.34)	15–710	
Treatment condition (*intervention group*)			64.1%			59.0%

Note. Means are calculated per person across assessments. Percentages are calculated per assessment (if applicable). The statistics for support are based on individuals who have reported on the experienced support, thus, excluding individuals without mentors or therapists. Since some participants filled out the first questionnaire prior to starting treatment, the range of treatment duration varies from a negative to a positive number of days.

Table 3. *Associations (β) Between Youth and Parental Resilience, Well-being, Pandemic-related Stress, Informal and Formal Support, and Covariates*

		1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.
1.	Resilience	-	.29*	-.31*	-	-	.05	.48*	.15	.18	.02	.00	.02	-.04	-.02	-.02
2.	Well-being	.68**	-	-.24	-	-	.08	.23	.12	-.04	.13	-.04	-.13	.00	-.10	-.08
3.	Pandemic-related stress	-.11	-.22*	-	-	-	-.10	-.13	-.23	-.05	.13	-.27*	-.08	.26*	-.02	-.08
4.	Mentor presence	-.23*	-.07	-.12	-	-	-	-	-	-	-	-	-	-	-	-
5.	Mentor relationship quality	.50**	.38*	.18	-	-	-	-	-	-	-	-	-	-	-	-
6.	Therapist presence	-.11	.01	-.12	.25**	.10	-	-	.02	-.01	-.23**	.11	.38**	.13	.09	.00
7.	Therapeutic alliance	.51**	.37**	.24*	-.23*	.37*	-	-	.09	-.12	-.17	-.54	.04	-.16	.13	.16
8.	Age	.07	-.01	-.05	-.01	.19*	-.29	.25	-	-.08	-.07	.29*	-.02	.81	.17	-.36**
9.	Gender	-.14	-.36*	.19	-.17	.22	-.70	.02	.19*	-	.09	.19*	.21	-.65	-.16	-.05
10.	Ethnic identity	-.16	.12	-.14	.12	-.13	.06	-.15	.03	-.08	-	-.15**	.31	.30	-.12	-.30**
11.	Living situation	-.32*	-.42**	.23*	-.17	.00	-.09	-.09	.26	.13	.10	-	.12	.11	.07	-.06
12.	Pandemic duration	-.06	-.07	-.01	.21*	-.08	.25**	-.06	-.79	-.67	.07	.04	-	-.14*	.92**	-.44*
13.	Pandemic measures severity level	-.01	-.03	.10	-.01	.04	-.05	-.01	-.04	.77	.46	-.02	-.14*	-	-.09	.03
14.	Treatment duration	-.01	-.03	.03	.17	-.00	-	-.02	-.62	-.59	-.34	-.09	.97**	-.03	-	-.13
15.	Treatment condition	.41**	.29*	-.06	-.38*	.09	-.08	.38*	-.01	.08	.00	.01	-.51	.04	-.26	-

Note. Associations for the youth sample ($n = 92$) are shown below the diagonal. Associations for the parent sample ($n = 78$) are shown above the diagonal. The statistics for mentor relationship quality and therapeutic alliance are based on individuals who have reported on the experienced support, thus excluding individuals without mentors or therapists. Irrelevant associations have been left out (e.g., between mentor presence and mentor relationship quality). The covariate going to school has been dropped due to insufficient variation.
* $p < .05$. ** $p < .001$

Model 1: Covariates

Youth data

Analyses on youth data showed that gender, treatment condition, and living situation were significant covariates of resilience and/or well-being. Boys (M = 3.05, SD = 0.95) had higher scores on well-being than girls (M = 2.41, SD = 1.05), β = -0.35, SE = 0.13, p = .009. Youth in the intervention group had higher scores on resilience and well-being (M = 3.84, SD = 0.50, and M = 2.93, SD = 1.02, respectively) than youth in the control group (M = 3.42, SD = 0.53, and M = 2.43, SD = 1.01, respectively), β = 0.37, SE = 0.10, p <.001, and β = 0.25, SE = 0.11, p = .024, respectively. Youth living with their parents had higher scores on resilience and well-being (M = 3.79, SD = 0.61, and M = 2.96, SD = 1.16, respectively) than youth who lived elsewhere (M = 3.57, SD = 0.60, and M = 2.46, SD = 1.18, respectively), β = -0.28, SE = 0.12, p = .015, and β = -0.31, SE = 0.11, p = .006, respectively. Therefore, gender, treatment condition, and living situation were included as covariates in subsequent analyses. Age, ethnic identity, pandemic duration, pandemic severity level and treatment duration were not significant and thus left out. Youth went to school at almost all of the assessments during the pandemic (91.6%). Therefore, we could not reliably estimate the influence of this covariate and dropped it.

Parent data

Analyses on parent data showed that none of the covariates were significant. Therefore, no covariates were added to the subsequent analyses with parent data.

Model 2: Predictors of resilience and well-being

Youth resilience

In Model 2a we examined pandemic-related stress and informal support as predictors of youth resilience. Results showed that pandemic-related stress was not significantly related to youth resilience, β = -0.11, SE = 0.11, p = .330. Informal support, however, was significantly related to resilience: Having a mentor was positively associated with resilience, β = 0.92, SE = 0.20, p < .001, and higher levels of mentor relationship quality were associated with higher levels of resilience, β = 1.14, SE = 0.20, p < .001. The within-effects of this model were medium in size, R^2 = 0.21.

Next, in Model 2b we examined pandemic-related stress and formal support as predictors of resilience. Again, results showed that pandemic-related stress was not significantly related to youth resilience, β = -0.14, SE = 0.11, p = .195. In addition, the presence of a therapist was not a significant predictor of youth resilience, β = 0.11, SE = 0.15, p = .456, but higher levels of therapeutic alliance were associated with higher levels of resilience, β = 0.53, SE = 0.13, p < .001. The within-effects of this model were medium in size, R^2 = 0.25.

Youth well-being

In Model 2a we examined pandemic-related stress and informal support as predictors of youth well-being. Results showed that at times when youth reported higher levels of pandemic-related stress, they reported lower levels of well-being, β = -0.18, SE = 0.09, p = .035. Additionally, informal support was positively associated with youth well-being: Having a mentor significantly predicted well-being, β = 0.70, SE = 0.34, p = .040, and higher levels of mentor relationship quality were related to higher levels of well-being, β = 0.84, SE = 0.34, p = .015. The within-effects of this model were medium in size, R^2 = 0.18.

In Model 2b we examined pandemic-related stress and formal support as predictors of youth well-being. Again, results showed that higher levels of pandemic-related stress were related to

lower levels of youth well-being, β = -0.20, *SE* = 0.09, *p* = .030. The presence of a therapist was not significantly related to youth well-being, β = 0.16, *SE* = 0.15, *p* = .268. Yet, higher levels of therapeutic alliance were associated with higher levels of youth well-being, β = 0.33, *SE* = 0.14, *p* = .022. The within-effects of this model were medium in size, R^2 = 0.16.

Parental resilience

In Model 2 we examined pandemic-related stress and formal support as predictors of parental resilience. Results showed that pandemic-related stress was not associated with parental resilience, β = -0.25, *SE* = 0.21, *p* = .237. Formal support, however, was positively associated with parental resilience: Receiving treatment was associated with resilience, β = 0.57, *SE* = 0.22, *p* = .008, and higher levels of therapeutic alliance predicted higher levels of parental resilience, β = 0.58, *SE* = 0.27, *p* = .030. The within-effects of this model were medium in size, R^2 = 0.14.

Parental well-being

In Model 2 we examined pandemic-related stress and formal support as predictors of parental well-being. Results showed that pandemic-related stress was not significantly related to parental well-being, β = -0.19, *SE* = 0.12, *p* = .118. Formal support, however, was a significant predictor of parental well-being: Receiving treatment was associated with well-being, β = 0.56, *SE* = 0.21, *p* = .008, and higher levels of therapeutic alliance were related to higher levels of well-being, β = 0.58, *SE* = 0.21, *p* = .007. The within-effects of this model were small in size, R^2 = 0.12.

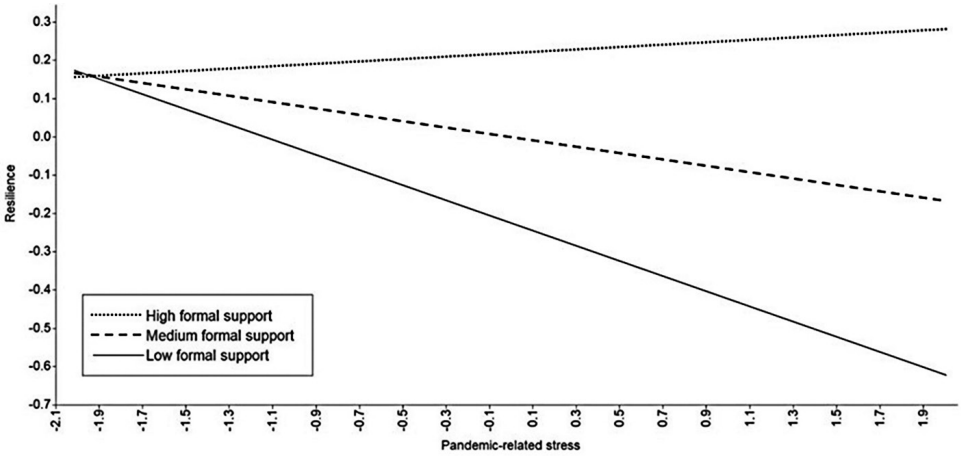
Sensitivity analyses

We conducted sensitivity analyses to check the robustness of our results of the perceived support variables as predictors of resilience and well-being (Model 2). In these analyses we excluded participants without mentors or therapists. The results (available upon request) were very similar to the initial analyses, giving us confidence in the accuracy of our initial results.

Model 3: Interactions between pandemic-related stress and support

In six separate models, we tested the interaction effects between pandemic-relation stress and perceived support on resilience and well-being, to examine whether the associations between pandemic-related stress and mental health are affected by perceived support. Just one of these interaction effects was significant: The interaction between pandemic-related stress and therapeutic alliance was a significant predictor of youth resilience, β = 0.19, *SE* = 0.09, *p* = .029. Inspection of Figure 1 reveals that for youth who experience no or low levels (-1 *SD*) of therapeutic alliance, pandemic-related stress is negatively related to resilience, *B* = -0.12, *SE* = 0.09, *p* = .036. For youth with average (*M*) and high levels (+1 *SD*) of therapeutic alliance, however, there is no significant link between pandemic-related stress and resilience, *B* = -0.08, *SE* = 0.06, *p* = .164, and *B* = 0.03, *SE* = 0.06, *p* = .595, respectively. The within-effects of this model were large in size, R^2 = 0.29. Results of the models with interaction effects are presented in Table 4 (youth data) and Table 5 (parent data).

Figure 1. *Interaction of Pandemic-related Stress and Therapeutic Alliance as Predictor of Youth Resilience*



Note. This figure shows the significant moderation of therapeutic alliance (i.e., formal support) on the link between pandemic-related stress and youth resilience, β = 0.19, *p* = .029. High formal support: β = 0.03; medium formal support: β = -0.08; low formal support: β = -0.20.

Table 4. *Results of the Models Predicting Youth Resilience and Well-being (n = 92)*

Outcome variable	Resilience				Well-being			
Support type	Informal support		Formal support		Informal support		Formal support	
	β (*SE*)	*p*	β (*SE*)	*p*	β (*SE*)	*p*	β (*SE*)	*p*
Model 2								
Pandemic-related stress	-0.11 (0.11)	.330	-0.14 (0.11)	.195	-0.18 (0.09)	.035	-0.20 (0.09)	.030
Support (dichotomous)	0.92 (0.20)	.000	0.11 (0.15)	.456	0.70 (0.34)	.040	0.16 (0.15)	.268
Support (continuous)	1.14 (0.20)	.000	0.53 (0.13)	.000	0.84 (0.24)	.015	0.33 (0.14)	.022
Living situation	-0.25 (0.10)	.011	-0.24 (0.10)	.016	-0.27 (0.11)	.017	-0.27 (0.11)	.019
Treatment condition	0.35 (0.12)	.003	0.36 (0.12)	.002	0.27 (0.12)	.019	0.26 (0.12)	.033
Gender	-	-	-	-	-0.43 (0.12)	.000	-0.40 (0.13)	.002
Model 3								
Pandemic-related stress	-0.11 (0.11)	.333	-0.14 (0.10)	.174	-0.18 (0.09)	.035	-0.20 (0.09)	.029
Support (dichotomous)	0.90 (0.20)	.000	0.08 (0.15)	.598	0.70 (0.34)	.040	0.16 (0.14)	.270
Support (continuous)	1.11 (0.19)	.000	0.52 (0.13)	.000	0.84 (0.35)	.015	0.33 (0.15)	.022
Stress × Support (continuous)	0.06 (0.07)	.413	0.19 (0.09)	.029	-0.01 (0.07)	.934	0.01 (0.07)	.863
Living situation	-0.25 (0.10)	.013	-0.24 (0.10)	.017	-0.27 (0.11)	.016	-0.27 (0.11)	.020
Treatment condition	0.35 (0.11)	.002	0.36 (0.11)	.001	0.27 (0.12)	.019	0.26 (0.12)	.032
Gender	-	-	-	-	-0.41 (0.13)	.001	-0.40 (0.13)	.002

Table 5. *Results of the Models Predicting Parental Resilience and Well-being (n = 78)*

Outcome variable	Resilience		Well-being	
	β (*SE*)	*p*	β (*SE*)	*p*
Model 2				
Pandemic-related stress	-0.25 (0.21)	.237	-0.19 (0.12)	.118
Formal support (dichotomous)	0.57 (0.22)	.008	0.56 (0.21)	.008
Formal support (continuous)	0.58 (0.27)	.030	0.58 (0.21)	.007
Model 3				
Pandemic-related stress	-0.24 (0.21)	.242	-0.20 (0.12)	.088
Formal support (dichotomous)	0.57 (0.22)	.011	0.58 (0.22)	.009
Formal support (continuous)	0.58 (0.27)	.032	0.58 (0.23)	.010
Stress × Support (continuous)	0.02 (0.17)	.921	-0.15 (0.11)	.160

Discussion

This study aimed to give deeper insight into the impact of the Covid-19 pandemic on mental health (i.e., resilience and well-being) and the functioning of support structures in the vulnerable population of multi-problem families, by testing three hypotheses: 1) pandemic-related stress is negatively associated with youth and parental mental health; 2) experienced support is positively associated with youth and parental mental health; and 3) experienced support is a protective factor minimizing the negative effects of pandemic-related stress on youth and parental mental health. Results showed that youth experiencing higher levels of pandemic-related stress reported lower levels of well-being, irrespective of perceived informal or formal support. Pandemic-related stress was also associated with youth resilience, yet only for youth reporting low levels of perceived formal support. Furthermore, perceived support was positively associated to mental health in both youth and parents from multi-problem families, yet did not further moderate the effect of pandemic-related stress on mental health.

Despite our expectations, pandemic-related stress was not consistently associated with mental health of youth and parents from multi-problem families, with one exception: Higher levels of pandemic-related stress were related to lower levels of youth well-being. This demonstrates that Covid-19 pandemic-related stress has not systematically negatively affected the mental health of multi-problem families, and parents in particular. Perhaps pandemic-related stress did not impact their mental health, as we measured mental health as two broad constructs which were not directly impacted by the pandemic. For example, it is arguable that resilience, which was measured as the individual and environmental resources available to participants (Liebenberg et al., 2013), were not immediately lost as a result of pandemic-related stress. This could also suggests that the common assumption that high-risk groups, such as multi-problem families, are vulnerable in stressful situations (Bodden & Deković, 2016; Tausendfreund et al., 2016), may be inadequate. That is, individual resiliency and good mental health depend not only on the history of adversity and environmental risk factors, but also on individual strengths, including intelligence and personality (Jaffee et al., 2007). Furthermore, some people with a history of adversity might be even less affected by recent stressors, such as pandemic-related stress, as they have learned to cope with adversity (Seery et al., 2010). This could suggest that multi-problem families, who

have experienced adversity, might have developed coping styles that proved useful to deal with the challenges during the Covid-19 pandemic, thereby reducing the negative impact of pandemic-related stress on mental health. Possibly, the adequate coping styles may have also kept stress levels low. In fact, the average levels of pandemic-related stress were quite low in both youth and parents (see Table 2), suggesting that these families had a certain flexibility to cope with the pandemic without experiencing a lot of stress and subsequent mental health consequences.

In line with our expectation, youth, however, did report some (elevated) mental health problems when experiencing pandemic-related stress, especially if they had no or weak therapist support. This suggests that the negative effects of pandemic-related stress may be stronger for youth than adults. That is, youth may be more effected by the pandemic and the imposed measures as social activities are particularly important during adolescence, while youth are less susceptible to severe Covid-19 infections (Courtney et al., 2020; Power et al., 2020). Our findings also showed that perceived pandemic-related stress was a better predictor of youth mental health than the duration of the pandemic and the actual imposed restrictions.

The current study also demonstrated that support was related to higher levels of mental health in both youth and parents of multi-problem families. This shows that support is indeed an important factor for promoting mental health, also during the Covid-19 pandemic (Grey et al., 2020; Jones et al., 2021; Koning et al., 2022). More specifically, this study showed that when youth have an informal mentor and when the quality of the mentoring relationship was perceived as high, these youth reported higher levels of resilience and well-being. In line with previous research, this indicates that informal mentoring relationships can have beneficial effects for youth (DuBois & Silverthorn, 2005; Koning et al., 2022; van Dam, Smit, et al., 2018). Additionally, we showed that the therapeutic alliance was positively associated with youth resilience and well-being, whereas the mere presence of a therapist was not. In parents, however, both the presence of a therapist and a strong therapeutic alliance were linked to high levels of resilience and well-being. Similar to previous findings (M. J. Lambert & Barley, 2001; Lange et al., 2021), our results suggest that the therapeutic alliance as perceived by clients is an important factor to consider in mental health care.

