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Sonderman, J.

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Residential group climate and effectiveness of treatment for girls in (secure-) residential youth care



Juliette Sonderman

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Residential group climate and effectiveness of treatment for girls in (secure-) residential youth care

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DE TROOSTZOEKERS

Zoals geluk gevaarlijk is voor wie er spaarzaam mee omgaat,
Voor wie niet-leven een koud kunstje wordt, voor wie hier binnenkomt
En twijfelt aan alles wat mooi is, twijfelt aan zijn plek in de wereld,
Voor wie eindeloos teert op het verlangen naar beterschap,

Voor wie niet breekbaar wil zijn net zomin als populierensterk
En wie mij raakt geef ik de wind, voor wie met een bevel tot
Omhakken in de hand rillerig plaatsneemt of juist wil opbloeien
En zie mij, voor wie alleen wil zijn maar het niet langer meer kan.

Zoals geluk gevaarlijk is voor hen die niet kunnen delen,
Voor wie wel glimlacht maar de snik onzichtbaar en hoog in
De keel heeft, voor wie alles verloor waarvan hij hield, voor wie
De koek uit de mond sparen en altijd andermans honger stillen,

Voor wie weerloos omgaat met de dingen, voor wie iedere
Avond zichzelf in het donker van zijn kop injaagt, voor wie de hoop
Heeft opgegeven als een zieke kameraad, voor wie van alles denkt maar te weinig uitspreekt,
voor wie moe is maar niet meer

In slaap komt en eeuwig ligt te woelen, voor hen die willen leunen,
Voor wie onder de mensen wil zijn als onder een warme deken,
Voor wie niet weet wie hij is en altijd onzeker, we zijn de leegte,
Zeggen we, we zijn de leegte en weten niet hoe ons te vullen.

Zoals geluk gevaarlijk is voor de roekeloze, voor wie verstrikt zit
In eigen-ik, voor wie weerloosheid weg-eet, koopt, slikt, voor wie
Zichzelf bezeert omdat een ander het niet meer doet, voor wie
Stemmen hoort maar zelden een lief woord, voor wie bang is om

Verlaten te worden en in een leeg huis thuis te komen, voor wie zélf
Uit voorzorg iedereen verlaat, voor wie weet dat het hart op vele manieren kan breken en
vergeet dat het ook op vele manieren
Weer kan helen, voor wie en voor iedereen is hier de plek

Marieke Lucas Rijneveld(2022) De Troostzoekers, *Komijnsplitsers*. P. 11

…And what is it to work with love? It is to weave the cloth with threads drawn from your heart, even as if your beloved were to wear that cloth. It is to build a house with affection, even as if your beloved were to dwell in that house…

Gibran, Kahlil (1927) The Prophet, p. 21

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Chapter 1

General introduction

The girls at the centre of this thesis were often damaged by people who should have loved and protected them. In their current relationships these traumata lead to fresh bruises, outside and inside. Nan Goldin's photograph 'a heart-shaped bruise' from the series 'The Ballad of Sexual Dependency' on the cover, heartbreakingly depicted the following quote from one of the interviews with the girls who are the subject of this thesis: 'It is illegal to hit me, he does it anyway. That he takes such a risk shows that he loves me'.

Introduction

Some children and youth grow up outside their own families, in foster care, child psychiatric clinics or in residential youth care (RYC). A subgroup is -mostly involuntary- placed in *secure* forms of residential youth care (SRYC). These are youth with severe behavioural and or psychiatric problems (Anckarsäter et al., 2007; Colins et al., 2010; Krabbendam, 2015; Leloux-Opmeer, 2016). In the Netherlands SRYC provides intensive 24-hour care and treatment for complex problems (Van der Helm et al., 2018). Secure residential youth care differs from open residential youth care in that the young people staying there cannot go outside without permission from authorities, as in a youth prison. In both situations there is a judge who decides on the stay. The difference is that in case of admission to an SRYC facility, there is no criminal offence that was the reason for the confinement. And in SRYC opposed to youth prison the duration of the stay is less predictable. Dutch law (Jeugdwet, art. 6.3.1) says that judges may impose admission if serious growing-up or parenting problems that seriously impede the youth's development toward adulthood, and the admission and residence are necessary to prevent the youth from withdrawing from care or from being withheld from such youth care by others. Unlike the legal procedures in criminal cases, when placed in SRYC, the placement can be extended by the judge during the stay. Thus, youths do not know upon entry when they will be allowed out again.

Residential treatment aims (including SRYC) are to learn to get along with others, (re)start schooling, develop prosocial attitudes, reduce internalising and externalising problem behaviour, delinquency, substance use, and prevent revictimization (Addink & Van der Veldt, 2022; Van der Helm et al., 2018; Vermaes & Nijhof, 2014).