We found little evidence that support protected youth and parents from the negative effects of pandemic-related stress on mental health. The direct effects of experienced support on mental health, but lack of interaction effects suggest that support plays a compensatory rather than protective role in mental health (Fergus & Zimmerman, 2005), and is therefore still an important factor in promoting mental health. Yet, we found one significant interaction effect in youth: A strong therapeutic alliance protected youth from a negative effect of pandemic-related stress on resilience. That is, the negative effect of pandemic-related stress on resilience only existed for youth not receiving therapy or perceiving the therapeutic alliance as relatively weak. This demonstrates that therapeutic alliance is a key factor in mental health care that can not only improve mental health directly, but can also buffer against additional stressors during the treatment process, which is in line with previous research (Flückiger et al., 2020; Horvath, 2005).

Implications

The results of the current study can inform policy makers and mental health care professionals about the mental health and support structures of multi-problem families during a pandemic. The findings are promising, as they show that individuals may not be as severely affected by Covid-19 pandemic-related stress as we expected, even in the presence of pre-pandemic risk factors, as is the case with multi-problem families (Bodden & Deković, 2016; Kim & Laurence, 2020; Sun et al., 2021). Yet, cautious optimism is advised given that we found associations between pandemic-

related stress and youth mental health. That is, youth who experience pandemic-related stress are more likely to experience low levels of well-being and – if the therapeutic alliance is weak – lower resilience. Good mental health care is therefore essential for youth from multi-problem families who experience pandemic-related stress, or else these youth risk (elevated) mental health problems.

Our results also demonstrated that perceived support was positively associated with mental health, which stresses the need to support youth and parents by strengthening their informal and formal networks. That is, our study suggests that individuals in need could benefit from professional help (i.e., presence of a therapist and a strong therapeutic alliance) and, in the case of youth, informal support (i.e., the presence of an informal mentor and a high mentor relationship quality). Strengthening the therapeutic alliance is even more important in youth, as a strong therapeutic alliance protects youth from negative consequences of pandemic-related stress on resilience. Furthermore, since the mere presence of an informal mentor is associated with higher levels of youth mental health, it is important to help youth in finding supportive non-parental adults, for example through youth-initiated mentoring (Schwartz et al., 2013; van Dam et al., 2020) or social capital interventions (Schwartz et al., 2017).

Strengths and limitations

This study is unique in several respects. First, we sampled a hard-to-reach population, namely that of multi-problem families, which is quite rare for research in general and, to our knowledge, our study was the first on mental health during the Covid-19 pandemic in this population. Second, most participants reported on multiple measurements during the pandemic, giving us insight into the links between pandemic-related stress, support and mental health in different phases of the pandemic, both during lockdowns and in times with very few restrictions, giving us more certainty of the robustness of our results.

This study also has limitations. First, we did not include pre-pandemic measurements, so it is unknown whether mental health changed as a result of the pandemic. Second, we only investigated the relation between pandemic-related stress and mental health. We have no knowledge on whether other aspects or consequences of the Covid-19 pandemic may have influenced the mental health of individuals (e.g., experienced loss of loved ones due to Covid-19) (Mayland et al., 2020). However, we also included pandemic duration and pandemic severity as covariates, which did not correlate significantly to mental health (see Table 3). Third, despite our efforts, the sample size is rather small for the number of associations tested, thus, our results should be interpreted carefully. Fourth and finally, parents did not report on informal support, thereby restricting the possibility to examine both types of support in parents. Future research could examine whether informal mentoring relates to parental mental health, as it does for youth.

Conclusion

In sum, this study demonstrated that youth from multi-problem families are at risk for mental health problems when experiencing pandemic-related stress, while parental mental health was not negatively affected by pandemic-related stress. Youth and parents who experienced support during the pandemic reported higher levels of resilience and well-being, showing that offering support is important to promote mental health during the pandemic. Our findings further demonstrate the importance of the therapeutic alliance in mental health care for both youth and parents (Flückiger et al., 2020; Horvath, 2005), and the potential of informal mentoring for improving youth mental health (Schwartz et al., 2013; van Dam, Smit, et al., 2018).

Appendix A: Pandemic-related stress questionnaire

Items
1. I'm afraid my family will be infected with the coronavirus.
2. The coronavirus crisis leads to money problems for me and/or my family.
3. I'm having a great time now that I'm home more because of the coronavirus crisis.
4. I'm afraid that my education will be delayed due to the coronavirus crisis.
5. Due to the coronavirus crisis, I am less able to share my concerns with others.
6. Due to the coronavirus crisis, I often argue with my family members.
7. I am afraid that I will be infected with the coronavirus.
8. Due to the coronavirus crisis I am worried about my future.
9. My life has become a lot more boring due to the coronavirus crisis.
10. Due to the coronavirus crisis I find it scary to be around other people.
11. Due to the coronavirus crisis I feel lonely.
12. I try to take care of others in this coronavirus time.

Note. Item 4 was only administered to youth.

Appendix B: Active measures by the Dutch government during risk levels

	1. Vigilant	2. Worrisome	3. Serious	4. Very serious
Quarantine	Yes	Yes	Yes	Yes
No. of people visiting per day (excl. children <12 y.o.)	≤8	≤6	≤4	≤2
Groups in public places (excl. children <12 y.o.)	≤8	≤6	≤4	≤2
Working from home	Yes	Yes	Yes	Yes
Curfew	No	No	No	Possible 21:00-04:30
Restaurants	Mandatory reservation and health check ≤8 people per table ≤100 guests inside	Mandatory reservation and health check ≤6 people per table ≤50 guests inside	Closed	Closed
Clubs	Closed	Closed	Closed	Closed
Supermarkets	Open	Open to vulnerable groups at special times	Open to vulnerable groups at special times	Open to vulnerable groups at special times
Other shops	Open	Open	Open	Closure of non-essential retail outlets possible
Sports	≤100 people as audience	No audience Dressing rooms and showers closed	No audience Dressing rooms, showers and canteen closed	No audience Dressing rooms, showers and canteen closed Sports practice at 1.5m distance; with ≤2 people (except for children <17 y.o.) Possible to forbid sporting indoors
Events	Mandatory reservation and health check ≤100 guests	Mandatory reservation and health check ≤50 guests	Events prohibited	Events prohibited
School & daycare	Open	Open	Open	Possible to limit physical education in primary, secondary and higher education

Note. Adapted from https://www.rijksoverheid.nl/binaries/rijksoverheid/documenten/publicaties/2021/04/13/routekaart-coronamaatregelen/routekaart-coronamaatregelen.pdf. Copyright 2021 by Central Government of the Netherlands.

Chapter 7

GENERAL DISCUSSION

The purpose of this dissertation was to advance our knowledge on the effectiveness of youth interventions that utilize the social network. To this end, our first aim was to provide insight into the effectiveness of youth care programs that utilize the social network by creating an overview of the effectiveness of existing programs (*Chapter 3*). Our second aim was to zoom in on the effectiveness of one program specifically, which is developed for youth with mental health needs in multi-problem families (i.e., InConnection; *Chapters 4*, *5* and *6*). Since the Covid-19 pandemic potentially impacted families' mental health as well as their possibilities for receiving support, our third and final aim was to better understand the links between pandemic-related stress, informal and formal support and mental health in multi-problem families (*Chapter 7*). This concluding chapter discusses the main findings of the current dissertation as well as its strengths and limitations, implications, and directions for future research.

Aim 1: The effectiveness of interventions for youth that utilize the social network

Our meta-analysis (*Chapter 2*) revealed that, overall, interventions for youth that utilize or activate the social network are not more effective than care as usual in increasing positive youth outcomes (e.g., academic functioning, child safety and social skills), nor were they more effective in reducing mental health problems (e.g., externalizing and psychological problems). Yet, moderator analyses revealed several circumstances under which these programs *were* effective. That is, interventions with features of youth-initiated mentoring (YIM; i.e., interventions in which youth were able to decide who to involve, and only involved one person) yielded small to medium significant effects, interventions in European samples showed small but significant effects, and interventions that targeted youth with mental health needs showed medium to large effects. Moreover, intervention effects were moderated by assessment characteristics (i.e., assessment type, information source and correction for pre-test differences). The finding that interventions with elements of YIM were effective, whereas other intervention types were not, is in line with previous research demonstrating that YIM programs are effective (Dantzer & Perry, 2022; van Dam et al., 2020). The effectiveness of interventions targeting youth with mental health needs is also supported by previous research demonstrating that interventions are generally most effective for youth with elevated problems (e.g., Stice et al., 2009; van Loon et al., 2020). Yet, the overlap between the two moderators was large, as most YIM interventions were studied in samples of youth with mental health needs, and vice versa. This makes it difficult to disentangle the impact of the two moderators on intervention effectiveness. Nevertheless, our results show that youth with mental health needs can be effectively supported by interventions that utilize the informal network, especially through YIM interventions. These findings support the notion that it is important to engage the social network in shared decision-making in youth care (e.g., Richtlijnen jeugdhulp en jeugdbescherming, 2022b).

Aim 2: The effectiveness of InConnection for youth with mental health needs in multi-problem families

To examine the potential of interventions utilizing the social network that target youth with mental health needs in multi-problem families, we set up the GRIP study (*Chapter 3*) to examine the effectiveness of the InConnection approach, a YIM treatment program in the Netherlands for the particularly vulnerable group of youth from multi-problem families. The results of the GRIP study are described in *Chapters 4* and *5*. From interviews with youth, parents and mentors, we learned in *Chapter 4* that almost all interviewees held positive views of YIM, except for two

youth who were unable to position a mentor. In line with previous research in other populations (e.g., Schwartz et al., 2017; van Dam & Schwartz, 2020), youth and parents in our study indicated that a strong connection and trust in the mentor relationship were most important, or even prerequisites for nominating someone as mentor, as youth who were unable to nominate mentors did not have strong relationships or trust. Youth and parents also voiced preferences for an understanding, sensitive mentor who offered youth perspective by providing support and advice and (according to some) setting rules. What mentors believed to offer matched youth's and parents' needs, suggesting that most youth successfully nominated suitable mentors. These findings demonstrate that most youth from multi-problem families have supportive adults in their networks who could potentially satisfy their needs, despite the common belief that multi-problem families have weak ties and poor social capital (Sousa, 2005). Thus, YIM may be a promising tool in mental health care for most youth from multi-problem families. Yet, our results also indicated that not all youth can benefit from YIM, as not all youth nominated and positioned a YIM, because they did not have strong relationships with trusting adults. These youth may require additional professional support, for example to increase their level of trust (e.g., Zeegers et al., 2020), before they can nominate a mentor. Yet, for some, it may be necessary to find other forms of support.

With a quasi-experimental design, we tested the hypothesis that InConnection would yield greater effects than treatment as usual on a variety of outcomes, including youth resilience as primary outcome, and other measures of youth and parental functioning as secondary outcomes. Contrary to our expectations, the findings in *Chapter 5* showed that youth in both treatment conditions did not report any treatment effects. Case managers did report a decline in child unsafety, which was similar across conditions. InConnection only outperformed treatment as usual in two parent-reported outcomes. That is, parents in the InConnection condition reported improvements over time in youth's emotional and behavioral problems and their own positive parenting, whereas parents in the control condition reported no changes. Additionally, we found no indication that the hypothesized mediators (i.e., shared decision-making, treatment motivation and social resourcefulness) were working mechanisms specific to InConnection. One possible explanation for the small number of differences in effectiveness between the two conditions lies in the content of the treatment offered. That is, reports from case managers showed that the two treatment conditions did not differ in the number of techniques to activate the social network, and that the treatment fidelity in the InConnection condition was quite low. This suggests that InConnection was possibly more similar to treatment as usual than intended. Yet, since families voiced positive opinions of InConnection (*Chapter 4*) and InConnection demonstrated some positive effects and no harmful effects (*Chapter 5*), we conclude that this treatment program can be a valuable addition to the range of treatments for multi-problem families, especially until more effective treatment programs or elements are developed, which could improve or replace existing treatments. To further advance our knowledge on the effectiveness of treatment for youth from multi-problem families, research is needed to examine for who and under what circumstances InConnection is effective and cost-effective, both after ending treatment, as well as at long-term follow-ups.

Aim 3: The link between pandemic-related stress, support and mental health

A year after the start of the GRIP study, the Covid-19 pandemic started and potentially affected the mental health of youth and parents from multi-problem families. *Chapter 6* showed that the

pandemic was indeed experienced as burdensome by some youth from multi-problem families. More specifically, our results indicated that youth who experienced pandemic-related stress reported lower levels of resilience and well-being during the pandemic, especially when they experienced no or weak therapist support or therapeutic alliance. The mental health of parents, however, was minimally affected by pandemic-related stress, indicating strength and flexibility. Youth and parents who experienced more support during the pandemic reported higher levels of resilience and well-being, demonstrating the importance of support for individuals' mental health during stressful times such as a pandemic, in line with previous research conducted during the Covid-19 pandemic (Koning et al., 2022). The findings are also in line with (meta-analytic) reviews demonstrating the importance of the therapeutic alliance in mental health care for both youth and parents (Flückiger et al., 2020; Horvath, 2005; Roest et al., 2022), and the potential of natural mentoring for improving youth mental health (Dantzer & Perry, 2022; van Dam et al., 2020; van Dam, Smit, et al., 2018). Our findings demonstrate that even though InConnection, as a specific treatment program to improve informal support, had only limited beneficial effects over care as usual (*Chapter 5*), experienced formal and informal support was indeed associated with resilience and well-being in the population of youth from multi-problem families. This knowledge can also be relevant outside the context of the pandemic. That is, youth from multi-problem families likely experience various adverse events that cause them stress, including poverty, parental mental health problems, and relationship breakdowns (Bodden & Deković, 2016; Tausendfreund et al., 2016). Yet, our findings indicate that if youth experience formal and informal support, they may be protected from developing more problems in response to these stressors.

Strengths and limitations

This dissertation has several noteworthy strengths. First, three research designs were used to further our understanding of the effectiveness of treatment programs for youth that utilize the social network (*Chapters 2, 3, 4* and *5*), that is, a meta-analytic review, a qualitative interview study, and a quasi-experimental study. The meta-analysis in *Chapter 2* provided an overview of treatment programs utilizing the social network, whereas the qualitative and quasi-experimental studies in *Chapters 4* and *5* respectively provided insight into one specific program. By using multiple research methods, we provided different perspectives on the impact of involving the social network in interventions for youth with mental health needs.

Second, in the GRIP study (*Chapters 3, 4, 5* and *6*) we sampled a hard-to-reach population, namely that of multi-problem families, which is challenging (Abrams, 2010) and, as a result, these groups are often overlooked in research. To the best of our knowledge, the study in *Chapter 6* was among few on mental health during the Covid-19 pandemic in this population (e.g., Lange et al., 2021), providing valuable information about the mental health and support networks of this vulnerable group in stressful times. Additionally, the GRIP study was a multi-site, multi-informant study, making the sample more representative and providing perspectives on several participant types. We used four measurement occasions to assess changes over a 15-month time period, using validated questionnaires. We also included our own questionnaire examining the treatment fidelity of the InConnection approach, based on the steps described in the InConnection manual (van Dam & Verhulst, 2016).

The studies presented in this dissertation also have several limitations. First, the families who participated in the GRIP study (*Chapters 3, 4, 5* and *6*) were not randomized to a treatment condition. The lack of randomization may have caused selection effects, possibly resulting in bias (Hariton & Locascio, 2018). In *Chapter 5* we indeed found evidence for selection bias, with youth

in the treatment condition reporting higher levels of resilience and shared-decision making at the first measurement occasion. This suggests that families in the treatment condition had more resources (an aspect of resilience) than those in the control condition. Although we initially aimed to match the samples in the two conditions using propensity score matching, this was not possible due to a smaller sample size than intended.

Second, and related to the small sample size of the GRIP study, we were unable to perform the moderator analyses as described in *Chapter 3*, because of the small sample and, consequently, lack of statistical power. Therefore, the research presented in *Chapter 5* could not include the investigation of moderators, which limited our knowledge on for whom and under what circumstances the InConnection approach works (best) (Kraemer et al., 2002).

Finally, treatment integrity may have played a role in the studies examining treatment effects (*Chapters 2* and *5*). Treatment integrity is known to moderate the effectiveness of treatment (Goense et al., 2016), which stresses the importance of examining which of the intended treatment elements have actually been delivered. In our meta-analysis (*Chapter 2*) we were able to code treatment integrity for just a few studies, thus limiting our knowledge on whether the examined treatment was not effective, or whether incomplete delivery impacted its effectiveness. In *Chapter 5*, in which we examined the effectiveness of InConnection, we found that treatment integrity for the InConnection condition varied greatly among cases (from 0% to 100% of treatment steps completed). Additionally, there were signs that the two conditions had more in common than intended, since we found that case managers in the control condition reported to use techniques to activate the social network just as often as InConnection case managers. These issues with treatment fidelity made it difficult to disentangle the effectiveness of the care as intended from the effectiveness of the care as delivered. In an attempt to disentangle these effects, we examined the effects of treatment integrity in both chapters, which did not change the overall results.

Directions for future research

We have several recommendations for future research following the findings and limitations of this dissertation. In general, there is a need for more robust, high-quality research examining the effectiveness of mental health care programs for youth with mental health needs from multi-problem families, and more specifically for programs that utilize the social network, including InConnection. Both this dissertation and previous research (e.g., van Dam et al., 2020; Visscher et al., 2022) point to the potential of activating the social network in care for multi-problem families, yet there is a lack of robust research confirming this potential. Randomized-controlled trials (RCT) are considered the golden standard of intervention research because randomization reduces bias due to selection effects (Hariton & Locascio, 2018), which was present in the research presented in this dissertation. Therefore, future studies should aim to conduct RCTs to rule out the influence of selection effects and recruit many participants to make the sample as representative as possible. Yet, this dissertation has also shown that it is difficult to conduct high-quality research in the field of youth care, as we are dependent on the cooperation of organizations, professionals and families. Additionally, unforeseen events including the Covid-19 pandemic and the dissolvement of one of the participating organizations have further complicated recruitment and data collection. Due to such complicating factors, randomized trials may not always be possible. If so, researchers could consider alternative designs that do not require randomization, but do limit the risk of selection bias, such as propensity score matching (Rosenbaum & Rubin, 1985) or a regression discontinuity design (Shadish et al., 2011).

To clarify for whom and under what circumstances these types of care programs work,

new trials should have sample sizes that are sufficiently large so they can examine moderators of treatment effects (Kraemer et al., 2002). For example, is the effectiveness of InConnection moderated by sample characteristics, as was the case in the meta-analysis in *Chapter 2*? Since we found that treatment effects were largest for samples with mental health needs, it would be interesting to investigate whether initial problem severity moderates the effects of InConnection. Investigating treatment elements and treatment integrity as predictors of treatment effects in both InConnection and treatment as usual is another method to gain further knowledge about under what circumstances a treatment program works. That is, treatment integrity moderates the effectiveness of treatment (Goense et al., 2016), stressing the importance of investigating and reporting which of the intended treatment elements have actually been delivered.

Research could also advance our knowledge on the effectiveness of InConnection by examining the long-term effects of the treatment. This is particularly relevant since it is assumed that the mentors who are nominated by youth in the InConnection treatment, have durable relationships with the youth, even long after professional support has ended (van Dam & Schwartz, 2020). The durability of these mentoring relationships is thought to increase resilience in youth and limit the need for professional care in the future. Indeed, a study conducted outside the context of care showed that natural mentoring relationships have long-term positive effects (Hagler & Rhodes, 2018). Future research could investigate if mentoring relationships are indeed durable within the context of care, and what the effects of these long-lasting relationships are by conducting a trial with long-term follow-up measurements following the youth into emerging adulthood. Additionally, using interviews and qualitative analysis techniques, research could examine the reasons why mentoring relationships are terminated. This type of research has only been conducted in the context of formal mentoring, in which youth are matched to an unknown adult. These studies showed that even in strong mentoring relationships, contextual factors, mentor relational skills, mentor expectations, youth motivation and family interference can negatively influence the mentoring relationship, potentially causing the relationship to end (Spencer, 2007; Spencer et al., 2020). Mentor relationship breakdown may be even more detrimental for the vulnerable population of youth from multi-problem families, which stresses the importance of advancing our knowledge on why natural mentoring relationships end and how relationship breakdowns can be prevented.

As we did not find any evidence that shared-decision making, treatment motivation and social resourcefulness were the working mechanisms specific to InConnection, future research should continue to study these and alternative working mechanisms. In the program theory of YIM, van Dam and Schwartz (2020) propose several other mediators and mediated moderators besides the three mediators that we studied in *Chapter 5*: relationship quality, parental support, epistemic trust, self-concordant treatment goals, and therapeutic alliance. It would be valuable to examine these mediators and mediated moderators in future research, to advance the program theory of YIM and InConnection. This line of research may particularly benefit from a community-based participatory research approach, instead of using a top-down approach (Dantzer & Perry, 2022). In community-based participatory research, community members are invited to apply their knowledge and expertise, which is thought to contribute to more relevant, meaningful and ecologically valid findings (Collins et al., 2018). Given the current lack of empirical evidence for any of the proposed working mechanisms of YIM, and the limited knowledge on working mechanisms of treatment for multi-problem families in general (Michie et al., 2009; Visscher et al., 2022), it may be valuable and efficient to involve youth, parents and professionals who have experience with the approach to share their ideas on the working mechanisms, before setting

up another trial. Their opinions and knowledge could give important insights, which could be valuable for developing more effective treatment and provide directions for future research.

Finally, future research examining the effectiveness and working mechanisms of InConnection should also focus on its financial costs by determining the cost effectiveness. InConnection was developed as an alternative for more restrictive and costly care, such as out-of-home placements, by utilizing the existing informal support networks and thereby reducing the involvement of professionals. Studying the cost-effectiveness of youth care interventions is particularly important, because an increasing number of youth requires care in the Netherlands (Bakker, 2022), while youth care also lasts increasingly longer, and the budget for youth care is not increased at the same rate. Thus, it is necessary to find ways to provide effective care to a growing number of youth with the same resources. We therefore recommend the investigation of the cost-effectiveness of interventions for youth with complex problems, such as InConnection.

Implications

Our results demonstrated that experiencing support from informal and formal networks is – at least to some extent – associated with mental health of youth and their parents. More specifically, our findings demonstrated the potential of natural mentoring and YIM for improving youth outcomes (*Chapters 2*, *5* and *6*), and the importance of a strong therapist alliance for both youth and parental outcomes (*Chapter 6*). Experiencing support was especially important for vulnerable populations such as youth with mental health needs (*Chapter 2*), and during stressful times such as the Covid-19 pandemic (*Chapter 6*). Although the InConnection approach using YIM only outperformed care as usual on two parent-reported outcomes (*Chapter 5*), YIM was shown to be the most effective type of social network engagement in youth interventions (*Chapter 2*), and youth, parents and mentors held positive views of this approach (*Chapter 4*). Based on the findings presented in this dissertation and the scientific knowledge currently available, we conclude that YIM programs and InConnection, specifically, can be valuable interventions to support vulnerable youth and their parents, especially until more effective programs or elements are developed, which could improve or replace existing interventions.

However, YIM programs may not be suitable and effective for *all* youth, as demonstrated in *Chapters 2* and *4*. Our meta-analysis (*Chapter 2*) showed that the effects of interventions that activate the social network (including YIM) were largest if youth had mental health problems, whereas we found no effects for interventions in samples without mental health problems. Additionally, the success of YIM highly depends on whether youth want to cooperate in nominating a mentor and whether they have someone in their network to fulfil the role of mentor. In *Chapter 4* we reported that two youth did not want mentors to be involved, because they did not trust others, did not want to burden others, and because mentors were not considered as knowledgeable as professionals. Three more families indicated they wanted to position mentors, but that there was no suitable person, because youth had no strong relationships with trusting adults. Thus, although most youth were able to position a mentor (van Dam et al., 2017), there was a small group of youth for whom YIM may not work, and for whom other types of care may be more suitable.

Conclusion

Our findings showed that activating the social network in youth interventions can be effective in improving positive youth and parental outcomes under specific circumstances. That is, YIM programs were shown to be the most effective type of interventions that activate the social

network. Additionally, we found that the effects of interventions that activate the social network were largest for youth with mental health needs, although there was great overlap between studies examining the effectiveness of YIM interventions and studies conducted in samples with mental health needs, which makes it diffucult to disentangle the effects of these two moderators. In our own quasi-experimental study on InConnection, we demonstrated a few beneficial effects of InConnection over care as usual for youth with mental health needs growing up in multi-problem families, but only based on parent-reported outcomes. Despite its modest effects, youth, parents and mentors hold positive views of YIM, and most youth were able to position a mentor. Finally, experienced support from a natural mentor and therapist served as a protective factor for the mental health of youth and parents during the Covid-19 pandemic. These findings illustrate that despite the complex challenges that vulnerable populations, such as youth with mental health needs and multi-problem families, experience, interventions with elements of YIM have the potential to support youth and help them alleviate their problems.

Chapter 8

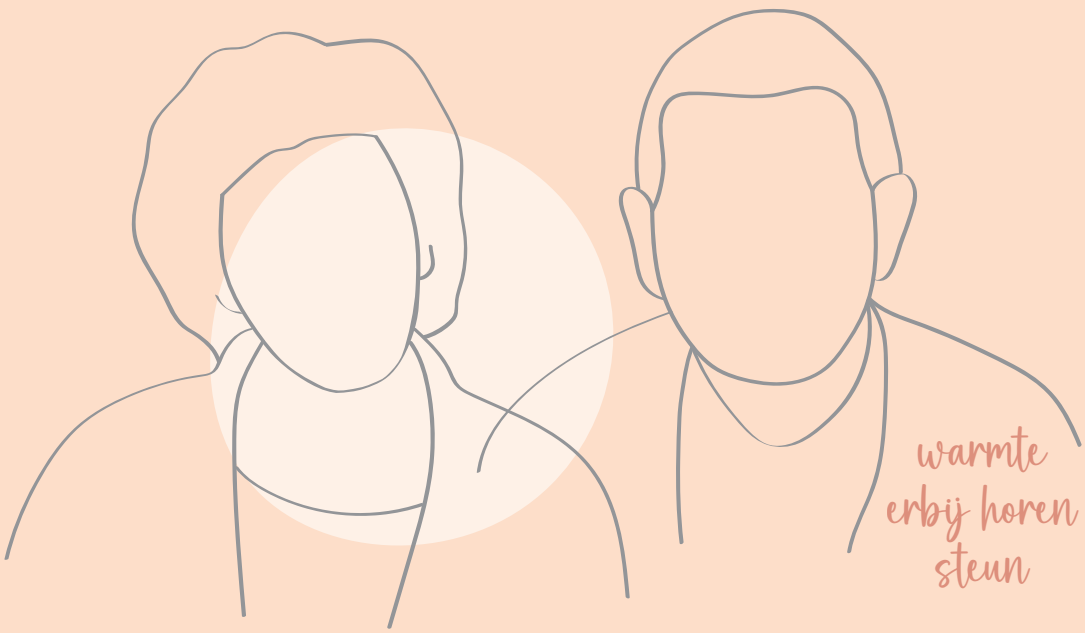
REFERENCES

NEDERLANDSE SAMENVATTING
(*SUMMARY IN DUTCH*)

CURRICULUM VITAE

LIST OF PUBLICATIONS

DANKWOORD
(*ACKNOWLEDGEMENTS IN DUTCH*)



References

Abrams, L. S. (2010). Sampling "hard to reach" populations in qualitative research: The case of incarcerated youth. *Qualitative Social Work*, *9*(4), 536–550. https://doi.org/10.1177/1473325010367821

Abundis-Gutierrrez, A. (2018). Parenting styles, academic achievement and the influence of culture. *Psychology and Psychotherapy:Research Study*, *1*(4), 1–3. https://doi.org/10.31031/pprs.2018.01.000518

Achterberg, M., Dobbelaar, S., Boer, O. D., & Crone, E. A. (2021). Perceived stress as mediator for longitudinal effects of the COVID-19 lockdown on wellbeing of parents and children. *Scientific Reports*, *11*(1), 1–14. https://doi.org/10.1038/s41598-021-81720-8

Allan, H., Rauktis, M. E., Pennell, J., Merkel-Holguin, L., & Crampton, D. (2021). Family meetings as a system reform to address racial disproportionality and disparities. In *Child Maltreatment: Contemporary Issues in Research and Policy* (Vol. 11, pp. 309–338). https://doi.org/10.1007/978-3-030-54314-3_16

American Psychological Association. (2006). *Report of the APA Task Force on Socioeconomic Status*. https://www.apa.org/pi/ses/resources/publications/task-force-2006.pdf

Ashida, S., Sewell, D. K., Schafer, E. J., Schroer, A., & Friberg, J. (2019). Social network members who engage in activities with older adults: Do they bring more social benefits than other members? *Ageing & Society*, *39*(5), 1050–1069. https://doi.org/10.1017/S0144686X17001490

Assink, M., & Wibbelink, C. J. M. (2016). Fitting three-level meta-analytic models in R: A step-by-step tutorial. *The Quantitative Methods for Psychology*, *12*(3), 154–174. https://doi.org/10.20982/tqmp.12.3.p154

Baard, P. P., Deci, E. L., & Ryan, R. M. (2004). Intrinsic need satisfaction: A motivational basis of performance and well-being in two work settings. *Journal of Applied Social Psychology*, *34*(10), 2045–2068. https://doi.org/10.1111/j.1559-1816.2004.tb02690.x

Baffour, T. D. (2006). Ethnic and gender differences in offending patterns: Examining family group conferencing interventions among at-risk adolescents. *Child and Adolescent Social Work Journal*, *23*(5), 557–578. https://doi.org/10.1007/s10560-006-0075-4

Bakker, R. (2022). *Jeugdhulp 2021 [Youth care 2021]*. https://www.cbs.nl/nl-nl/longread/rapportages/2022/jeugdhulp-2021?onepage=true

Baldwin, S. A., Christian, S., Berkeljon, A., & Shadish, W. R. (2012). The effects of family therapies for adolescent delinquency and substance abuse: A meta-analysis. *Journal of Marital and Family Therapy*, *38*(1), 281–304. https://doi.org/10.1111/J.1752-0606.2011.00248.X

Bartelink, C., van Yperen, T. A., & ten Berge, I. J. (2015). Deciding on child maltreatment: A literature review on methods that improve decision-making. *Child Abuse and Neglect*, *49*, 142-153. https://doi.org/10.1016/j.chiabu.2015.07.002

Basualdo-Delmonico, A. M., & Spencer, R. (2016). A parent's place: Parents', mentors' and program staff members' expectations for and experiences of parental involvement in community-based youth mentoring relationships. *Children and Youth Services Review*, *61*, 6–14. https://doi.org/10.1016/j.childyouth.2015.11.021

Baumrind, D. (1967). Child care practices anteceding three patterns of preschool behavior. *Genetic Psychology Monographs*, *75*(1), 43–88. https://psycnet-apa-org.proxy.library.uu.nl/record/1967-05780-001

Beames, J. R., Li, S. H., Newby, J. M., Maston, K., Christensen, H., & Werner-Seidler, A. (2021). The upside: coping and psychological resilience in Australian adolescents during the COVID-19 pandemic. *Child and Adolescent Psychiatry and Mental Health*, *15*(1), 1–10. https://doi.org/10.1186/S13034-021-00432-Z/TABLES/5

Berzin, S. C. (2006). Using sibling data to understand the impact of family group decision-making on child welfare outcomes. *Children and Youth Services Review*, *28*(12), 1449–1458. https://doi.org/10.1016/j.childyouth.2006.03.003

Bijleveld, C. C. J. H., & Commandeur, J. J. F. (2009). *Multivariate analyse. Een inleiding voor criminologen en andere sociale wetenschappers. [Multivariate analysis. An introduction for criminologists and other social scientists.]* (2nd edition). Boom Juridische uitgevers.

Bodden, D. H. M., & Deković, M. (2016). Multiproblem families referred to youth mental health: What's in a name? *Family Process*, *55*(1), 31–47. https://doi.org/10.1111/famp.12144

Boele, S., Van der Graaff, J., de Wied, M., Van der Valk, I. E., Crocetti, E., & Branje, S. (2019). Linking parent–child and peer relationship quality to empathy in adolescence: A multilevel meta-analysis. *Journal of Youth and Adolescence*, *48*, 1033-1055. https://doi.org/10.1007/s10964-019-00993-5

Boer, M., van Dorsselaer, S., de Looze, M., de Roos, S., Brons, H., van den Eijnden, R., Monshouwer, K., Huijnk, W., ter Bogt, T., Vollebergh, W., & Stevens, G. W. J. M. (2022). *HBSC 2021: Gezondheid en welzijn van jongeren in Nederland [HBSC 2021: Health and well-being of youth in the Netherlands]*. https://www.trimbos.nl/wp-content/uploads/2022/09/AF2022-HBSC-2021-Gezondheid-en-welzijn-van-jongeren-in-Nederland.pdf

Boezen-Hilberdink, L., Janse, P., van Dijk, M., & Verbraak, M. (2014). De Outcome Rating Scale en de Session Rating Scale: De psychometrische eigenschappen van de Nederlandse versies [The Outcome Rating Scale and the Session Rating Scale: The psychometric properties of Dutch versions]. *Directieve Therapie*, *34*(1), 15–33.

Bollen, K. A. (1989). A new incremental fit index for general structural equation models. *Sociological Methods & Research*, *17*(3). https://doi.org/10.1177/0049124189017003004

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Breuk, R. E., Clauser, C. A. C., Stams, G. J. J. M., Slot, N. W., & Doreleijers, T. A. H. (2007). The validity of questionnaire self-report of psychopathology and parent–child relationship quality in juvenile delinquents with psychiatric disorders. *Journal of Adolescence*, *30*(5), 761–771. https://doi.org/10.1016/J.ADOLESCENCE.2006.10.003

Broekhoven, J. L. (2015). *De invloed van de kwaliteit van het leefklimaat in residentiële instellingen op de veerkracht van jeugdigen [The influence of the group climate in residential youth institutions on resilience of youth]* [Utrecht University]. https://dspace.library.uu.nl/bitstream/handle/1874/325332/Masterthesis Broekhoven%2C J L-3824659.pdf

Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S., Greenberg, N., & Rubin, G. J. (2020). The psychological impact of quarantine and how to reduce it: Rapid review of the evidence. *The Lancet*, *395*(10227), 912–920. https://doi.org/10.1016/S0140-6736(20)30460-8

Brown, J., Cohen, P., Johnson, J. G., & Smailes, E. M. (1999). Childhood abuse and neglect: Specificity of effects on adolescent and young adult depression and suicidality. *Journal of the American Academy of Child and Adolescent Psychiatry*, *38*(12), 1490–1496. https://doi.org/10.1097/00004583-199912000-00009

Center for Self-Determination Theory. (n.d.). *The Work Climate Questionnaire (WCQ)*. Retrieved June 14, 2019, from https://selfdeterminationtheory.org/pas-work-climate/

Central Bureau for Statistics. (2021). *Income of persons; income classes, personal characteristics*. https://opendata.cbs.nl/#/CBS/nl/dataset/83931NED/table

Chan, C. S., Rhodes, J. E., Howard, W. J., Lowe, S. R., Schwartz, S. E. O., & Herrera, C. (2013). Pathways of influence in school-based mentoring: The mediating role of parent and teacher relationships. *Journal of School Psychology*, *51*(1), 129–142. https://doi.org/10.1016/j.jsp.2012.10.001

Chen, M., & Chan, K. L. (2016). Effects of parenting programs on child maltreatment prevention: A meta-analysis. *Trauma, Violence, and Abuse*, *17*(1), 88-104. https://doi.org/10.1177/1524838014566718

Cheung, A. C. K., & Slavin, R. E. (2016). How methodological features affect effect sizes in education. *Educational Researcher*, *45*(5), 283–292. https://doi.org/10.3102/0013189X16656615

Christensen, K. M., Hagler, M. A., Stams, G. J. J.M., Raposa, E. B., Burton, S., & Rhodes, J. E. (2020). Non-specific versus targeted approaches to youth mentoring: A follow-up meta-analysis. *Journal of Youth and Adolescence*, *49*(5), 959–972. https://doi.org/10.1007/s10964-020-01233-x

Cicchetti, D., & Lynch, M. (1993). Toward an ecological/transactional model of community violence and child maltreatment: Consequences for children's development. *Psychiatry Interpersonal & Biological Processes*, *56*, 96–117. https://doi.org/10.1521/00332747.1993.11024624

Cohen, J. (1988). Statistical power analysis for the behavioral sciences. In *Computers, Environment and Urban Systems* (2nd edition). Lawrence Erlbaum Associates.