To meet these aims residential youth care (including SRYC) in the Netherlands is delivered in living groups of typically 8–10 adolescents, where adolescents are supervised by two or more trained group social workers. Youth receive schooling also within the RYC. Individual treatment plans are made for the youth, and psychologists, psychiatrists, pedagogues, and

therapists also provide individual treatment, group therapy or family therapy. In the Netherlands in 2018, when most of the empirical data for this dissertation were gathered, 12410 youth received residential youthcare of whom 1065 were placed in one of than twelve Secure Residential Youth Care (SRYC) facilities (Harder et al., 2020). Of these adolescents 44% were female and 56% male (Jeugdzorg Nederland, 2018). SRYC thus aims to aid adolescents with complex and severe problems who mostly live in adverse family circumstances. They are admitted to SRYC because they need to be protected from themselves or dangers in the outside world, and it is the multitude of problems of these young people that justifies this most intensive form of youth care available (Andrews & Bonta, 2010; Assink et al., 2019; Harder, et al., 2015; Witt, et al., 2019). Although both genders are well represented in the population that SRYC inhabits, there are differences in problems and needs between boys and girls. To our knowledge very little research has been done on any possible gender differences in needs that impede or support the aims of the stay, which is the subject of this thesis. Therefore, the focus will be primarily on possible gender-specific needs of girls.

Girls in (secure) residential youth care: complex trauma and often PTSD

A solid body of research shows that girls in (S)RYC have even more severe and complicated problems than admitted boys. Abram, Teplin, McClelland, & Dulcan (2003) took a diagnostic interview from over 1,800 youth in a juvenile prison in the USA and found that nearly two thirds of males and nearly three quarters of females met diagnostic criteria for one or more psychiatric disorders. Van Damme, Colins & VanderPlassche (2014) found in a sample of 440 Belgian detained youth that girls had higher rates for most psychiatric disorders and lower levels of self-esteem than boys did. Girls were subject to more adverse childhood experiences (Kroneman, 2009; Lanctôt, Reid, & Laurier, 2020; Nijhof, 2011) and more psychopathology (Van der Molen et al., 2013). The severity of problems of girls should not be surprising when we consider that incarcerated girls generally have a childhood in which Adverse Childhood Experiences (ACEs) and trauma have accumulated to an even greater extent than in the childhoods of their male counterparts (Baglivo et al., 2014; Leenarts, 2013). Baglivo and colleagues (2014) examined the prevalence of ACEs in a cohort of 64,329 formerly detained youth in Florida to conclude that females having a higher prevalence rate of each ACE for all 10 ACE indicators (emotional abuse, physical abuse, sexual abuse, emotional neglect, physical neglect, violent treatment towards mother, household substance abuse, household mental illness, parental separation, or divorce, and having an incarcerated household member) measured. The research on the effects of ACEs shows that there is a dose response

relationship; the more ACEs the more adverse the effects (Anda, et al., 2010; Petruccelli, et al., 2019; Davis& Berman, 2019). High ACE scores have been linked to negative emotionality (Baglivio et al., 2018) such as depression and anxiety, low self-worth, lack of trust, impulsivity, and aggression. Also, it is associated with several sexually risky behaviours and revictimization (Petruccelli, et al, 2019) such as having 50 or more sexual partners, intercourse before age 15 (Hillis, et al., 2001), and becoming pregnant as a teenager (Hillis et al., 2004). Also, substance abuse, criminal activities (Baglivio et al., 2014) and violence are frequent. Trauma and PTSD also lead to alexithymia (Honkalampi et al., 2020), dissociation, nightmares, and dissociation (Lyssenko et al., 2018).

Kerig & Becker (2012) offer a relevant explanatory model for the gendered relations of trauma to criminal behaviour of girls. They describe five patterns. First, they outline the possibility of girls to put on a cold and dismissive mask as a *defence against the outside world*, after which, if there is no empathic response, the girls themselves become less and less empathic. The second way is mainly seen when girls are traumatised in relationships. Kerig & Becker mention the *emotional processes* whereby the traumata lead to agitation and oppositional behaviour leading girls to become emotionally numb. The third way describes the *cognitive processes* of guilt and shame that are especially important in cases of sexual abuse, and these thoughts then lead to unpleasant feelings and aggressive behaviour. The fourth gendered way from trauma to crime is through *problematic attachment*. After abuse or neglect, hostile internal working models for relationships emerge, which then create new dysfunctional relationships. As a final route to crime, Kerig & Becker describe the transitional effects of the above routes. Trauma leads to risky behaviour that creates contact with the law, which leads to stigma and alienation from society and bonding with deviant others. The gendered vicious circle from trauma to crime is then complete and this model also shows how crime trauma and victimization are related for girls. In addition to empirical scientists, psychotherapeutically active scholars and practitioners also describe similar processes in response to traumatization See for therapeutical work the work of Bessel Van der Kolk (2014), Deb Dana & Stephen Porges (2018) , Babette Rothchild (2021), Szalavitz & Perry (2010), Francine Shapiro (2007) or Gabor Mathé (2019).

Girls in (secure) residential youth care: sexual abuse

To explain the heightened complexity of problems girls in RYC it is notable that girls are more often and earlier victims of sexual abuse (Assink et al., 2019; Baglivio et al., 2014; Kerig & Schindler, 2013) compared to boys. The difference in the amount of sexual abuse in

the history of girls as compared to boys seems to be a robust finding (Assink et al., 2019; Miller et al., 2012; Leve, Chamberlain, & Kim, 2015). It fits in to the above model of Kerig & Becker that with sexual abuse in their history, girls are found to be more vulnerable to abusive relationships later in life (Buss & Duntley, 2008). And on what Kerig & Becker call 'transactional processes', Van der Kolk (2014), says in his standard work on trauma that after sexual abuse women 're-enact' earlier traumatic experiences and are therefore prone to revictimization. The sexual abuse consequences are disastrous for their entire further development during the life course (Selvius et al., 2018). They disrupt personality development (Lanctôt, 2020; Van den Bosch, 2003; Van der Molen et al., 2013), sexual development (Postma, et al., 2013), and the social-emotional and cognitive development. It deregulates the stress system (Van der Kolk, 2014) and disrupts social and familial relations (Cole, et al., 2016; Farley et al., 2004; Garg, et al., 2020). Eating disorders, self-harming and suicidal behaviour are often encountered (Rabinovitch, et al., 2015). The risk of revictimization is high (Bright et al., 2011; DeHart & Moran, 2015; Scoglio et al., 2019). The risk of delinquent behaviour after staying in (S)RYC is also high (Baglivio et al., 2018). And there is intergenerational transfer of problems (Haselschwerdt et al., 2019; Leve et al., 2015).