Collins, S. E., Clifasefi, S. L., Stanton, J., Straits, K. J. E., Gil-Kashiwabara, E., Espinosa, P. R., Nicasio, A. V., Andrasik, M. P., Hawes, S. M., Miller, K. A., Nelson, L. A., Orfaly, V. E., Duran, B. M., & Wallerstein, N. (2018). Community-based participatory research (CBPR): Towards equitable involvement of community in psychology research. *American Psychologist*, *73*(7), 884–898. https://doi.org/10.1037/amp0000167

Colonnesi, C., Wissink, I. B., Noom, M. J., Asscher, J. J., Hoeve, M., Stams, G. J. J. M, G. J., Polderman, N., & Kellaert-Knol, M. G. (2012). Basic Trust: An attachment-oriented intervention based on mind-mindedness in adoptive families. *Research on Social Work Practice*, *23*(2), 179–188. https://doi.org/10.1177/1049731512469301

Connell, A. M., & Goodman, S. H. (2002). The association between psychopathology in fathers versus mothers and children's internalizing and externalizing behavior problems: A meta-analysis. *Psychological Bulletin*, *128*(5), 746–770. https://doi.org/10.1037//0033-2909.128.5.746

Courtney, D., Watson, P., Battaglia, M., Mulsant, B. H., & Szatmari, P. (2020). COVID-19 impacts on child and youth anxiety and depression: Challenges and opportunities. *Canadian Journal of Psychiatry*, *65*(10), 688–691. https://doi.org/10.1177/0706743720935646

Dantzer, B., & Perry, N. E. (2022). Advancing and mobilizing knowledge about youth-initiated mentoring through community-based participatory research: A scoping review. *Youth*, *2*(4), 587–609. https://doi.org/10.3390/YOUTH2040042

Darley, J. M., & Latane, B. (1968). Bystander intervention in emergencies: Diffusion of responsibility. *Journal of Personality and Social Psychology*, *8*(4 PART 1), 377–383. https://doi.org/10.1037/H0025589

De Los Reyes, A., Augenstein, T. M., Wang, M., Thomas, S. A., Drabick, D. A. G., Burgers, D. E., & Rabinowitz, J. (2015). The validity of the multi-informant approach to assessing child and adolescent mental health. *Psychological Bulletin*, *141*(4), 858–900. https://doi.org/10.1037/a0038498

de Vries, S. L. A., Hoeve, M., Asscher, J. J., & Stams, G. J. J. M. (2018). The long-term effects of the youth crime prevention program "New Perspectives" on delinquency and recidivism. *International Journal of Offender Therapy and Comparative Criminology*, *62*(12), 3639–3661. https://doi.org/10.1177/0306624X17751161

de Vries, S. L. A., Hoeve, M., Wibbelink, C. J. M., Asscher, J. J., & Stams, G. J. J. M. (2017). A randomized controlled trial of the effectiveness of the youth crime prevention program 'New Perspectives' (NP): Post-treatment changes and moderator effects. *Children and Youth Services Review*, *82*, 413–426. https://doi.org/10.1016/j.childyouth.2017.10.011

Dekkers, T. J., Groenman, A. P., Cuijpers, P., Hoekstra, P. J., Luman, M., Orobio de Castro, B., Overbeek, G., Popma, A., Rommelse, N., Salemink, E., Stikkelbroek, Y. A. J., van den Hoofdakker, B. J., van der Oord, S., & Leijten, P. (2022). Commentary: Why treatment is the best choice for childhood mental disorders—a commentary on Roest et al. (2022). *Journal of Child Psychology and Psychiatry*, *64*(3), 470-473. https://doi.org/10.1111/JCPP.13715

Dijkstra, S., Asscher, J. J., Deković, M., Stams, G. J. J. M., & Creemers, H. E. (2019). A randomized controlled trial on the effectiveness of family group conferencing in child welfare: Effectiveness, moderators, and level of FGC completion. *Child Maltreatment*, *24*(2), 137–151. https://doi.org/10.1177/1077559518808221

Dijkstra, S., Creemers, H. E., Asscher, J. J., Deković, M., & Stams, G. J. J. M. (2016). The effectiveness of family group conferencing in youth care: A meta-analysis. *Child Abuse & Neglect*, *62*, 100–110. https://doi.org/10.1016/J.CHIABU.2016.10.017

Drieschner, K. H., & Boomsma, A. (2008). The Treatment Motivation Scales for forensic outpatient treatment (TMS-F): Construction and psychometric evaluation. *Assessment*, *15*(2), 224–241. https://doi.org/10.1177/1073191107311650

DuBois, D. L., & Silverthorn, N. (2005). Natural mentoring relationships and adolescent health: Evidence from a national study. *American Journal of Public Health*, *95*(3), 518-524. https://doi.org/10.2105/AJPH.2003.031476

Duncan, B. L., Miller, S. D., Sparks, J. A., Claud, D. A., Reynolds, L. R., Broan, J., & Johnson, L. D. (2015). The Session Rating Scale: Preliminary psychometric properties of a "working" alliance measure. *Journal of Brief Therapy*, *3*(1), 3–12.

Duval, S., & Tweedie, R. (2000a). A nonparametric "trim and fill" method of accounting for publication bias in meta-analysis. *Journal of the American Statistical Association*, *95*(449), 89–98. https://doi.org/10.1080/01621459.2000.10473905

Duval, S., & Tweedie, R. (2000b). Trim and fill: A simple funnel-plot-based method of testing and adjusting for publication bias in meta-analysis. *Biometrics*, *56*(2), 455–463. https://doi.org/10.1111/j.0006-341X.2000.00455.x

Eales, L., Ferguson, G. M., Gillespie, S., Smoyer, S., & Carlson, S. M. (2021). Family resilience and psychological distress in the COVID-19 pandemic: A mixed methods study. *Developmental Psychology*, *57*(10), 1563–1581. https://doi.org/10.1037/DEV0001221

Edwards, M., Tinworth, K., Burford, G., & Pennell, J. (2006). *Family team meeting (FTM) process, outcome, and impact evaluation: Phase II report*.

Egger, M., Smith, G. D., Schneider, M., & Minder, C. (1997). Bias in meta-analysis detected by a simple, graphical test. *British Medical Journal*, *315*(7109), 629–634. https://doi.org/10.1136/bmj.315.7109.629

Eklund, J., Andersson-Stråberg, T., & Hansen, E. M. (2009). "I've also experienced loss and fear": Effects of prior similar experience on empathy. *Scandinavian Journal of Psychology*, *50*(1), 65–69. https://doi.org/10.1111/j.1467-9450.2008.00673.x

Elgar, F. J., Waschbusch, D. A., Dadds, M. R., & Sigvaldason, N. (2007). Development and validation of a short form of the Alabama Parenting Questionnaire. *Journal of Child and Family Studies*, *16*(2), 243–259. https://doi.org/10.1007/s10826-006-9082-5

Farrington, D. P. (2003). Methodological quality standards for evaluation research. *Annals of the American Academy of Political and Social Science* (Vol. 587), *587*(1), 49-68. https://doi.org/10.1177/0002716202250789

Faul, F., Erdfelder, E., Buchner, A., & Lang, A. G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, *41*(4), 1149–1160. https://doi.org/10.3758/BRM.41.4.1149

Fegert, J. M., Vitiello, B., Plener, P. L., & Clemens, V. (2020). Challenges and burden of the Coronavirus 2019 (COVID-19) pandemic for child and adolescent mental health: A narrative review to highlight clinical and research needs in the acute phase and the long return to normality. *Child and Adolescent Psychiatry and Mental Health*, *14*(1), 1–11. https://doi.org/10.1186/S13034-020-00329-3/FIGURES/1

Fergus, S., & Zimmerman, M. A. (2005). Adolescent resilience: A framework for understanidng healthy development in the face of risk. *Annual Review of Public Health*, *26*, 399–419. https://doi.org/10.1146/annurev.publhealth.26.021304.144357

Fernández-Castilla, B., Declercq, L., Jamshidi, L., Beretvas, S. N., Onghena, P., & van den Noortgate, W. (2020). Visual representations of meta-analyses of multiple outcomes: Extensions to forest plots, funnel plots, and caterpillar plots. *Methodology*, *16*(4), 299-315. https://doi.org/10.5964/METH.4013

Fernández-Castilla, B., Declercq, L., Jamshidi, L., Beretvas, S. N., Onghena, P., & Van den Noortgate, W. (2021). Detecting selection bias in meta-analyses with multiple outcomes: A simulation study. *Journal of Experimental Education*, *89*(1), 125–144. https://doi.org/10.1080/00220973.2019.1582470

Fischer, P., Krueger, J. I., Greitemeyer, T., Vogrincic, C., Kastenmüller, A., Frey, D., Heene, M., Wicher, M., & Kainbacher, M. (2011). The bystander-effect: A meta-analytic review on bystander intervention in dangerous and non-dangerous emergencies. *Psychological Bulletin*, *137*(4), 517–537. https://doi.org/10.1037/A0023304

Flückiger, C., Del Re, A. C., Wlodasch, D., Horvath, A. O., Solomonov, N., & Wampold, B. E. (2020). Assessing the alliance–outcome association adjusted for patient characteristics and treatment processes: A meta-analytic summary of direct comparisons. *Journal of Counseling Psychology*, *67*(6), 706–711. https://doi.org/10.1037/COU0000424

Ford, R. C., Bach, S. A., & Fottler, M. D. (1997). Methods of measuring patient satisfaction in health care organizations. *Health Care Management Review*, *22*(2), 74–89. https://doi.org/10.1097/00004010-199704000-00009

Garringer, M., Kupersmidt, J., Rhodes, J. E., Stelter, R., & Tai, T. (2015). *Elements of effective practice for mentoring: Research-informed and practitioner-approved best practices for creating and sustaining impactful mentoring relationships and strong program services*. MENTOR: National Mentoring Partnership. http://www.mentoring.org/downloads/mentoring_1222.pdf

Geenen, S., & Powers, L. E. (2007). "Tomorrow is another problem". The experiences of youth in foster care during their transition into adulthood. *Children and Youth Services Review*, *29*(8). https://doi.org/10.1016/j.childyouth.2007.04.008

Ghesquière, P. (1993). *Multi-problem gezinnen: Problematische hulpverleningssituaties in perspectief [Multi-problem families: Problematic care situations in perspective]*. Garant.
Gnambs, T., & Kaspar, K. (2014). Disclosure of sensitive behaviors across self-administered survey modes: a meta-analysis. *Behavior Research Methods*, *47*(4), 1237–1259. https://doi.org/10.3758/S13428-014-0533-4/FIGURES/3
Goense, P. B., Assink, M., Stams, G. J. J. M., Boendermaker, L., & Hoeve, M. (2016). Making 'what works' work: A meta-analytic study of the effect of treatment integrity on outcomes of evidence-based interventions for juveniles with antisocial behavior. *Aggression and Violent Behavior*, *31*, 106–115. https://doi.org/10.1016/J.AVB.2016.08.003
Greeson, J. K. P., & Thompson, A. E. (2017). Development, feasibility, and piloting of a novel natural mentoring intervention for older youth in foster care. *Journal of Social Service Research*, *43*(2), 205–222. https://doi.org/10.1080/01488376.2016.1248269
Grey, I., Arora, T., Thomas, J., Saneh, A., Tomhe, P., & Abi-Habib, R. (2020). The role of perceived social support on depression and sleep during the COVID-19 pandemic. *Psychiatry Research*, *293*, 113452. https://doi.org/10.1016/J.PSYCHRES.2020.113452
Gulliver, A., Griffiths, K. M., & Christensen, H. (2010). Perceived barriers and facilitators to mental health help-seeking in young people: A systematic review. *BMC Psychiatry*, *10*(1), 1–9. https://doi.org/10.1186/1471-244X-10-113
Gutterswijk, R. V., Kuiper, C. H. Z., Lautan, N., Kunst, E. G., van der Horst, F. C. P., Stams, G. J. J. M., & Prinzie, P. (2020). The outcome of non-residential youth care compared to residential youth care: A multilevel meta-analysis. *Children and Youth Services Review*, *113*, 104950. https://doi.org/10.1016/j.childyouth.2020.104950
Hagler, M. A. (2018). Processes of natural mentoring that promote underrepresented students' educational attainment: A theoretical model. *American Journal of Community Psychology*, *62*(1–2), 150–162. https://doi.org/10.1002/ajcp.12251
Hagler, M. A., & Rhodes, J. E. (2018). The long-term impact of natural mentoring relationships: A counterfactual analysis. *American Journal of Community Psychology*, *62*(1–2), 175–188. https://doi.org/10.1002/ajcp.12265
Hajos, T. R. S., Pouwer, F., Skovlund, S. E., Den Oudsten, B. L., Geelhoed-Duijvestijn, P. H. L. M., Tack, C. J., & Snoek, F. J. (2013). Psychometric and screening properties of the WHO-5 well-being index in adult outpatients with Type 1 or Type 2 diabetes mellitus. *Diabetic Medicine*, *30*(2), e63-e69. https://doi.org/10.1111/dme.12040
Harandi, T. F., Taghinasab, M. M., & Nayeri, T. D. (2017). The correlation of social support with mental health: A meta-analysis. *Electronic Physician*, *9*(9), 5212–5222. https://doi.org/10.19082/5212
Hariton, E., & Locascio, J. J. (2018). Randomised controlled trials—the gold standard for effectiveness research. *BJOG : An International Journal of Obstetrics and Gynaecology*, *125*(13), 1716. https://doi.org/10.1111/1471-0528.15199
Hauken, M. A., Pereira, M., & Senneseth, M. (2018). The effects on children's anxiety and quality of life of a psychoeducational program for families living with parental cancer and their network. *Cancer Nursing*, *41*(6), 473-483. https://doi.org/10.1097/NCC.0000000000000529
Hayden, C., & Jenkins, C. (2014). 'Troubled Families' Programme in England: 'wicked problems' and policy-based evidence. *Policy Studies*, *35*(6), 631–649. https://doi.org/10.1080/01442872.2014.971732
Hedges, L. V., & Olkin, I. (2014). Statistical methods for meta-analysis. In *Statistical Methodblogy in Meta-Analysis*. Academic Press.
Hodges, S. D., Kiel, K. J., Kramer, A. D. I., Veach, D., & Villanueva, B. R. (2010). Giving birth to empathy: The effects of similar experience on empathic accuracy, empathic concern, and perceived empathy. *Personality and Social Psychology Bulletin*, *36*(3), 398–409. https://doi.org/10.1177/0146167209350326
Hollinshead, D. M., Corwin, T. W., Maher, E. J., Merkel-Holguin, L., Allan, H., & Fluke, J. D. (2017). Effectiveness of family group conferencing in preventing repeat referrals to child protective services and out-of-home placements. *Child Abuse and Neglect*, *69*, 285-294. https://doi.org/10.1016/j.chiabu.2017.04.022
Horvath, A. O. (2005). The therapeutic relationship: Research and theory. An introduction to the special issue. *Psychotherapy Research*, *15*(1–2), 3–7. https://doi.org/10.1080/10503300512331339143
Howick, J., Koletsi, D., Ioannidis, J. P. A., Madigan, C., Pandis, N., Loef, M., Walach, H., Sauer, S., Kleijnen, J., Seehra, J., Johnson, T., & Schmidt, S. (2022). Most healthcare interventions tested in Cochrane Reviews are not effective according to high quality evidence: A meta-epidemiological study. *SSRN Electronic Journal*, *148*, 160–169. https://doi.org/10.2139/ssrn.4031358
Hox, J. J., Moerbeek, M., & van de Schoot, R. (2017). *Multilevel analysis: Techniques and applications*. Routledge. https://doi.org/10.4324/9780203852279
Hughes, J. (2017). *paramtest: Run a function iteratively while varying parameters* (R package version 0.1.0). https://cran.r-project.org/package=paramtest
IJntema, R. C., Burger, Y. D., & Schaufeli, W. B. (2019). Reviewing the labyrinth of psychological resilience: Establishing criteria for resilience-building programs. *Consulting Psychology Journal*, *71*(4), 288–304. https://doi.org/10.1037/cpb0000147
Jaffee, S. R., Caspi, A., Moffitt, T. E., Polo-Tomás, M., & Taylor, A. (2007). Individual, family, and neighborhood factors distinguish resilient from non-resilient maltreated children: A cumulative stressors model. *Child Abuse & Neglect*, *31*(3), 231–253. https://doi.org/10.1016/J.CHIABU.2006.03.011
James, C., Asscher, J. J., Stams, G. J. J. M., & van der Laan, P. H. (2016). The effectiveness of aftercare for juvenile and young adult offenders. *International Journal of Offender Therapy and Comparative Criminology*, *60*(10), 1159–1184. https://doi.org/10.1177/0306624X15576884

Jeong, S., McGarrell, E. F., & Hipple, N. K. (2012). Long-term impact of family group conferences on re-offending: The Indianapolis restorative justice experiment. *Journal of Experimental Criminology*, *8*(4), 369-385. https://doi.org/10.1007/s11292-012-9158-8

Jones, E. A. K., Mitra, A. K., & Bhuiyan, A. R. (2021). Impact of COVID-19 on mental health in adolescents: A systematic review. *International Journal of Environmental Research and Public Health*, *18*(5), 2470–2479. https://doi.org/10.3390/IJERPH18052470

Keller, T. E. (2005). A systemic model of the youth mentoring intervention. *Journal of Primary Prevention*, *26*(2), 169–188. https://doi.org/10.1007/s10935-005-1850-2

Kesselring, M., de Winter, M., Horjus, B., van de Schoot, R., & van Yperen, T. (2012). Do parents think it takes a village? Parents' attitudes towards nonparental adults' involvement in the upbringing and nuture of children. *Journal of Community Psychology*, *40*(8), 921–937. https://doi.org/10.1002/jcop.21497

Kim, H. H. S., & Laurence, J. (2020). COVID-19 restrictions and mental distress among American adults: Evidence from Corona Impact Survey (W1 and W2). *Journal of Public Health (United Kingdom)*, *42*(4), 704–711. https://doi.org/10.1093/pubmed/fdaa148

King, C. A., Arango, A., Kramer, A., Busby, D., Czyz, E., Foster, C. E., & Gillespie, B. W. (2019). Association of the Youth-nominated Support Team intervention for suicidal adolescents with 11- to 14-year mortality outcomes: Secondary analysis of a randomized clinical trial. *JAMA Psychiatry*, *76*(5), 492–498. https://doi.org/10.1001/jamapsychiatry.2018.4358

King, C. A., Klaus, N., Kramer, A., Venkataraman, S., Quinlan, P., & Gillespie, B. (2009). The Youth-nominated Support Team-version II for suicidal adolescents: A randomized controlled intervention trial. *Journal of Consulting and Clinical Psychology*, *77*(5), 880–893. https://doi.org/10.1037/a0016552

King, C. A., Kramer, A., Preuss, L., Kerr, D. C. R., Weisse, L., & Venkataraman, S. (2006). Youth-nominated support team for suicidal adolescents (version 1): A randomized controlled trial. *Journal of Consulting and Clinical Psychology*, *74*(1). https://doi.org/10.1037/0022-006X.74.1.199

Kline, R. B. (2005). *Principles and practice of Structural Equation Modeling* (2nd edition). The Guilford Press.