Approximately 30% of the girls were placed in Dutch SRYC due to concerns about commercial sexual exploitation (CSE) (Dirkse et al., 2018). In the case of CSE, the vulnerabilities accumulate (Barnert et al., 2020; Franchino-Olsen, 2019; Palines et al., 2020). The severity of the problems mentioned above and low motivation for treatment is the legitimization for the involuntary admission to SRYC (Andrews & Bonta, 2010; Assink et al., 2019; Harder, et al., 2015; Witt et al., 2019). The relationship between sexual abuse, trauma and imprisonment is not unique to the Netherlands. For example, in the US the path from trauma to prison is being debated (Baumle 2018; DeHart, 2018), in Belgium Van Damme and colleagues (2015) relate trauma to detention and in the UK Bartlett & Hollins (2018) discuss the same pathways.

Girls in (secure) residential youth care: poor outcomes

After their stay in RYC girls present more problematic social functioning in adulthood. The combination of adverse childhood experiences, trauma, antisocial behaviours, and mental health problems results in a negative cycle that increases the risk for negative development and revictimization into adulthood. Recent research shows a prolonged stay in secure care to be associated with loss of schooling and later participation in society (Ringbom et al., 2022). Pajer (1998) found in a review including twenty studies that girls as adults manifested

increased mortality rates, a 10- to 40-fold increase in the rate of criminality, substantial rates of psychiatric morbidity, dysfunctional and often violent relationships, and high rates of multiple service utilization. A similar a similar picture is depicted by Krabbendam (2015) who followed up 229 detained girls 2 to 3 years after detention. She described that the girls in the sample displayed aggressive acts more often towards themselves; inward aggression and self-harming behaviour and that this does not fade away five years later. She also reported high mortality rates and pregnancies at a young age.

Effectiveness of RYC

Because (compulsory) admission to residential care is so drastic, it is essential to ascertain that it effectively gets the admitted youth back on track. In the last decades there is debate about the quality (Jeugdzorg Nederland, 2019) and effectiveness of (secure-) residential youth care. Addink and Van der Veldt (2022) reported on ten years of Routine Outcome Monitoring of SRYC: 'The research program provides limited insight into the effectiveness of SRYC. The items were often not being fully completed or were completed differently by institutions. Follow up data are only available to a limited extent (p40), it is mainly exploratory and qualitative research as by Sondeijker and colleagues (2020). In terms of reducing the problems of girls admitted in SRYC, Dirkse and colleagues (2018) studied the reduction of problems using the Child Behaviour Checklist (CBCL). Over 46 percent of the 89 adolescents showed a decrease in problems, in 31.5 percent there was an increase in problems and in over 22 percent of the youth, no difference emerged.

Meta-analyses on the effect of SRYC are not available. Therefore, we also use studies on effectiveness of RYC in general. From three major meta-analyses into the effects of RYC, the impression emerges that the effectiveness of RYC compared to other forms of care, is found to be at best not very high (de Swart, 2012), questionable (Strijbosch, 2015), or less effective compared to treatment foster care (Gutterswijk, et al., 2020).

First, De Swart and colleagues (2012) compared in a meta-analysis 27 studies on residential youth care of which 12 studies involved incarceration. This study found that institutional evidence-based treatment (EBT) versus institutional care as usual (CAU). CAU is regular group care offering daily care and structure in a (psychiatric) living group setting. The study yielded a significant small- to-medium effect (Cohens d= .34). Seven of the 27 included studies in this study compared institutional EBT with the same method in non-institutional care. Results indicated that residential care can be equally effective as non-institutional care.

The researchers concluded that it is important to provide youth with EBT during their stay in the institution. Furthermore, in this study no significant effect of secure versus open living groups was found, nor were effect differences found between genders.

Second, Strijbosch and colleagues (2015) conducted a meta-analysis of nineteen studies where EBT in residential care was compared to CAU in residential youth care and EBT and CAU in non-institutional care (mostly foster care). Children receiving non-institutional CAU had slightly better outcomes than children in institutional CAU. No differences were found between institutional and non-institutional care when institutional treatment was evidence-based. Only two of the studies in this analysis involved secure groups which meant that no effect of incarceration could be discerned.

The researchers suggest as a possible explanation for this finding that girls in residential care compared to girls in foster care tend to exhibit more severe and more externalising problems and hence can make more progress in residential care.

Third Gutterswijk and colleagues (2020) performed a multilevel meta-analysis on 24 studies of which 11 were included in at least one of the earlier mentioned studies (De Swart et al., 2012; Strijbosch et al., 2015). The objective of Gutterswijk and colleagues (2020) was to test the effect of RYC compared to foster care and home-based care. They found a small statistically significant overall effect (d= 0.21), which indicated that non-residential youth care was slightly more effective than residential youth care. The researchers concluded that based on these findings (TFCO) foster care should be the first option when out of home placement is indicated. However, the analysis did not address the previously found to be distinctive dimension of EBT. Therefore, we think this conclusion may possibly be premature.

All things considered, it seems wise, when an accumulation of problems merits out-of-home placement in an RYC, to focus primarily on what is needed in addition to the daily care and structure for the admitted youth to prosper and grow. And since the mentioned complexity of problems exposed by girls, especially girls could possibly benefit most from rising quality of RYC.

Insight into factors that influence effectiveness of treatment in RYC is growing. Leipoldt and colleagues (2019) conducted a systematic review on what they define as ‘therapeutic residential youth care’ (TRC), to be distinguished from other types of residential care that serve other primary purposes, such as detention and basic care. They included 36 studies in

the review and found effect sizes that ranged from small to large and varied between and within studies. Most associations were found between social climate and positive outcomes. The most mentioned social climate constructs were an open climate, support, and autonomy. The constructs used to describe a positive residential group climate can be traced back to the basic psychological needs of autonomy, relatedness and competence as defined in the Self Determination theory by Deci & Ryan (Van der Helm et al., 2018). The lack of autonomy support is often discussed as a threat to the social climate in RYC. Rules and regulations are mostly restrictive (autonomy) and most certainly in SRYC all contacts with peers (relatedness) are supervised by staff (De Valk et al., 2016); the use of too much repression (autonomy) can reduce the effectivity (De Valk et al., 2017), especially prolonged use of separation units, often in case of self-harm or suicidal behaviour. Involving the families (relatedness) of young people can promote impact (Simons et al., 2019) and a positive work-relationship (relatedness) with group social workers is essential (Roest et al., 2016). The organizational culture must support a social climate (Ainsworth & Fulcher, 2006; Leipoldt, 2019; Neimeijer, 2021). A positive social climate is found to be a transactional process (Souverein et al., 2013) that must constantly be evaluated and recreated based on combining the perspectives of residents, staff, and external perspectives. A positive social climate is probably a prerequisite for effectivity of RYC. A positive living and working environment is also one of the seven fundamental requirements in the SRYC adopted by the Dutch Youth Care Sector Association (Jeugdzorg Nederland, 2019). However, our knowledge about causal links and 'what works for whom' tailoring social climate to youth characteristics -including gender- requires future attention to enhance positive results.

Dissertation outline

There is a need to expand knowledge about how the social climate for girls in RYC influences its effectiveness. Evidence points to a gender related perception of social climate in RYC by girls and of staff that work with girls in residential living groups. This dissertation seeks to contribute to the extension of the understanding of the gender-related needs in social climate of girls in residential youth care and to provide means to improve gender responsive care in RYC. The central research question is:

What do girls in residential youth care need in the pedagogical environment of the living group to stimulate their development and to promote the achievement of treatment goals?

Chapter 2 examines whether there are differences in the perception of the social climate in Dutch RYC between boys and girls.

In *Chapter 3*, a questionnaire will be constructed and validated to assess the quality of peer relationships between adolescents in community settings. Peer relationships are part of the perception of the social living climate in RYC.

Chapter 4 describes a study at a secure residential living group consisting of girls who have been admitted there because of (commercial) sexual exploitation. In this chapter the quality of the social climate and the relationship with treatment outcomes are examined. In addition, a counselling program aimed at the improvement of mutual peer relations between the girls is evaluated. A time series design is combined with observational data.

In *Chapter 5* the questionnaire we constructed in *Chapter 3* (the PIRY) will be used -amongst other instruments- to investigate what the mixing of genders at a residential group in SRYC means for the safety of the girls who are admitted there because of (commercial) sexual abuse. A time series design is used.

In *Chapter 6* we present the qualitive counterpart of the study in *Chapter 5* that reflects on the meaning of the findings.

The concluding *Chapter 7* of this dissertation summarizes and discusses the results of the five consecutive studies and provides implications for practice and directions for further research.

Table 1.1 *Overview Chapters*

Chapter	Type of study	Type of setting	Research questions
Chapter 2	Self-report Questionnaires	Youth prison, secure residential youth care and open residential youth care (n=344)	Do boys and girls in different forms of RYC differ in how they experience the residential group climate?
Chapter 3	Construction and validation of a self-report questionnaire: The PIRY	Secure residential youth care and open residential youth care (n=345)	How to measure the quality of relationships between adolescents in groups in RYC using a self-report questionnaire
Chapter 4	Mixed methods: case-based time series, observations, and interviews	Secure residential youth care group for girl victims of (commercial-) sexual exploitation (n=9)	How does residential group climate affect treatment results? And can a group counselling program promote positive peer interactions?
Chapter 5	Case based time series	Secure residential youth care group for girl victims of (commercial-) sexual exploitation combined with boys (n=11)	Is mixing genders as a means of normalization in a secure youth care group safe for girl victims of (commercial) sexual exploitation? And can the adolescents in this group make progress in meeting treatment goals?
Chapter 6	Qualitative counterpart of Chapter 5, study using interviews observations and file study	Secure residential youth care group for girl victims of (commercial-) sexual exploitation combined with boys (n=11)	How do the adolescents perceive the residential group climate and how is their perception related to placing boys and girls together?