Knapp, G., & Hartung, J. (2003). Improved tests for a random effects meta-regression with a single covariate. *Statistics in Medicine*, *22*(17), 2693–2710. https://doi.org/10.1002/sim.1482

Knot-Dickscheit, J. (2006). Forms of intensive ambulant (pedagogical) home care for multiproblem families in the Netherlands. In G. C. Schulze, M. Wittrock, & B. Lütgenau (Eds.), *Children at risk in family and school* (pp. 85–94). Universitätsverlag.

Knox, L., Guerra, N. G., Williams, K. R., & Toro, R. (2011). Preventing children's aggression in immigrant Latino families: A mixed methods evaluation of the Families and Schools Together program. *American Journal of Community Psychology*, *48*(1–2), 65–76. https://doi.org/10.1007/s10464-010-9411-0

Koestner, R., Lekes, N., Powers, T. A., & Chicoine, E. (2002). Attaining personal goals: Self-concordance plus implementation intentions equals success. *Journal of Personality and Social Psychology*, *83*(1), 231–244. https://doi.org/10.1037/0022-3514.83.1.231

Koning, N., Hagedoorn, N., Stams, G. J. J. M., Assink, M., & van Dam, L. (2022). What makes Dutch youth comply with preventive COVID-19 measures? An explorative study. *Journal of Community Psychology*, *50*, 653–665. https://doi.org/10.1002/jcop.22651

Koper, N., Creemers, H. E., Branje, S., Stams, G. J. J. M., & van Dam, L. (2020). Effectiveness and working mechanisms of the InConnection approach in multi-problem families: Study protocol of a mixed-methods study. *BMC Health Services Research*, *20*(692). https://doi.org/10.1186/s12913-020-05553-3

Koper, N., Creemers, H. E., van Dam, L., Stams, G. J. J. M., & Branje, S. (2021). Needs of youth and parents from multi-problem families in the search for youth-initiated mentors. *Youth and Society*, *0*(0), 1–27. https://doi.org/10.1177/0044118X211058217

Koren, P. E., DeChillo, N., & Friesen, B. J. (1992). Measuring empowerment in families whose children have emotional disabilities: A brief questionnaire. *Rehabilitation Psychology*, *37*(4), 305–321. https://doi.org/10.1037/h0079106

Kraemer, H. C., Wilson, G. T., Fairburn, C. G., & Agras, W. S. (2002). Mediators and moderators of treatment effects in randomized clinical trials. *Archives of General Psychiatry*, *59*(10), 877–883. http://www.ncbi.nlm.nih.gov/pubmed/12365874

Kratochwill, T. R., McDonald, L., Levin, J. R., Bear-Tibbetts, H. Y., & Demaray, M. K. (2004). Families and Schools Together: An experimental analysis of a parent-mediated multi-family group program for American Indian children. *Journal of School Psychology*, *42*(5), 359–383. https://doi.org/10.1016/j.jsp.2004.08.001

Kratochwill, T. R., McDonald, L., Levin, J. R., Scalia, P. A., & Coover, G. (2009). Families and Schools Together: An experimental study of multi-family support groups for children at risk. *Journal of School Psychology*, *47*(4), 245–265. https://doi.org/10.1016/j.jsp.2009.03.001

Krause, M. S. (1966). A cognitive theory of motivation for treatment. *The Journal of General Psychiatry*, *75*, 9–19. https://doi.org/10.1080/00221309.1966.9710345

Lambert, M. C., Johnson, L. E., & Wang, E. W. (2017). The impact of family group decision-making on preventing removals. *Children and Youth Services Review*, *78*, 89-92. https://doi.org/10.1016/j.childyouth.2017.05.005

Lambert, M. J., & Barley, D. E. (2001). Research summary on the therapeutic relationship and psychotherapy outcome. *Psychotherapy: Theory, Research, Practice, Training*, *38*(4), 357–361. https://doi.org/10.1037/0033-3204.38.4.357

Lange, A. M. C., Delsing, M. J. M. H., van Geffen, M., & Scholte, R. H. J. (2021). Alliance between therapist and multi-stressed families during the COVID-19 pandemic: The effect of family-based videoconferencing. *Child and Youth Care Forum*, 1–19. https://doi.org/10.1007/s10566-021-09644-y
Lee, S. S., Humphreys, K. L., Flory, K., Liu, R., & Glass, K. (2011). Prospective association of childhood attention-deficit/hyperactivity disorder (ADHD) and substance use and abuse/dependence: A meta-analytic review. *Clinical Psychology Review*, *31*(3), 328–341. https://doi.org/10.1016/J.CPR.2011.01.006
Leon, S. C., Saucedo, D. J., & Jachymiak, K. (2016). Keeping it in the family: The impact of a Family Finding intervention on placement, permanency, and well-being outcomes. *Children and Youth Services Review*, *70*, 163–170. https://doi.org/10.1016/j.childyouth.2016.09.020
Leventhal, T., & Brooks-Gunn, J. (2000). The neighborhoods they live in: The effects of neighborhood residence on child and adolescent outcomes. *Psychological Bulletin*, *126*(2), 309–337. https://doi.org/10.1037/0033-2909.126.2.309
Li, J. Bin, Dou, K., & Liu, Z. H. (2022). Profiles of positive changes in life outcomes over the COVID-19 pandemic in Chinese adolescents: the role of resilience and mental health consequence. *Child and Adolescent Psychiatry and Mental Health*, *16*(1), 1–11. https://doi.org/10.1186/S13034-022-00451-4/TABLES/3
Liebenberg, L., Ungar, M., & LeBlanc, J. C. (2013). The CYRM-12: A brief measure of resilience. *Canadian Journal of Public Health*, *104*(2), 131–135. https://doi.org/10.1007/BF03405676
Lipsey, M. W., Wilson, D. B., & Lipsey. (2001). Practical meta-analysis. In *Applied Social Research Methods Series* (Vol. 49).
Little, R. J. A., & Rubin, D. B. (1989). The analysis of social science data with missing values. *Sociological Methods & Research*, *18*(2–3). https://doi.org/10.1177/0049124189018002004
Little, R. J. A., & Rubin, D. B. (2002). *Statistical analysis with missing data* (2nd ed.). John Wiley & Sons.
Lyons, M. D., McQuillin, S. D., & Henderson, L. J. (2019). Finding the sweet spot: Investigating the effects of relationship closeness and instrumental activities in school-based mentoring. *American Journal of Community Psychology*, *63*(1–2), 88–98. https://doi.org/10.1002/ajcp.12283
MacLeod, J., & Nelson, G. (2000). Programs for the promotion of family wellness and the prevention of child maltreatment: a meta-analytic review. *Child Abuse & Neglect*, *24*(9), 1127–1149. https://doi.org/10.1016/S0145-2134(00)00178-2
Malysiak, R. (1997). Exploring the theory and paradigm base for wraparound. *Journal of Child and Family Studies*, *6*(4), 399–408. https://doi.org/10.1023/A:1025089227710
Marchini, S., Zaurino, E., Bouziotis, J., Brondino, N., Delvenne, V., & Delhaye, M. (2021). Study of resilience and loneliness in youth (18–25 years old) during the COVID-19 pandemic lockdown measures. *Journal of Community Psychology*, *49*(2), 468–480. https://doi.org/10.1002/JCOP.22473
Markoulakis, R., Da Silva, A., Kodeeswaran, S., & Levitt, A. (2022). Youth mental health and/or addiction concerns and service needs during the COVID-19 pandemic: a qualitative exploration of caregiver experiences and perspectives. *Child and Adolescent Psychiatry and Mental Health*, *16*(1), 1–12. https://doi.org/10.1186/S13034-022-00471-0
Masten, A. S. (2021). Family risk and resilience in the context of cascading COVID-19 challenges: Commentary on the special issue. *Developmental Psychology*, *57*(10), 1748–1754. https://doi.org/10.1037/DEV0001259
Mayland, C. R., Harding, A. J. E., Preston, N., & Payne, S. (2020). Supporting adults bereaved through COVID-19: A rapid review of the impact of previous pandemics on grief and bereavement. *Journal of Pain and Symptom Management*, *60*(2), e33–e39. https://doi.org/10.1016/j.jpainsymman.2020.05.012
McCart, M. R., Priester, P. E., Davies, W. H., & Azen, R. (2006). Differential effectiveness of behavioral parent-training and cognitive-behavioral therapy for antisocial youth: A meta-analysis. *Journal of Abnormal Child Psychology*, *34*(4), 525-541. https://doi.org/10.1007/s10802-006-9031-1
McGarrell, E. F., & Hipple, N. K. (2007). Family group conferencing and re-offending among first-time juvenile offenders: The Indianapolis experiment. *Justice Quarterly*, *24*(2), 221-246. https://doi.org/10.1080/07418820701294789
McGinn, T., Best, P., Wilson, J., Chereni, A., Kamndaya, M., & Shlonsky, A. (2020). Family group decision-making for children at risk of abuse or neglect: A systematic review. *Campbell Systematic Reviews*, *16*(3), e1088. https://doi.org/10.1002/CL2.1088
Mclaughlin, K. A., Costello, E. J., Leblanc, W., Sampson, N. A., & Kessler, R. C. (2012). Socioeconomic status and adolescent mental disorders. *American Journal of Public Health*, *102*(9), 1742–1750. https://doi.org/10.2105/AJPH.2011.300477
McLaughlin, K. A., Green, J. G., Gruber, M. J., Sampson, N. A., Zaslavsky, A. M., & Kessler, R. C. (2012). Childhood adversities and first onset of psychiatric disorders in a national sample of US adolescents. *Archives of General Psychiatry*, *69*(11), 1151–1160. https://doi.org/10.1001/archgenpsychiatry.2011.2277
Mehlkopf, P. J. (2008). *Tussen regels en handelingsruimte: Over multiprobleemgezinnen, coördinatie van zorg en gezinscoaching. Handreiking bij uitvoering [Between rules and space for action: About multi-problem families, coordination of care and family coaching. Guide to impleme*.
Menting, A. T. A., Orobio de Castro, B., Wijngaards-de Meij, L. D. N. V., & Matthys, W. (2014). A trial of parent training for mothers being released from incarceration and their children. *Journal of Clinical Child and Adolescent Psychology*, *43*(3), 381–396. https://doi.org/10.1080/15374416.2013.817310
Michie, S., Fixsen, D., Grimshaw, J. M., & Eccles, M. P. (2009). Specifying and reporting complex behaviour change interventions: The need for a scientific method. *Implementation Science*, *4*(1), 1–6. https://doi.org/10.1186/1748-5908-4-40/COMMENTS

Miles, M. B., Huberman, A. M., & Saldaña, J. (2013). *Qualitative data analysis* (3rd ed.). Sage.
Millenky, M., Bloom, D., & Dillon, C. (2010). *Making the transition: Interim results of the National Guard Youth ChalleNGe Evaluation*.
Millenky, M., Bloom, D., Muller-Ravett, S., & Broadus, J. (2012). Staying on course: Three-year results of the National Guard Youth Challenge evaluation. In *SSRN*. https://doi.org/10.2139/ssrn.2019770
Millenky, M., Schwartz, S. E. O., & Rhodes, J. E. (2014). Supporting the transition to adulthood among high school dropouts: An impact study of the National Guard Youth ChalleNGe program. *Prevention Science*, *15*(4), 448–459. https://doi.org/10.1007/s11121-013-0388-4
Mowbray, C. T., Holter, M. C., Teague, G. B., & Bybee, D. (2003). Fidelity criteria: Development, measurement, and validation. *American Journal of Evaluation*, *24*(3), 315–340. https://doi.org/10.1016/S1098-2140(03)00057-2
Mullen, B. (2013). Advanced Basic Meta-analysis. In *Advanced Basic Meta-analysis*. https://doi.org/10.4324/9780203771938
Muthén, L. K., & Muthén, B. O. (n.d.). *Mplus user's guide* (8th ed.).
Niemiec, C. P., Lynch, M. F., Vansteenkiste, M., Bernstein, J., Deci, E. L., & Ryan, R. M. (2006). The antecedents and consequences of autonomous self-regulation for college: A self-determination theory perspective on socialization. *Journal of Adolescence*, *29*(5), 761–775. https://doi.org/10.1016/j.adolescence.2005.11.009
NJI. (2011). *Youth and family centres in The Netherlands*. www.nji.nl/nl/Download-NJi/PublicatieNJi/Youth_and_Family_Centres_in_The_%0ANetherlands.pdf/%0A
Nooteboom, L. A., Kuiper, C. H. Z., Mulder, E. A., Roetman, P. J., Eilander, J., & Vermeiren, R. R. J. M. (2020). What do parents expect in the 21st century? A qualitative analysis of integrated youth care. *International Journal of Integrated Care*, *20*(3), 1–13. https://doi.org/10.5334/IJIC.5419/METRICS/
Nooteboom, L. A., van den Driesschen, S. I., Kuiper, C. H. Z., Vermeiren, R. R. J. M., & Mulder, E. A. (2020). An integrated approach to meet the needs of high-vulnerable families: A qualitative study on integrated care from a professional perspective. *Child and Adolescent Psychiatry and Mental Health*, *14*(1), 1-17. https://doi.org/10.1186/s13034-020-00321-x
OECD. (2022). *Poverty rate (indicator)*. https://doi.org/10.1787/0fe1315d-en
Onrust, S. A., Romijn, G., & De Beer, Y. (2015). Family Group Conferences within the integrated care system for young people with ID: A controlled study of effects and costs. *BMC Health Services Research*, *15*(1), 1-12. https://doi.org/10.1186/s12913-015-1062-2
Öst, L. G., & Ollendick, T. H. (2017). Brief, intensive and concentrated cognitive behavioral treatments for anxiety disorders in children: A systematic review and meta-analysis. *Behaviour Research and Therapy*, *97*, 134-145. https://doi.org/10.1016/j.brat.2017.07.008
Ouzzani, M., Hammady, H., Fedorowicz, Z., & Elmagarmid, A. (2016). Rayyan-a web and mobile app for systematic reviews. *Systematic Reviews*, *5*(1), 1–10. https://doi.org/10.1186/s13643-016-0384-4
Ozbay, F., Johnson, D. C., Dimoulas, E., C.A. Morgan, I., Charney, D., & Southwick, S. (2007). Social support and resilience to stress: From neurobiology to clinical practice. *Psychiatry (Edgmont)*, *4*(5), 35. /pmc/articles/PMC2921311/
Pennell, J., Edwards, M., & Burford, G. (2010). Expedited family group engagement and child permanency. *Children and Youth Services Review*, *32*(7). https://doi.org/10.1016/j.childyouth.2010.03.029
Peters, J. L., Sutton, A. J., Jones, D. R., Abrams, K. R., & Rushton, L. (2007). Performance of the trim and fill method in the presence of publication bias and between-study heterogeneity. *Statistics in Medicine*, *26*(25). https://doi.org/10.1002/sim.2889
Piper, B. J., Gray, H. M., Raber, J., & Birkett, M. A. (2014). Reliability and validity of brief problem monitor, an abbreviated form of the child behavior checklist. *Psychiatry and Clinical Neurosciences*, *68*(10), 759–767. https://doi.org/10.1111/pcn.12188
Plenty, S., Bracegirdle, C., Dollmann, J., & Spiegler, O. (2021). Changes in young adults' mental well-being before and during the early stage of the COVID-19 pandemic: Disparities between ethnic groups in Germany. *Child and Adolescent Psychiatry and Mental Health*, *15*(1), 1–14. https://doi.org/10.1186/S13034-021-00418-X/TABLES/4
Power, E., Hughes, S., Cotter, D., & Cannon, M. (2020). Youth mental health in the time of COVID-19. *Irish Journal of Psychological Medicine*, *37*(4), 301–305. https://doi.org/10.1017/IPM.2020.84
Prime, H., Wade, M., & Browne, D. T. (2020). Risk and resilience in family well-being during the COVID-19 pandemic. *American Psychologist*, *75*(5), 631–643. https://doi.org/10.1037/AMP0000660
QSR International. (2012). *NVivo 10* (No. 10). http://www.qsrinternational.com
R Core Team. (2016). R Development Core Team. *R: A Language and Environment for Statistical Computing*, *55*.
R Core Team. (2020). *R: A language and environment for statistical computing*. R Foundation for Statistical Computing. https://www.r-project.org/
Raposa, E. B., Rhodes, J. E., Stams, G. J. J. M., Card, N., Burton, S., Schwartz, S. E. O., Sykes, L. A. Y., Kanchewa, S. S., Kupersmidt, J., & Hussain, S. (2019). The effects of youth mentoring programs: A meta-analysis of outcome studies. *Journal of Youth and Adolescence*, *48*(3), 423–443. https://doi.org/10.1007/s10964-019-00982-8
Reekers, S. E., Dijkstra, S., Stams, G. J. J. M., Asscher, J. J., & Creemers, H. E. (2018). Signs of effectiveness of signs of safety?—A pilot study. *Children and Youth Services Review*, *91*, 177-184. https://doi.org/10.1016/j.childyouth.2018.06.012
Rhodes, J. E. (2002). *Stand by me: The risks and rewards of mentoring today's youth*. Harvard University Press.
Rhodes, J. E., Reddy, R., & Grossman, J. B. (2005). The protective nfluence of mentoring on adolescents' substance use: Direct and indirect pathways. *Applied Developmental Science*, *9*(1), 31–47. https://doi.org/10.1207/s1532480xads0901_4