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Chapter 2

Differences between boys and girls in perceived group climate

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Abstract

The aim of the present study was to examine differences in perceived living group climate between boys and girls in a sample of 344 youth (68.6% male, M age = 16, SD = 1.58) receiving residential youth care in the Netherlands. Participants filled out self-report measures on living group climate. Results of multilevel regression models indicated that girls in non-correctional facilities experienced living group climate most positively, and girls in correctional facilities experienced living group climate most negatively compared to girls and boys in non-correctional facilities. We conclude that residential treatment settings should adapt gender-responsive approaches to address specific needs of girls, specifically in secure residential care. Future studies should focus on specific needs of girls to advance knowledge on how they can benefit optimally from their stay in residential care to facilitate gender-specific programming in residential youth care.

Introduction

Adolescents with severe behavioural problems or who commit crimes are treated in (secure) residential youth care facilities. In general, their problems are more complex and severe compared to youth in non-residential facilities (Leloux-Opmeer, Kuiper, Swaab, & Scholte, 2016; Ter Beek, Van der Rijken, Kuiper, Hendriks, & Stams, 2018; Vermaes & Nijhof, 2014). Residential care and treatment in the Netherlands are delivered in living groups of typically 8–10 adolescents, where adolescents are supervised by two or more trained group workers. In correctional facilities, rules and regulations are mostly restrictive, and contact with peers is supervised by staff (De Valk, Kuiper, Van der Helm, Maas, & Stams, 2016).

In the Netherlands in the period 2010-20121, it is estimated that 90 per 10.000 minors were placed out of their homes each year, ca. 45,000 in total. Over the same period, the lowest number of young people in Europe were placed out of their homes in Italy - 38 per 10,000 minors - while the highest numbers were to be found in Denmark 120 per 10,000 minors. This means that the Dutch figures are slightly above the European average of the Netherlands (Harder, Knorth & Kuiper, 2020, p. 16). In the year 20132, 11,540 of these children and adolescents received residential youth care (Dutch Central Bureau of Statistics, 2020). Most youths are likely to be referred to open (non-correctional) residential youth care facilities, whereas many girls as boys live. Of this group (in 2013) 1,818 adolescents (Jeugdzorg Nederland, 2017) between 12 and 18 years of age have been placed in one of twelve secure (non-correctional) youth care facilities (called YouthcarePlus) to protect them from others who pose a threat to their development, to prevent them from self-harm or refusal of necessary care, but most of all to provide intensive 24-hour care and effective treatment for complex problems (Van der Helm, Kuiper, & Stams, 2018). There is always a judicial authorization for the placement. Of these adolescents in YouthcarePlus 43% were female and 57% male (Jeugdzorg Nederland, 2017). In the year 2013 on top of the adolescents in residential youth care 1.180 (5.4% girls, in a girls-only group) were placed in youth prisons (WODC, 2020). In those cases, there was a form of punishment related to a criminal offence. The aims of residential treatment for youth is to learn to get along with others, to (re)start schooling, to develop prosocial attitudes, to reduce internalising and externalising problem

[1] The most recent reliable European comparisons are available for this period.

[2] The data in the current study were collected in 2013

behaviour, delinquency, substance use, and prevent re-victimization (Van der Helm et al., 2018; Vermaes & Nijhof, 2014).

In order to achieve youths' treatment goals, a positive living group climate is required, as the living group is the primary social environment for adolescents receiving residential care (Eltink, 2020; Leipoldt, Harder, Kayed, Grietens, & Rimehaug, 2019; Stams & Van der Helm, 2017; Van der Helm et al., 2018). Knowledge on how girls and boys differ in their perception of living group climate is important to better understand how youth in residential youth care can benefit from their treatment in order to facilitate gender-specific programming in residential care. Notably, the perception of living group climate by girls is an important although understudied subject in literature. Therefore, the aim of the present study was to examine differences between boys and girls in perceived living group climate in secure (correctional and non-correctional) facilities.

Gender Responsive Treatment in Residential Youth Care

Effective treatment is based on the RNR principles (Andrews & Bonta, 2010), which indicate that treatment should be tailored to the individual needs of the person: the intensity of treatment should be in line with the risk for recidivism or revictimization, should fit the criminogenic or development threatening needs, and should be in line with the motivation and capabilities of the individual. Recent studies have emphasized the need for gender responsive treatment of youth in residential care based on differences in psychological development of boys and girls as well as differences in exposure to risk factors, pathways to crime, and needs (Anderson, Hoskins, & Rubino, 2019; Granski et al., 2020; Hubbard & Matthews, 2008; Lanctôt, 2018; Piller, Gibly, & Peled 2019; Walker, Bishop, Nurius, & Logan-Greene, 2016). For example, boys tend to display more aggressive and delinquent behaviour than girls, whereas girls display more internalising behaviour and are more at risk for exposure to adverse childhood experiences (ACEs), such as parental neglect, domestic violence, and sexual abuse (Asscher, Van der Put, & Stams, 2015; Assink et al., 2019; Biswas & Vaughn, 2011; Chaplo, Kerig, Modrowski, & Bennett, 2017; Dirkse, Eichelsheim, Asscher, & Van der Laan, 2018; Leve, Chamberlain, & Kim, 2015; Van Damme, Colins, De Maeyer, Vermeiren, & Vanderplasschen, 2015).

Studies have found that girls are more at risk to develop trauma-related symptoms compared to boys, and that experienced trauma is likely to be one of the principal mechanisms underlying aggressive behaviour in girls (Ford, Chapman, Connor, & Cruise, 2012; Ford,

Grasso, Hawke, & Chapman, 2013; Kerig & Becker, 2012; Leenarts et al., 2013; Olff, 2017). Ample evidence indicates that history of trauma or post-traumatic stress disorder in girls is related to aggressive or antisocial behaviour and mental health problems, resulting in affiliations with deviant peers, renewed victimization, and/or criminalization (Carbone-Lopez, Kruttschnitt, & McMillan, 2006; Hoeve et al., 2015; Kerig & Becker, 2012; Krabbendam, 2015; Leenarts et al., 2013; Van Vugt, Lanctôt, Paquette, Collin-Vézina, & Lemieux, 2014; Raine, 2013).

A recent meta-analysis by Granski et al. (2020) on program characteristics for youth with disruptive behaviour problems demonstrated that boys may benefit more from interventions targeting disruptive behaviour problems than girls. This finding could imply that gender responsive treatment for disruptive behaviour problems is necessary to allow girls to benefit equally from treatment as boys. The authors suggest that the delivery of trauma-informed approaches to address experiences of trauma and victimization in girls as well as a relational approach, focusing on the girls' family and peer group, may be more beneficial for girls.

During the past decade, research has focused on treatment principles and implementation of trauma-informed care in residential youth care facilities aimed at preventing re-victimization and traumatization, particularly through responsive and non-coercive staff-client interactions by refraining from restrictive measures, such as seclusion and restraint (Bryson et al., 2017; Ford et al., 2012; Ford & Blaustein, 2013; Hodgdon, Kinniburgh, Gabowitz, Blaustein, & Spinazzola, 2013; Roy et al., 2019). Also, recent studies have specifically focused on relational approaches targeting girls in residential care (Lanctôt, 2018; Lanctôt, Lemieux, & Mathys, 2016). While research on trauma-informed care and gender-responsive treatment is steadily growing, the effective implementation of these practices remains limited (Anderson et al., 2019; Bryson et al, 2017; Lanctôt, 2018, Smith, 2017). In addition to the development of promising interventions based on trauma-informed or relational based principles to address girls' needs in residential care, the adaptation of gender-responsive strategies may also be effective at the living group in which youth stay during their treatment.

Living Group Climate

During their stay in residential care, it is important for youth to develop prosocial attitudes and prosocial behaviour. The living group in which youth reside is the primary social environment for adolescents in residential care. The quality of this environment can be described in terms of living group climate. Living group climate can be defined as 'the quality

of the social and physical environment in terms of the provision of sufficient and necessary conditions for physical and mental health, well-being, contact, and personal growth of the residents, with respect for their human dignity and human rights, as well as (if not restricted by judicial measures) their personal autonomy, aimed at recovery and successful participation in society' (Stams & Van der Helm, 2017, p. 4).

Living group climate may be relatively 'open', providing a structured therapeutic environment, with a positive atmosphere where the adolescents respect each other and feel safe, and where group social workers support their needs, and support cohesion and active participation. On the other hand, group climate may be negative and repressive, with a lack of mutual respect and safety among the adolescents and between adolescents and group workers. An open group climate is associated with well-being, increased treatment motivation, active coping strategies, and treatment satisfaction (Leipoldt et al., 2019; Van der Helm, Klapwijk, Stams, & Van der Laan, 2009; Van der Helm, Kuiper, & Stams, 2018). A negative and repressive living group climate may lead to feelings of fear, uncertainty and helplessness, passive coping, and aggressive behaviour (De Decker et al., 2018; Eltink, 2020; Heynen, Van Der Helm, Cima, Stams, & Korebrits, 2016; Van der Helm, Beunk, Stams, & Van der Laan, 2014; Van der Helm, Boekee, Stams, & Van der Laan, 2011).

In recent years, studies have focused on girls' perceptions of living group climate in residential youth care. Several studies have found relational factors, such as relationships with peers and relationships with staff, to be important aspects of group climate for girls (Cantora, 2014; Kerig & Schindler, 2013; Mathys, Lanctôt, & Touchette, 2013). Previous studies have demonstrated that girls are more orientated towards social interaction and social support seeking (Miller, Leve & Kerig, 2012; Miller, Winn, Taylor, & Wiki, 2012; Taylor et al., 2000). Lanctôt, Lemieux and Mathys (2016) explored girls' perceptions of group climate by means of latent class analysis, revealing that girls differ in their perceptions of group climate in terms of their sense of safety among their peers at the group, their connection with their peers, and with staff. Also, girls who displayed more complex problems at admission – particularly trauma-related problems –had more negative perceptions of group climate (Lanctôt et al., 2016). A qualitative study by De Valk, Kuiper, Van der Helm, Maas and Stams (2017) revealed differences between boys and girls in how youth perceived autonomy and meaningfulness. Girls experienced more repression when they were not granted opportunities for personal development related to internally motivated goals, whereas boys mainly focused on meeting externally motivated goals. For example, they wanted to meet the

expectations of staff in order to be 'released'. Studies focusing on the working alliance – the collaborative relationship – between girls and staff in residential care found that staff found it more difficult to establish a working alliance with girls than with boys due to gender-specific extreme problem behaviour, such as auto-mutilation (Lanctôt, Ayotte, Turcotte, & Besnard, 2012). Additionally, Ayotte Lanctôt and Tourigny (2015) found that girls with more severe problem behaviour had weaker working alliances with staff.