Richter, J. (2015). Preliminary evidence for good psychometric properties of the Norwegian version of the Brief Problems Monitor (BPM). *Nordic Journal of Psychiatry, 69*(3), 174-178. https://doi.org/10.3109/08039488.2014.951070
Richtlijnen jeugdhulp en jeugdbescherming. (2022a). *Richtlijn: Gezinnen met meervoudige en complexe problemen [Guideline: Families with multiple and complex problems]*. https://richtlijnenjeugdhulp.nl/gezinnen-met-meervoudige-en-complexe-problemen/
Richtlijnen jeugdhulp en jeugdbescherming. (2022b). *Richtlijn: Samen met ouders en jeugdige beslissen over passende hulp [Guideline shared decision-making with parents and youth about appropriate support]*. https://richtlijnenjeugdhulp.nl/samen-beslissen-over-passende-hulp/
Roest, J. J., Welmers - Van de Poll, M. J., van der Helm, G. H. P., Stams, G. J. J. M., & Hoeve, M. (2022). A three-level meta-analysis on the alliance-outcome association in child and adolescent psychotherapy. *Research on Child and Adolescent Psychopathology, 51*, 1–19. https://doi.org/10.1007/S10802-022-00986-2/TABLES/1
Rosen, M. L., Rodman, A. M., Kasparek, S. W., Mayes, M., Freeman, M. M., Lengua, L. J., Meltzoff, A. N., & McLaughlin, K. A. (2021). Promoting youth mental health during the COVID-19 pandemic: A longitudinal study. *PLOS ONE*, *16*(8), e0255294. https://doi.org/10.1371/JOURNAL.PONE.0255294
Rosenbaum, P. R., & Rubin, D. B. (1985). Constructing a control group using multivariate matched sampling methods that incorporate the propensity score. *American Statistician*, *39*(1), 33–38. https://doi.org/10.1080/00031305.1985.10479383
Rosenthal, R. (1979). The file drawer problem and tolerance for null results. *Psychological Bulletin*, *86*(3), 638-641. https://doi.org/10.1037/0033-2909.86.3.638
Rushovich, B., Hebert, A., Crampton, D., & Malm, K. (2021). Results from a randomized controlled trial of team decision-making in child welfare. *Children and Youth Services Review*, *131*, 106263. https://doi.org/10.1016/j.childyouth.2021.106263
Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, *55*(1), 68–78. https://doi.org/10.1037/0003-066X.55.1.68
Ryan, R. M., & Deci, E. L. (2008). A self-determination theory approach to psychotherapy: The motivational basis for effective change. *Canadian Psychology*, *49*(3), 186–193. https://doi.org/10.1037/A0012753
Ryan, R. M., Plant, R. W., & O'Malley, S. (1995). Initial motivations for alcohol treatment: Relations with patient characteristics, treatment involvement, and dropout. *Addictive Behaviors*, *20*(3), 279–297. https://doi.org/10.1016/0306-4603(94)00072-7
Saha, S., Saint, S., & Christakis, D. A. (2003). Impact factor: A valid measure of journal quality? *Journal of the Medical Library Association*, *91*(1), 42–46.
Sanders, M. R., Kirby, J. N., Tellegen, C. L., & Day, J. J. (2014). The Triple P-Positive Parenting Program: A systematic review and meta-analysis of a multi-level system of parenting support. In *Clinical Psychology Review*, *34*(4), 337-357. https://doi.org/10.1016/j.cpr.2014.04.003
Sarason, I. G., & Sarason, B. R. (2009). Social support: Mapping the construct. *Journal of Social and Personal Relationships*, *26*(1), 113–120. https://doi.org/10.1177/0265407509105526
Scherbaum, C. A., & Ferreter, J. M. (2009). Estimating statistical power and required sample sizes for organizational research using multilevel modeling. *Organizational Research Methods*, *12*(2), 347–367. https://doi.org/10.1177/1094428107308906
Schoemann, A. M., Boulton, A. J., & Short, S. D. (2017). Determining power and sample size for simple and complex mediation models. *Social Psychological and Personality Science*, *8*(4), 379–386. https://doi.org/10.1177/1948550617715068
Schreurs, P. J. G., van de Willige, G., Brosschot, J. F., Telegen, B., & Graus, G. M. H. (1993). *Handleiding Utrechtse Coping Lijst UCL (herziene versie) [Manual Utrecht Coping List UCL (revised version)]*. Zwets & Zeitlinger.
Schwartz, S. E. O., Kanchewa, S. S., Rhodes, J. E., Gowdy, G., Stark, A. M., Horn, J. P., Parnes, M., & Spencer, R. (2017). "I'm having a little struggle with this, can you help me out?": Examining impacts and processes of a social capital intervention for first-generation college students. *American Journal of Community Psychology*, *61*(1–2), 166–178. https://doi.org/10.1002/ajcp.12206
Schwartz, S. E. O., & Rhodes, J. E. (2016). From treatment to empowerment: New approaches to youth mentoring. *American Journal of Community Psychology*, *58*(1–2), 150–157. https://doi.org/10.1002/AJCP.12070
Schwartz, S. E. O., Rhodes, J. E., Spencer, R., & Grossman, J. B. (2013). Youth initiated mentoring: Investigating a new approach to working with vulnerable adolescents. *American Journal of Community Psychology*, *52*(1–2), 155–169. https://doi.org/10.1007/s10464-013-9585-3
Seery, M. D., Holman, E. A., & Silver, R. C. (2010). Whatever does not kill us: Cumulative lifetime adversity, vulnerability, and resilience. *Journal of Personality and Social Psychology*, *99*(6), 1025–1041. https://doi.org/10.1037/A0021344
Segers, L. (2017). *The content validation of the Dutch Family Empowerment Scale for parents of children with a chronic condition*. Utrecht University.
Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). *Experimental & quasi-experimental designs for generalized causal inference.* Houghton Mifflin.
Shadish, W. R., Galindo, R., Wong, V. C., Steiner, P. M., & Cook, T. D. (2011). A randomized experiment comparing random and cutoff-based assignment. *Psychological Methods*, *16*(2), 179-191. https://doi.org/10.1037/a0023345
Shadish, W. R., Navarro, A. M., Matt, G. E., & Phillips, G. (2000). The effects of psychological therapies under clinically representative conditions: A meta-analysis. *Psychological Bulletin*, *126*(4), 512–529. https://doi.org/10.1037/0033-2909.126.4.512

Sheets, J., Wittenstrom, K., Fong, R., James, J., Tecci, M., Baumann, D. J., & Rodriguez, C. (2009). Evidence-based practice in family group decision-making for Anglo, African American and Hispanic families. *Children and Youth Services Review*, *31*(11), 1187-1191. https://doi.org/10.1016/j.childyouth.2009.08.003

Simon, N. M., Herlands, N. N., Marks, E. H., Mancini, C., Letamendi, A., Li, Z., Pollack, M. H., Van Ameringen, M., & Stein, M. B. (2009). Childhood maltreatment linked to greater symptom severity and poorer quality of life and function in social anxiety disorder. *Depression and Anxiety*, *26*(11), 1027–1032. https://doi.org/10.1002/DA.20604

Simpson, J. A. (2007). Psychological foundations of trust. *Current Directions in Psychological Science*, *16*(5), 264–268. https://doi.org/10.1111/j.1467-8721.2007.00517.x

Singh, N. N., Curtis, W. J., Ellis, C. R., Nicholson, M. W., Villani, T. M., & Wechsler, H. A. (1995). Psychometric analysis of the Family Empowerment Scale. *Journal of Emotional and Behavioral Disorders*, *3*(2), 85–91. https://doi.org/10.1177/106342669500300203

Small, M. L. (2013). Weak ties and the core discussion network: Why people regularly discuss important matters with unimportant alters. *Social Networks*, *35*(3), 470–483. https://doi.org/10.1016/j.socnet.2013.05.004

Smith, C., & Carlson, B. E. (1997). Stress, coping, and resilience in children and youth. *Social Service Review*, *71*, 231–256. https://doi.org/10.1086/604249

Sousa, L. (2005). Building on personal networks when intervening with multi-problem poor families. *Journal of Social Work Practice*, *19*(2), 163–179. https://doi.org/10.1080/02650530500144766

Sousa, L., & Eusébio, C. (2007). When multi-problem poor individuals' myths meet social services myths. *Journal of Social Work*, *7*(2), 217–237. https://doi.org/10.1177/1468017307080281

Sousa, L., & Rodrigues, S. (2009). Linking formal and informal support in multiproblem low-income families: The role of the family manager. *Journal of Community Psychology*, *37*(5), 649–662. https://doi.org/10.1002/jcop.20313

Southwick, S. M., Morgan III, C. A., Vythilingam, M., & Charney, D. (2006). Mentors enhance resilience in at-risk children and adolescents. *Psychoanalytic Inquiry*, *26*(4), 577–584. https://doi.org/10.1080/07351690701310631

Spear, H. J., & Kulbok, P. (2004). Autonomy and adolescence: A concept analysis. *Public Health Nursing*, *21*(2), 144–152. https://doi.org/10.1111/J.0737-1209.2004.021208.X

Spencer, R. (2007). "It's not what I expected": A qualitative study of youth mentoring relationship failures. *Journal of Adolescent Research*, *22*(4), 331–354. https://doi.org/10.1177/0743558407301915

Spencer, R., Drew, A. L., & Horn, J. P. (2021). Program staff perspectives on implementing youth-initiated mentoring with system-involved youth. *Journal of Community Psychology*, *49*(7), 2781-2794. https://doi.org/10.1002/jcop.22514

Spencer, R., Drew, A. L., Walsh, J., & Kanchewa, S. S. (2018). Girls (and boys) just want to have fun: A mixed-methods examination of the role of gender in youth mentoring relationship duration and quality. *Journal of Primary Prevention*, *39*, 17-35. https://doi.org/10.1007/s10935-017-0494-3

Spencer, R., Gowdy, G., Drew, A. L., McCormack, M. J., & Keller, T. E. (2020). It takes a village to break up a match: A systemic analysis of formal youth mentoring relationship endings. *Child and Youth Care Forum*, *49*(1), 97–120. https://doi.org/10.1007/s10566-019-09520-w

Spencer, R., Gowdy, G., Drew, A. L., & Rhodes, J. E. (2019). "Who knows me the best and can encourage me the most?": Matching and early relationship development in youth-initiated mentoring relationships with system-involved youth. *Journal of Adolescent Research*, *34*(1), 3–29. https://doi.org/10.1177/0743558418755686

Spencer, R., Tugenberg, T., Ocean, M., Schwartz, S. E. O., & Rhodes, J. E. (2016). "Somebody who was on my side": A qualitative examination of youth initiated mentoring. *Youth and Society*, *48*(3), 402–424. https://doi.org/10.1177/0044118X13495053

Spielmans, G. I., Gatlin, E. T., & McFall, J. P. (2010). The efficacy of evidence-based psychotherapies versus usual care for youths: Controlling confounds in a meta-reanalysis. *Psychotherapy Research*, *20*(2), 234-246. https://doi.org/10.1080/10503300903311293

Stams, G. J. J. M., Juffer, F., Rispens, J., & Hoksbergen, R. A. C. (2000). The development and adjustment of 7-year-old children adopted in infancy. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, *41*(8), 1025–1037. https://doi.org/10.1017/S0021963099006344

Steinberg, L., Lamborn, S. D., Dornbusch, S. M., & Darling, N. (1992). Impact of parenting practices on adolescent achievement: Authoritative parenting, school involvement, and encouragement to succeed. *Child Development*, *63*(5), 1266–1281. https://doi.org/10.1111/j.1467-8624.1992.tb01694.x

Sterrett, E. M., Jones, D. J., McKee, L. G., & Kincaid, C. (2011). Supportive non-parental adults and adolescent psychosocial functioning: Using social support as a theoretical framework. *American Journal of Community Psychology*, *48*(3), 284–295. https://doi.org/10.1007/s10464-011-9429-y

Stice, E., Shaw, H., Bohon, C., Marti, C. N., & Rohde, P. (2009). A meta-analytic review of depression prevention programs for children and adolescents: Factors that predict magnitude of intervention effects. *Journal of Consulting and Clinical Psychology*, *77*(3), 486–503. https://doi.org/10.1037/a0015168

Streiner, D. L., & Norman, G. R. (2011). Correction for multiple testing: Is there a resolution? *Chest*, *140*(1), 16–18. https://doi.org/10.1378/chest.11-0523

Strijbosch, E. L. L., Huijs, J. A. M., Stams, G. J. J. M., Wissink, I. B., van der Helm, G. H. P., de Swart, J. J. W., & van der Veen, Z. (2015). The outcome of institutional youth care compared to non-institutional youth care for children of primary school age and early adolescence: A multi-level meta-analysis. *Children and Youth Services Review*, *58*(58), 208–218. https://doi.org/10.1016/j.childyouth.2015.09.018

Sukhodolsky, D. G., Kassinove, H., & Gorman, B. S. (2004). Cognitive-behavioral therapy for anger in children and adolescents: A meta-analysis. *Aggression and Violent Behavior*, *9*(3), 247-269. https://doi.org/10.1016/j.avb.2003.08.005
Sun, X., Updegraff, K. A., McHale, S. M., Hochgraf, A. K., Gallagher, A. M., & Umaña-Taylor, A. J. (2021). Implications of COVID-19 school closures for sibling dynamics among U.S. Latinx children: A prospective, daily diary study. *Developmental Psychology*, *57*(10), 1708–1718. https://doi.org/10.1037/DEV0001196
Sundell, K., & Vinnerljung, B. (2004). Outcomes of family group conferencing in Sweden: A 3-year follow-up. *Child Abuse and Neglect*, *28*(3), 267-287. https://doi.org/10.1016/j.chiabu.2003.09.018
Sztompka, P. (1998). Trust, distrust and two paradoxes of democracy. *European Journal of Social Theory*, *1*(1), 19–32. https://doi.org/10.1177/136843198001001003
Tabachnick, B. G., & Fidell, L. S. (2013). *Using multivariate statistics: Data handling in science and technology* (6th edition).
Tausendfreund, T., Knot-Dickscheit, J., Schulze, G. C., Knorth, E. J., & Grietens, H. (2016). Families in multi-problem situations: Backgrounds, characteristics, and care services. *Child and Youth Services*, *37*(1), 4–22. https://doi.org/10.1080/0145935X.2015.1052133
Tausendfreund, T., Metselaar, J., Conradie, J., de Groot, M. H., Schipaanboord, N., Knot-Dickscheit, J., Grietens, H., & Knorth, E. J. (2015). Self-reported care activities in a home-based intervention programme for families with multiple problems. *Journal of Children's Services*, *10*(1), 29-44. https://doi.org/10.1108/JCS-07-2014-0034
Teal, B. L. (2013). *The effectiveness of Team Decision Making in children's division on child welfare outcomes*. Capella University.
Thurmond, V. A. (2001). The Point of Triangulation. *Journal of Nursing Scholarship*, *33*(3), 253–258. https://doi.org/10.1111/j.1547-5069.2001.00253.x
Tijms, J., Stoop, M. A., & Polleck, J. N. (2018). Bibliotherapeutic book club intervention to promote reading skills and social–emotional competencies in low SES community-based high schools: A randomised controlled trial. *Journal of Research in Reading*, *41*(3), 525-545. https://doi.org/10.1111/1467-9817.12123
Topp, C. W., Østergaard, S. D., Søndergaard, S., & Bech, P. (2015). The WHO-5 well-being index: A systematic review of the literature. *Psychotherapy and Psychosomatics*, *84*(3), 167–176. https://doi.org/10.1159/000376585
Turley, R. N. L., Gamoran, A., McCarty, A. T., & Fish, R. (2017). Reducing children's behavior problems through social capital: A causal assessment. *Social Science Research*, *61*, 206–217. https://doi.org/https://doi.org/10.1016/j.ssresearch.2016.06.015
Ungar, M. (2011). Community resilience for youth and families: Facilitative physical and social capital in contexts of adversity. *Children and Youth Services Review*, *33*(9), 1742–1748. https://doi.org/10.1016/j.childyouth.2011.04.027
Ungar, M., & Liebenberg, L. (2013a). *The Adult Resilience Measure (ARM). User's manual: Research*.
Ungar, M., & Liebenberg, L. (2013b). *The Child and Youth Resilience Measure (CYRM). User's manual: Research*.
Valentijn, P. P., Schepman, S. M., Opheij, W., & Bruijnzeels, M. A. (2013). Understanding integrated care: a comprehensive conceptual framework based on the integrative functions of primary care. *International Journal of Integrated Care*, *13*, e010. http://www.ncbi.nlm.nih.gov/pubmed/23687482%0Ahttp://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=PMC3653278
Valentine, J. C., Leach, S. M., Fowler, A. P., Stojda, D. K., & Macdonald, G. (2019). Families and schools together (FAST) for improving outcomes for children and their families. *Cochrane Database of Systematic Reviews*, *7*. https://doi.org/10.1002/14651858.CD012760.pub2
van Aar, J., Leijten, P., Orobio de Castro, B., & Overbeek, G. (2017). Sustained, fade-out or sleeper effects? A systematic review and meta-analysis of parenting interventions for disruptive child behavior. *Clinical Psychology Review*, *51*, 153–163. https://doi.org/10.1016/j.cpr.2016.11.006
van Dam, L., Bakhuizen, R. E., Schwartz, S. E. O., de Winter, M., Zwaanswijk, M., Wissink, I. B., & Stams, G. J. J. M. (2019). An exploration of youth–parent–mentor relationship dynamics in a youth-initiated mentoring intervention to prevent out-of-home placement. *Youth and Society*, *51*(7), 915–933.
van Dam, L., Blom, D., Kara, E., Assink, M., Stams, G. J. J. M., Schwartz, S. E. O., & Rhodes, J. E. (2020). Youth initiated mentoring: A meta-analytic study of a hybrid approach to youth mentoring. *Journal of Youth and Adolescence*, *5*(2), 219–230. https://doi.org/10.1007/s10964-020-01336-5
van Dam, L., Klein Schaarsberg, R., Wissink, I. B., Zwaanswijk, M., Stams, G. J. J. M., & Schwartz, S. E. O. (2018). *Youth initiated mentoring: A mixed-methods follow-up study among youth at-risk for out-of-home placement*.
van Dam, L., Neels, S., de Winter, M., Branje, S., Wijsbroek, S., Hutschemaekers, G., Dekker, A., Sekreve, A., Zwaanswijk, M., Wissink, I. B., & Stams, G. J. J. M. (2017). Youth initiated mentors: Do they offer an alternative for out-of-home placement in youth care? *British Journal of Social Work*, *47*(6), 1764–1780. https://doi.org/10.1093/bjsw/bcx092
van Dam, L., & Schwartz, S. E. O. (2020). Cultivation of natural mentors to strengthen resiliency in youth: A program theory of youth initiated mentoring (YIM). *Journal of Social Intervention: Theory and Practice*, *29*(1), 3–20. https://doi.org/10.18352/jsi.623
van Dam, L., & Sijbesma, W. (2014). *Rapportage verbindingsteams: Mei t/m augustus 2014*.
van Dam, L., Smit, D., Wildschut, B., Branje, S., Rhodes, J. E., Assink, M., & Stams, G. J. J. M. (2018). Does natural mentoring matter? A multilevel meta-analysis on the association between natural mentoring and youth outcomes. *American Journal of Community Psychology*, *62*(1–2), 203–220. https://doi.org/10.1002/ajcp.12248
van Dam, L., & Verhulst, S. (2016). *De JIM-aanpak. Het alternatief voor uithuisplaatsing van jongeren [The YIM approach. The alternative for the out-of-home placement of youth]*. Boom.

van der Helm, G. H. P., Kuiper, C. H. Z., & Stams, G. J. J. M. (2018). Group climate and treatment motivation in secure residential and forensic youth care from the perspective of self determination theory. *Children and Youth Services Review*, *93*, 339-344. https://doi.org/10.1016/j.childyouth.2018.07.028

van der Put, C., Assink, M., & Stams, G. J. J. M. (2015). *Actuarieel Risicotaxatie Instrument voor Jeugdbescherming (ARIJ): Eindrapport [Actuarial Risk Assessment Tool for Protection of Juveniles: Final report*.

van Loon, A. W. G., Creemers, H. E., Beumer, W. Y., Okorn, A., Vogelaar, S., Saab, N., Miers, A. C., Westenberg, P. M., & Asscher, J. J. (2020). Can schools reduce adolescent psychological stress? A multilevel meta-analysis of the effectiveness of school-based intervention programs. *Journal of Youth and Adolescence*, *49*(6), 1127–1145. https://doi.org/10.1007/s10964-020-01201-5

van Schie, S., & Moerbeek, M. (2014). Re-estimating sample size in cluster randomised trials with active recruitment within clusters. *Statistics in Medicine*, *33*(19), 3253–3268. https://doi.org/10.1002/sim.6172

Vandivere, S., Malm, K. E., Allen, T. J., Williams, S. C., & McKlindon, A. (2017). A randomized controlled trial of Family Finding: A relative search and engagement intervention for youth lingering in foster care. *Evaluation Review*, *41*(6), 542–567. https://doi.org/10.1177/0193841X17689971

Verhulst, F. C., & Van der Ende, J. (n.d.). *Handleiding ASEBA-Vragenlijsten voor leeftijden 6 t/m 18 jaar: CBCL/6-18, YSR en TRF [Manual ASEBA questionnaires for ages 6-18 years: CBCL/6-18, YSR and TRF]*. ASEBA Nederland.

Vial, A., Assink, M., Stams, G. J. J. M., & van der Put, C. (2019). Safety and risk assessment in child welfare: A reliability study using multiple measures. *Journal of Child and Family Studies*. https://doi.org/10.1007/s10826-019-01536-z

Viechtbauer, W. (2010). Conducting meta-analyses in R with the metafor package. *Journal of Statistical Software*, *36*(3), 1–48.

Vinnerljung, B., & Sallnäs, M. (2008). Into adulthood: A follow-up study of 718 young people who were placed in out-of-home care during their teens. *Child and Family Social Work*, *13*(2), 144–155. https://doi.org/10.1111/j.1365-2206.2007.00527.x

Visscher, L., Evenboer, K. E., Jansen, D. E. M. C., Scholte, R. H. J., Knot-Dickscheit, J., Veerman, J. W., Reijneveld, S. A., & van Yperen, T. A. (2018). Identifying practice and program elements of interventions for families with multiple problems: The development of a taxonomy. *Children and Youth Services Review*, *95*, 64–70. https://doi.org/10.1016/j.childyouth.2018.10.030

Visscher, L., Evenboer, K. E., Knot-Dickscheit, J., Veerman, J. W., van Yperen, T. A., Sondeijker, F., Scholte, R. H. J., van Dam, C., Jansen, D. E. M. C., & Reijneveld, S. A. (2017). *Taxonomie voor zware opvoedproblemen en multiprobleemgezinnen [Taxonomy for severe parenting problems and multi-problem families]*.

Visscher, L., Evenboer, K. E., Scholte, R. H. J., van Yperen, T. A., Knot-Dickscheit, J., Jansen, D. E. M. C., & Reijneveld, S. A. (2020). Elucidating care for families with multiple problems in routine practice: Self-registered practice and program elements of practitioners. *Children and Youth Services Review*, *111*, 104856. https://doi.org/10.1016/j.childyouth.2020.104856

Visscher, L., Jansen, D. E. M. C., Scholte, R. H. J., van Yperen, T. A., Evenboer, K. E., & Reijneveld, S. A. (2022). Elements of care that matter: Perspectives of families with multiple problems. *Children and Youth Services Review*, *138*, 106495. https://doi.org/https://doi.org/10.1016/j.childyouth.2022.106495

Wan Mohd Yunus, W. M. A., Kauhanen, L., Sourander, A., Brown, J. S. L., Peltonen, K., Mishina, K., Lempinen, L., Bastola, K., Gilbert, S., & Gyllenberg, D. (2022). Registered psychiatric service use, self-harm and suicides of children and young people aged 0–24 before and during the COVID-19 pandemic: A systematic review. *Child and Adolescent Psychiatry and Mental Health*, *16*(1), 1–13. https://doi.org/10.1186/S13034-022-00452-3/FIGURES/3

Wang, E. W., Lambert, M. C., Johnson, L. E., Boudreau, B., Breidenbach, R., & Baumann, D. (2012). Expediting permanent placement from foster care systems: The role of family group decision-making. *Children and Youth Services Review*, *34*(4), 845-850. https://doi.org/10.1016/j.childyouth.2012.01.015

Weeland, J., Keijsers, L., & Branje, S. (2021). Introduction to the special issue: Parenting and family dynamics in times of the COVID-19 pandemic. *Developmental Psychology*, *57*(10), 1559. https://doi.org/10.1037/DEV0001252

Weigensberg, E. C., Barth, R. P., & Guo, S. (2009). Family group decision making: A propensity score analysis to evaluate child and family services at baseline and after 36-months. *Children and Youth Services Review*, *31*(3), 383-390. https://doi.org/10.1016/j.childyouth.2008.09.001

Weiler, L. M., Keyzers, A., Scafe, M., Anderson, A., & Cavell, T. A. (2020). "My village fell apart": Parents' views on seeking informal mentoring relationships for their children. *Family Relations*, *69*(5), 983–995. https://doi.org/10.1111/fare.12436

Weisz, J. R., Kuppens, S., Eckshtain, D., Ugueto, A. M., Hawley, K. M., & Jensen-Doss, A. (2013). Performance of evidence-based youth psychotherapies compared with usual clinical care a multilevelmeta-analysis. *JAMA Psychiatry*, *70*(7), 750-761. https://doi.org/10.1001/jamapsychiatry.2013.1176

Weisz, J. R., Kuppens, S., Ng, M. Y., Eckshtain, D., Ugueto, A. M., Vaughn-Coaxum, R., Jensen-Doss, A., Hawley, K. M., Krumholz Marchette, L. S., Chu, B. C., Weersing, V. R., & Fordwood, S. R. (2017). What five decades of research tells us about the effects of youth psychological therapy: A multilevel meta-analysis and implications for science and practice. *American Psychologist*, *72*(2), 79–117. https://doi.org/10.1037/a0040360

Weisz, J. R., Sandler, I. N., & Durlak, J. A. (2005). Promoting and protecting youth mental health through evidence-based prevention and treatment. *American Psychologist*, *60*(6), 628 – 648. https://doi.org/10.1037/0003-066X.60.6.628

Weisz, J. R., Ugueto, A. M., Cheron, D. M., & Herren, J. (2013). Evidence-based youth psychotherapy in the mental health ecosystem. *Journal of Clinical Child and Adolescent Psychology*, *42*(2), 274–286. https://doi.org/10.1080/15374416.2013.764824

Westrupp, E. M., Bennett, C., Berkowitz, T., Youssef, G. J., Toumbourou, J. W., Tucker, R., Andrews, F. J., Evans, S., Teague, S. J., Karantzas, G. C., Melvin, G. M., Olsson, C., Macdonald, J. A., Greenwood, C. J., Mikocka-Walus, A., Hutchinson, D., Fuller-Tyszkiewicz, M., Stokes, M. A., Olive, L., … Sciberras, E. (2021). Child, parent, and family mental health and functioning in Australia during COVID-19: comparison to pre-pandemic data. *European Child and Adolescent Psychiatry*, *1*, 1–14. https://doi.org/10.1007/S00787-021-01861-Z/FIGURES/1

WHO. (1998). *Wellbeing measures in primary health care/the Depcare Project*. http://www.euro.who.int/__data/assets/pdf_file/0016/130750/E60246.pdf

Williams, G. C., & Deci, E. L. (1996). Internalization of biopsychosocial values by medical Students: A test of self-determination theory. *Journal of Personality and Social Psychology*, *70*(4), 747–779. https://doi.org/10.1037//0022-3514.70.4.767

Williams, G. C., Grow, V. M., Freedman, Z. R., Ryan, R. M., & Deci, E. L. (1996). Motivational predictors of weight loss and weight-loss maintenance. *Journal of Personality and Social Psychology*, *70*(1), 115–126. https://doi.org/10.1037/0022-3514.70.1.115

Wingrove, T. A., & Weisz, V. (2005). An evaluation of expedited family group conferences. *American Law-Psychology Society Annual Conference*.

Woolley, A. W., Aggarwal, I., & Malone, T. W. (2015). Collective intelligence and group performance. *Current Directions in Psychological Science*, *24*(6), 420–424. https://doi.org/10.1177/0963721415599543

Woolley, A. W., Chabris, C. F., Pentland, A., Hashmi, N., & Malone, T. W. (2010). Evidence for a collective intelligence factor in the performance of human groups. *Science*, *330*(6004), 686–688. https://doi.org/10.1126/science.1193147

World Health Organization. (2016). *Integrated care models: an overview*. https://www.euro.who.int/__data/assets/pdf_file/0005/322475/Integrated-care-models-overview.pdf

Zeegers, M. A. J., Colonnesi, C., Noom, M. J., Polderman, N., & Stams, G. J. J.M. (2020). Remediating child attachment insecurity: Evaluating the Basic Trust Intervention in adoptive families. *Research on Social Work Practice*, *30*(7), 736–749. https://doi.org/10.1177/1049731519863106

Zegers, M. A. M. (2007). *Attachment among Institutionalized Adolescents. Mental Representations, Therapeutic Relationships and Problem Behavior.* Vrije Universiteit.

Zegers, M. A. M., Schuengel, C., van IJzendoorn, M. H., & Janssens, J. M. A. M. (2006). Attachment representations of institutionalized adolescents and their professional caregivers: Predicting the development of therapeutic relationships. *American Journal of Orthopsychiatry*, *76*(3), 325–334. https://doi.org/10.1037/0002-9432.76.3.325

Zimmer-Gembeck, M. J., & Collins, W. A. (2008). Autonomy Development During Adolescence. In *Blackwell Handbook of Adolescence*. https://doi.org/10.1002/9780470756607.ch9

Zimmerman, F. J. (2005). Social and economic determinants of disparities in professional help-seeking for child mental health problems: Evidence from a national sample. *Health Services Research*, *40*(5p1), 1514–1533. https://doi.org/10.1111/J.1475-6773.2005.00411.X

Nederlandse samenvatting

Hoewel psychologische interventies worden beschouwd als de belangrijkste hulpbron om psychische problemen van jongeren te voorkomen of te verminderen (Weisz et al., 2005), zijn niet alle interventies effectief (Howick et al., 2022; Weisz et al., 2017). Vooral voor jongeren met meervoudige psychische problemen (Weisz et al., 2017), zoals jongeren uit gezinnen met meervoudige en complexe problemen, die meerdere problemen op verschillende levensdomeinen ervaren die vaak chronisch en intergenerationeel zijn (Bodden & Deković, 2016; Tausendfreund et al., 2016), ontbreekt het aan *evidence-based* behandelingen. Sociale steun vanuit het informele netwerk (familie, vrienden, etc.) wordt gezien als een belangrijke beschermende factor voor problemen, aangezien het ontvangen van sociale steun samenhangt met welzijn en veerkracht (IJntema et al., 2019; Sarason & Sarason, 2009; Southwick et al., 2006; van Dam, Smit, et al., 2018). Daarom is de verwachting dat behandelingen verbeterd kunnen worden door samen te werken met informele steunnetwerken tijdens de geboden hulpverlening (Sousa & Rodrigues, 2009). Het doel van dit proefschrift was drieledig: 1) inzicht verkrijgen in de effectiviteit van interventies waarin er wordt samengewerkt met het informele netwerk door een overzichtsstudie met verschillende interventietypen uit te voeren; 2) inzicht verkrijgen in de effectiviteit van InVerbinding, een ambulante, systemische behandeling voor gezinnen met meervoudige en complexe problemen waarin wordt samengewerkt met een steunfiguur (*Jouw Ingebrachte Mentor*; JIM) volgens de JIM-aanpak; en 3) kennis te vergaren over de relatie tussen stress en mentale gezondheid tijdens de coronapandemie en de beschermende werking van formele en informele steun in gezinnen met meervoudige en complexe problemen.

Doel 1: De effectiviteit van interventies waarin er wordt samengewerkt met het informele netwerk

Ongeveer één derde van de Nederlandse jongeren ervaart psychische problemen (Boer et al., 2022), en deze jongeren lopen daardoor kans op blijvende problemen tot in hun volwassenheid (zie bijvoorbeeld Brown et al., 1999; Lee et al., 2011; McLaughlin et al., 2012; Simon et al., 2009). Doordat psychologische interventies voor jongeren met psychische problemen niet altijd effectief zijn (Howick et al., 2022; Weisz et al., 2017), is het belangrijk om meer onderzoek te doen naar de effectiviteit van interventies, om zo inzicht te verkrijgen in welke interventies wel effectief zijn en onder welke omstandigheden. Interventies kunnen mogelijk verbeterd worden door hulp door formele en informele steunnetwerken samen te brengen (Sousa & Rodrigues, 2009). Er wordt verwacht dat het samenwerken met het informele netwerk in interventies positieve effecten heeft vanwege twee mechanismen. Ten eerste draagt het samenwerken met het netwerk mogelijk bij aan het vervullen van de basisbehoeften voor zelfbeschikking: autonomie, competentie en verbondenheid (Ryan & Deci, 2000), wat zou leiden tot meer behandelmotivatie en vervolgens betere interventie-effecten (Krause, 1966; van der Helm et al., 2018). Ten tweede wordt verondersteld dat het samenwerken met het netwerk leidt tot meer steun vanuit het netwerk en een betere relatiekwaliteit (zie bijvoorbeeld Ashida et al., 2019; Chan et al., 2013; van Dam et al., 2020), wat weer bijdraagt aan meer welzijn en veerkracht, het dynamisch proces waardoor mensen met hun sociale omgeving in staat zijn zich aan te passen aan stressoren (IJntema et al., 2019; Sarason & Sarason, 2009; Southwick et al., 2006; Ungar, 2011; van Dam, Smit, et al., 2018).