Present Study

The aim of the present study was to examine differences between boys and girls in perceived living group climate in correctional and non-correctional facilities. To the best of our knowledge, prior studies on perception of group climate in residential youth care have not examined differences between boys and girls, taking into account the type of facility (non-correctional versus correctional facilities). Given the higher degree of coercion and restrictiveness and more severe problem behaviour of youth in correctional facilities (Vermaes & Nijhof, 2014), we expected youth in these facilities to experience a less positive living group climate compared to youth in non-correctional facilities.

Method

Participants

The total (convenience) sample consisted of 344 adolescents (n = 236 boys, n = 108 girls) receiving residential care in the Netherlands. The mean age of the respondents was 16 years (SD = 1.58; range 7–24) and 77.9% had the Dutch nationality. Of the total sample, 76 youth (n = 40 boys, n = 36 girls) were treated in non-correctional centres (5 different open facilities) and 268 youth (n = 196 boys, n = 72 girls) were treated in correctional centres (6 different secure care facilities and 4 different youth prisons). The living groups at which youth were placed consisted of boys-only, girls-only, and mixed groups. Of the total sample, 179 boys resided in boys-only groups, 62 girls resided in girls-only groups, and 96 youth were resided in mixed groups (n = 53 boys, n = 43 girls). Youth were referred to secure non-correctional centres because of severe behaviour problems or being a danger to themselves or others.

Procedure

The data were collected in 2013. All adolescents participated voluntarily, signed an informed consent declaration, and were told that their answers would be treated confidentially and anonymously, and would be accessed only by the researchers. As a token of gratitude for their participation, participants received a telephone card or a small gift with a maximum value of

€5.50. The names of the respondents on the questionnaires were deleted and substituted with a code number for use in SPSS data-analysis software. In order to protect the privacy of the adolescents, researchers had no access to their full names. Specially trained graduate students of social work administered questionnaires during a group session on the residential group. The questionnaires were completed two to three weeks after the arrival of the adolescent at the centres. This choice (cross-sectional) has been made because the duration of stay of the youngsters varies considerably from for example, 6 weeks in a juvenile prison to 2 years in an open residential facility. The answering rate was approximately 82%; reasons for not participating were: absence due to going to court or leave (12%); not interested or angry (6%).

Measures

Living group climate was assessed with the Prison Group Climate Inventory (PGCI, Van der Helm et al., 2011). This self-report measure consists of 36 items rated on a five-point Likert type scale, ranging from 1, (*I do not agree*), to 5 (*I totally agree*). Each item belongs to one of the four scales for group climate: Support, Growth, Repression and Atmosphere. The Support scale (12 items) assesses perceived support from group workers, in particularly the responsiveness of group workers. Listening to youth, taking their complaints seriously, and respect and trust are important characteristics of support. An example item is: 'Group workers treat me with respect'. The Growth scale (8 items) assesses youth's perceptions of learning and hope for the future during their stay in the centre. An example item is: 'I learn the right things here'. The Repression scale (9 items) assesses perceptions of strictness and control as well as unfair and haphazard rules. An example item is: 'You have to ask permission for everything here'. The Atmosphere scale (7 items) assesses the social interaction among youth in terms of mutual trust, their feelings of safety at the group, and how youth perceive the physical environment at the group, such as daylight and fresh air at the group. An example item is: 'We trust each other here'. The internal consistency reliability of the scales was good in boys and girls for the scales Support ($\alpha = .90$, $\alpha = .87$, respectively), Growth ($\alpha = .87$, $\alpha = .88$, respectively), Repression ($\alpha = .75$, $\alpha = .72$, respectively), and Atmosphere ($\alpha = .78$, $\alpha = .83$, respectively). Higher mean scores for the scales Support, Growth, and Atmosphere are indicative of higher levels of support from group workers, more possibilities for growth, and a more positive atmosphere as perceived by youth. Also, a higher mean score for the scale Repression is indicative of more repressive behaviour of staff as perceived by youth.

Statistical analyses

To examine differences in living group climate, a multilevel approach was used, given the nested nature of the data (youth are nested in living groups). Hierarchical Linear Modelling (HLM) was used to account for violation of the independence assumption of regression. HLM allows for examination of how variation in the dependent variable is attributed to differences within-group (i.e., individual level) or between-group (i.e., living group level; Raudenbush & Bryk, 2002). The analyses were conducted using the 'lme4' package (Bates, Maechler, Bolker, & Walker, 2015) in the R environment. The 'lmerTest' package (Kuznetsova, Brockhoff, & Christensen, 2015) was used for the calculation of *p*-values, which uses the Satterthwaite approximation procedure for calculating degrees of freedom.

Four models were fit for each dependent variable. First, a random intercept-only model (null model) was fitted without predictors to estimate the Level-2 variance and ICC (Intraclass Correlation Coefficient) for the dependent variable. When significant Level-2 variance is demonstrated, multilevel analysis is warranted. Subsequently, three multilevel models were fitted. The first model included only main effects of Level-1 predictors (gender and age). A second model included Level-2 predictors (Type of facility). A final model included a cross-level interaction between gender and type of facility. The fit of the models was compared using likelihood-ratio tests. Models were compared after adding the cross-level interaction term. Parameter estimates and statistical tests on individual terms are reported for the basic model and the final model.