Hoofdstuk 2 bevat een meta-analyse waarin we een overzicht geven van de effectiviteit van interventies voor jongeren waarin wordt samengewerkt met het informele netwerk op basis van 37 studies met 35 onafhankelijke steekproeven van jongeren (N = 712.269) met een leeftijd van 0-26 jaar (M = 7,20 jaar). De resultaten lieten zien dat interventies voor jongeren waarin wordt

samengewerkt met het informele netwerk niet effectiever zijn dan interventies waarin niet wordt samengewerkt. De moderatoranalyses gaven inzicht de omstandigheden waaronder deze interventies *wel* effectief kunnen zijn. Interventies met kenmerken van de JIM-aanpak (waarin jongeren beslisten met wie uit het netwerk wordt samengewerkt en er slechts met één persoon werd samengewerkt) hadden kleine tot middelgrote significante effecten, interventies uitgevoerd in Europa hadden kleine significante effecten, en interventies voor jongeren met psychische problemen hadden middelgrote tot grote significante effecten. Bovendien werden interventie-effecten gemodereerd door dataverzamelingskenmerken (type afname, informant, en of er gecorrigeerd was voor verschillen tussen de behandelcondities voor de start van de behandeling). De bevinding dat interventies met kenmerken van de JIM-aanpak effectief waren, terwijl andere interventietypes dat niet waren, komt overeen met eerdere meta-analyses die aantoonden dat JIM-interventies effectief zijn (Dantzer & Perry, 2022; van Dam et al., 2020). De effectiviteit van interventies voor jongeren met psychische problemen sluit eveneens aan op eerder onderzoek dat laat zien dat interventies het meest effectief zijn voor jongeren met verhoogde problemen (zie bijvoorbeeld Stice et al., 2009; van Loon et al., 2020).

Doel 2: De effectiviteit van InVerbinding voor jongeren in gezinnen met meervoudige en complexe problemen

Vanwege de complexiteit van problemen krijgen jongeren in gezinnen met meervoudige en complexe problemen vaak gefragmenteerde hulp (Ghesquière, 1993; Mehlkopf, 2008; Sousa & Rodrigues, 2009; Tausendfreund et al., 2016). Om fragmentatie te voorkomen, zijn geïntegreerde interventies ontwikkeld (World Health Organization, 2016) met het doel om behandeluitkomsten, kwaliteit van leven en cliënttevredenheid te vergroten (Valentijn et al., 2013). Deze interventies integreren echter vaak alleen formele steunnetwerken (professionele hulp), en niet de informele steunnetwerken (natuurlijke mentoren, familie, vrienden). InVerbinding is een van de weinige interventies waarin zowel de formele als informele netwerken worden geïntegreerd met het doel om de veerkracht van jongeren uit gezinnen met meervoudige en complexe problemen te verbeteren en uithuisplaatsingen te voorkomen. Het multidisciplinaire team bestaat uit hulpverleners vanuit de jeugd- en opvoedhulp, geestelijke gezondheidszorg, verslavingszorg en zorg voor mensen met een licht verstandelijke beperking. Het team werkt volgens de JIM-aanpak samen met een JIM, een steunfiguur vanuit het netwerk van de jongere die gekozen is door de jongere (van Dam & Verhulst, 2016). Op basis van eerder onderzoek naar InVerbinding en andere interventies met soortgelijke kenmerken lijkt InVerbinding veelbelovend (zie bijvoorbeeld Valentijn et al., 2013; van Dam et al., 2017, 2020; van Dam, Klein Schaarsberg, et al., 2018), maar er is nog weinig onderzoek gedaan naar deze behandelvorm.

Hoofdstuk 3 bevat het studieprotocol van het onderzoeksproject *Groeien in persoonlijke omgeving* (GRIP), dat een interview- en quasi-experimentele vragenlijststudie bevat waarmee we de effectiviteit van InVerbinding onderzochten in gezinnen met meervoudige en complexe problemen. In *Hoofdstuk 3* presenteren we de theoretische achtergrond, opzet, methoden, instrumenten en voorgenomen analyses. De resultaten van dit onderzoeksproject bespreken we in *Hoofdstuk 4* en *5*.

Hoofdstuk 4 betreft een interviewstudie waarin onderzocht wordt wat jongeren (n = 15, M = 15,67 jaar oud) en ouders (n = 13) verwachten van een JIM, welke behoeften zij hebben hieromtrent, en in hoeverre JIMs (n = 8) aan die verwachting en behoeften kunnen voldoen. Uit de interviews leerden we dat vrijwel alle deelnemers positief zijn over het samenwerken met een JIM. Net als eerder onderzoek vonden we dat jongeren en ouders een sterke band en vertrouwen het meest

belangrijk vonden in een relatie met een JIM (Schwartz et al., 2017; van Dam & Schwartz, 2020). De match tussen enerzijds de behoeften van jongeren en ouders, en anderzijds wat JIMs de jongeren dachten te bieden, bleek in de meeste gevallen goed. Deze bevindingen suggereren dat de JIM-aanpak een veelbelovende methode is om iemand uit het sociaal netwerk te betrekken die kan bieden wat jongeren uit gezinnen met meervoudige en complexe problemen nodig hebben.

In *Hoofdstuk 5* toetsten we de hypothese dat InVerbinding betere behandeleffecten heeft dan andere behandelingen voor jongeren en ouders uit gezinnen met meervoudige en complexe problemen, door middel van een quasi-experimenteel multicenter design met vier meetmomenten (tot 15 maanden na de start van de behandeling) en drie type informanten: jongeren (n = 102, M = 15,59 jaar oud), ouders (n = 85) en hulpverleners (n = 58 hulpverleners die rapporteerden over n = 107 jongeren). We vonden één significante verbetering over tijd voor de twee behandelcondities gezamenlijk, namelijk een afname in de onveiligheid van kinderen gerapporteerd door hulpverleners. In tegenstelling tot onze verwachting was InVerbinding slechts op twee uitkomsten effectiever dan de controleconditie, en enkel op basis van ouderrapportages. Ouders uit de InVerbinding-conditie rapporteerden verbeteringen in emotionele en gedragsproblemen van hun kinderen en hun eigen positieve opvoedgedrag, terwijl ouders in de controleconditie deze verbeteringen niet rapporteerden. InVerbinding heeft dus in beperkte mate positieve effecten op het functioneren van gezinnen met meervoudige en complexe problemen. Het gebrek aan overtuigend bewijs voor de effectiviteit van InVerbinding ten opzichte van de controleconditie zou het gevolg kunnen zijn van de precieze inhoud van de geboden behandeling. Door rapportages van hulpverleners weten we dat de twee behandelcondities evenveel technieken gebruikten om het informele netwerk te activeren, en dat de behandeltrouw in de InVerbinding-conditie vrij laag was. Dit suggereert dat InVerbinding mogelijk meer leek op de behandeling in de controleconditie dan verwacht en bedoeld was.

Doel 3: De relatie tussen pandemiestress, sociale steun en mentale gezondheid

Sociale steun is een belangrijke beschermende factor voor de mentale gezondheid. Door de maatregelen die opgelegd zijn tijdens de coronapandemie hebben jongeren en hun ouders echter minder kansen gehad om steun uit hun formele en informele netwerken te krijgen, terwijl de kans op psychische problemen vergroot was (Achterberg et al., 2021; Brooks et al., 2020; Jones et al., 2021). Vooral kwetsbare groepen hebben last gehad van psychische problemen (Kim & Laurence, 2020; Weeland et al., 2021), maar er was nog geen onderzoek verricht in hoog-risicogroepen, zoals gezinnen met meervoudige en complexe problemen.

In *Hoofdstuk 6* onderzochten we de relatie tussen ervaren stress als gevolg van de pandemie (d.w.z. pandemiestress), sociale steun en mentale gezondheid van jongeren (n = 92, M = 16,00 jaar) en ouders (n = 78) uit gezinnen met meervoudige en complexe problemen. De resultaten lieten zien dat de coronapandemie door sommige jongeren als stressvol werd ervaren. Jongeren die pandemiestress ervaarden, hadden een verhoogd risico op psychische problemen tijdens de pandemie, vooral als ze geen of slecht beoordeelde formele hulp (behandeling) kregen. De mentale gezondheid van ouders werd echter minimaal beïnvloed door pandemiestress, wat duidt op kracht en flexibiliteit. Jongeren en ouders die tijdens de pandemie steun hebben ervaren uit hun informele en/of formele netwerk, rapporteerden hogere niveaus van mentale gezondheid, wat het belang aantoont van het bieden van hulp en steun aan mensen met psychische problemen tijdens stressvolle situaties zoals een pandemie. De bevindingen komen overeen met eerder onderzoek dat wijst op het belang van de therapeutische alliantie (Flückiger

et al., 2020; Horvath, 2005; Roest et al., 2022) en het potentieel van natuurlijk mentorschap (Schwartz et al., 2013; van Dam et al., 2020; van Dam, Smit, et al., 2018) voor het vergroten van de mentale gezondheid van jongeren, ook ten tijde van een pandemie (Koning et al., 2022).

Discussie

Hoofdstuk 7 sluit dit proefschrift af met een samenvatting en discussie. Het onderzoek in dit proefschrift geeft belangrijke informatie over de effectiviteit van behandelingen waarin het informele netwerk wordt betrokken, en – specifiek voor gezinnen met meervoudige en complexe problemen – over de effectiviteit van InVerbinding, en het belang van steun tijdens de pandemie. Onze bevindingen toonden aan dat het activeren van het informele netwerk in behandelingen effectief kan zijn onder bepaalde omstandigheden. Interventies met kenmerken van de JIM-aanpak (waarin jongeren konden kiezen wie betrokken werd en slechts één iemand werd betrokken) bleken als enige interventietype effectief. Bovendien waren de effecten het grootst voor interventies die gericht waren op jongeren met psychische problemen. In onze quasi-experimentele studie naar InVerbinding vonden we enkele positieve effecten voor gezinnen met meervoudige en complexe problemen, maar alleen op basis van ouderrapportages. Echter, aangezien gezinnen positief waren over de JIM-aanpak en de samenwerking met een JIM, en InVerbinding een aantal positieve effecten liet zien, kan geconcludeerd worden dat deze behandeling een waardevolle behandeling kan zijn voor jongeren uit gezinnen met meervoudige en complexe problemen, in elk geval totdat er effectievere behandelingen of behandeltechnieken worden ontwikkeld die bestaande behandelingen kunnen verbeteren of vervangen. Tenslotte bleek dat professionele hulp en de steun van een natuurlijke mentor beschermende factoren zijn voor de mentale gezondheid van jongeren en ouders met meervoudige en complexe problemen tijdens de coronapandemie. Deze bevindingen illustreren dat ondanks de complexe uitdagingen die kwetsbare jongeren (zoals jongeren met psychische problemen en jongeren uit gezinnen met meervoudige en complexe problemen) ervaren, interventies met kenmerken van de JIM-aanpak in het algemeen en InVerbinding specifiek even goed of zelfs beter zijn dan andere interventies in het ondersteunen van jongeren en het verminderen van hun problemen.

Curriculum Vitae

Natasha Koper was born in 1993 in Leiderdorp. She received her bachelor degree in Pedagogical Sciences from Utrecht University in 2015, after which she obtained her research master degree in Development and Socialization in Childhood and Adolescence (cum laude) in 2017.

In 2017, Natasha started working as a research assistant and teacher at the Department of Pedagogy of Utrecht University. In 2018, she started her PhD in the same department. Her PhD was a collaboration with the Department of Child Development of University of Amsterdam and the Youth Initiated Mentoring (YIM) Foundation, the Netherlands. For most of her PhD, Natasha was involved in teaching in the bachelor and master programs of Pedagogical Sciences at Utrecht University. From 2021 onward, she focused solely on writing her dissertation.

Currently, Natasha is working as a postdoctoral researcher at the department of Interdisciplinary Social Science of Utrecht University, where she studies the complex link between poverty and mental well-being in youth from a systems perspective.

List of Publications

Branje, S., & **Koper, N.** (2018). Erikson's stages of psychosocial development. In M.H. Bornstein, M.E. Arterberry, K.L. Fingerman, & J.E. Lansford (Eds), *The SAGE Encyclopedia of Lifespan Human Development*. SAGE.

Hillekens, J., Buist, K.L., Horváth, L.O., **Koper, N.**, Ólafsdóttir, J., Karkdijk, E., & Balázs, J. (2020). Parent‐early adolescent relationship quality and problem behavior in Hungary, the Netherlands, India, and Iceland. *Scandinavian Journal of Psychology*, *61*(6), 763-774.

Koper, N., Boin, Y., Creemers, H.E., van Dam, L., Stams, G.J.J.M.,& Branje, S. (2022). *Effectiveness of a multidisciplinary treatment with youth-initiated mentoring for youth with mental health needs from multi-problem families.* Manuscript in preparation.

Koper, N., Creemers, H.E., Branje, S., Stams, G.J.J.M., & van Dam, L. (2020). Effectiveness and working mechanisms of the InConnection approach in multi-problem families: Study protocol of a mixed-methods study. *BMC Health Services Research*, *20*(1), 1-16.

Koper, N., Creemers, H.E., van Dam, L., Stams, G.J.J.M., & Branje, S. (2021). Needs of youth and parents from multi-problem families in the search for youth-initiated mentors. *Youth & Society*, *0*(0), 1-27.

Koper, N., Creemers, H.E., van Dam, L., Stams, G.J.J.M., & Branje, S. (2022). Resilience, well-being and informal and formal support in multi-problem families during the Covid-19 pandemic. *Child and Adolescent Psychiatry and Mental Health*, *16*, Article 103.

Koper, N., van der Heijden, R.M., Donk, S., T. Kieu, Creemers, H.E., van Dam, L., Branje, S., & Stams, G.J.J.M. (2022). *The effectiveness of interventions for youth that activate the social network: A meta-analytic study.* Manuscript in preparation.

van Dam, L., ter Beek, E., & **Koper, N.** (2020). Youth-Initiated Mentoring: Promoting and improving the social networks of youth with complex needs in the Netherlands. In O. Prieto-Flores & J. Feu (Eds), *Mentoring Children and Young People for Social Inclusion*. Routledge.

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Door alle samenwerkingen in mijn PhD-traject heb ik veel collega's gehad: bij Stichting JIM, de UvA en de UU. Collega's zijn natuurlijk mensen met wie je samen werkt, maar volgens Wikipedia zijn collega's vooral personen die verenigd zijn om een gezamenlijk doel te bereiken. En zo heeft het voor mij gevoeld: we werkten allemaal om jongeren zo gezond en gelukkig mogelijk op te laten groeien. Ontelbaar veel collega's hebben mij in mijn traject geholpen om mijn kleine stukje van de puzzel bij te kunnen dragen. Ik wil een aantal collega's in het bijzonder bedanken vanwege hun enorme bijdrage.

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Door de coronapandemie werd alles anders en vaak niet beter, maar het heeft ook een paar goede bijeffecten gehad. In 2020 kozen **Amanda** en ik elkaar als *accountability partners*. Sindsdien wandelen we bijna elke week samen, en of we nou echt verantwoording bij elkaar afleggen weet ik niet, maar leuk en fijn is het in elk geval altijd! Ik ben blij dat we ook nog na het afronden van onze proefschriften blijven wandelen, want jouw enthousiasme, energie en relaxte houding zorgen elke keer weer voor een oppepper!

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Bij Stichting JIM zeggen ze ‘met je eigen wortels groei je het mooist’ om uit te drukken hoe belangrijk familie is. Want bij familie ben je thuis en voel je je vertrouwd. En hoewel we niet altijd op één lijn liggen en geregeld discussiëren (of ruziën), zou ik me niet voor kunnen stellen hoe ik hier had kunnen komen zonder de steun van mijn ouders. Lieve **papa** en **mama**, jullie hebben mij gemaakt en gevormd: jullie hebben mij zelfvertrouwen gegeven en gemotiveerd om mijn eigen pad te kiezen. Mijn lieve broertjes **Xander** en **Storm**, ik vind het zo fijn dat we in de afgelopen jaren vaker de ervaringen van samen opgroeien hebben gedeeld. En wat vind ik het een eer dat jullie mijn getuigen willen zijn bij mijn geregistreerd partnerschap en mij ‘weg willen geven’. Jullie maken me een gelukkige zus! Lieve **Opa** en **Oma**, jullie deur heeft altijd voor mij en de andere kleinkinderen opengestaan, en daarvoor ben ik jullie dankbaar. Opa, ik had je zo graag ook op deze dag erbij gehad, maar gelukkig voel ik je aanwezigheid, en weet ik dat je beretrots op me zou zijn geweest.

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Better together

SUPPORTING YOUTH WITH MENTAL HEALTH NEEDS BY UTILIZING THE SOCIAL NETWORK

Although youth (mental health) care in general has beneficial effects, not all interventions are effective, especially for youth with multiple problems. Thus, interventions or the conditions under which they are provided should be improved. One of the avenues to achieve this is by making use of the social network, because social support offered by extended family and others outside the family (e.g., friends, peers and neighbors) is associated with resilience and positive youth development. The first aim of this dissertation, therefore, was to provide insight into the effectiveness of youth care programs that utilize the social network by creating an overview of the effectiveness of existing programs. Our second aim was to zoom in on the effectiveness of one program specifically, which is developed for youth with mental health needs in multi-problem families (i.e., InConnection). Since the Covid-19 pandemic potentially impacted families' mental health as well as their possibilities for receiving support, our third and final aim was to better understand the links between pandemic-related stress, informal and formal support and mental health in multi-problem families.