Results

Table 2.1 shows the descriptive information of all study variables for boys and girls in non-correctional and correctional residential care facilities. Mean scores of Support, Growth, and Atmosphere (scales referring to an open climate) for boys in correctional facilities ranged from $M = 3.20$ to 3.35, and scores for girls in correctional facilities ranged from $M = 2.74$ to 3.22. The mean score of the scale Repression for boys and girls in correctional facilities were $M = 3.45$ and $M = 3.54$, respectively. A previous study on group climate in 59 boys in correctional facilities reported similar mean scores for the scales Growth ($M = 3.1$), Atmosphere ($M = 3.2$), Repression ($M = 3.3$), and a somewhat lower score for Support ($M = 2.8$) (Van der Helm, Stams, Van der Stel, Van Langen, & Van der Laan, 2012) compared to the sample of boys in correctional facilities in the present study. Another study examining 179 adolescents (66% male) in correctional facilities also reported similar mean scores for the scales Support ($M = 3.49$), Growth ($M = 3.41$), Atmosphere ($M = 3.24$), and

Repression (*M* = 3.25). Of note, no prior studies on scores of the group climate scales for girls are available.

For boys in non-correctional facilities, mean scores ranged from *M* = 3.35 to 3.61 for the scales Support, Growth, and Atmosphere, and scores for girls in non-correctional facilities ranged from *M* = 3.71 to 4.15. The mean score of the scale Repression for boys and girls in non-correctional facilities were *M* = 2.83 and *M* = 2.71, respectively. No prior studies on scores on group climate scales for youth in non-correctional facilities are available.

A series of hierarchical linear models was conducted to examine the relation between gender, type of facility, and living group climate. First, four different random intercept-only models were conducted to establish whether there was significant variance at Level-2 for the variables Support, Growth, Repression, and Atmosphere. Results indicated that there was significant Level-2 variance for Support (ICC = .16, Wald z = 2.68, p = .007), Growth (ICC = .16, Wald z = 2.55, p = .011) Repression (ICC = .22, Wald z = 3.04, p = .002), and Atmosphere (ICC = .16, Wald z = 2.50, p = .012).

Second, for each dependent variable, multilevel models were specified in which several main effects for Level-1 (gender and age) and Level-2 (Type of facility) were included, and an interaction effect between gender and type of facility.

Results of the HLM models with only main effects (basic model) and interaction effects (final model), as well as comparisons between models are presented in *Tables 2.2 – 2.5*. Results indicated a significant cross-level interaction effect between gender and type of facility for Support (β = -.75), Growth (β = -.76), and Atmosphere (β = -.87), which indicated that girls in correctional facilities experienced lower levels of support, growth, and atmosphere compared to boys. Results showed no significant interaction effect between gender and type of facility for Repression. However, a positive main effect was found for Type of facility (β = .85), indicating that youth in correctional facilities experienced more repression compared to youth in non-correctional facilities.

Discussion

The aim of the present study was to examine differences in perceived group climate between boys and girls in non-correctional and correctional residential care facilities. Findings indicated that girls in non-correctional facilities experienced aspects of living group climate most positively (more support, more possibilities for growth, and a more positive

atmosphere), and girls in correctional facilities experienced aspects of living group climate most negatively compared to girls and boys in non-correctional facilities. The differences in perceived group climate between youth in non-correctional and correctional facilities were largely in line with our expectations. According to literature, these results could be explained by the higher degree of coercion and restrictiveness as well as by more severe problem behaviour of youth in correctional facilities (Vermaes & Nijhof, 2014). For girls, this possibly touches on giving meaning to their stay because they experience less possibilities for personal growth (De Valk et al., 2017). In addition, girls may benefit less from interventions targeting disruptive behaviour problems (Granski et al, 2020).

Findings also revealed that girls in non-correctional facilities indeed reported more support from group workers, whereas girls in correctional facilities experienced less support from group workers. These findings could also be explained by the complex and severe problem behaviour of girls in correctional facilities. Most girls in correctional facilities have a history of trauma and are often poly-victimized (Kerig & Becker, 2012). Lanctôt (2020) found that high levels of childhood trauma in girls are related to maladaptive cognitive schemas, specifically perceptions of disconnection and rejection, which is negatively related to girls' perceived social support during their stay in residential care. Several other studies found that severe problem behaviour in girls is related to a poor working alliance with staff (Ayotte et al., 2015, 2017; Lanctôt et al., 2012).

Further, findings revealed that girls in correctional facilities experienced a less positive atmosphere at the living group. Prosocial and meaningful relationships are necessary to feel *'safe and connected'*, and prior research suggests that this is specifically the case for girls (Lanctôt et al., 2016). This means that staff in correctional facilities should take an active role in stimulating positive interactions among youth (Sonderman et al., 2020). Further, by creating a positive atmosphere at the living group, aggressive behaviour and negative group dynamics may be reduced or prevented. This is important not only to create a positive living group climate during youth's stay at the facility, but also because evidence suggests that aggressive behaviour persists in adulthood (Cleverley, Szatmari, Vaillancourt, Boyle, & Lipman, 2012; Krabbendam et al., 2014; Teplin, Welty, Abram, Dulcan & Washburn, 2012).

Limitations

Several limitations to the present study need to be acknowledged. Firstly, the present study used cross-sectional data and the measurements were carried out at the beginning (first weeks)

of the youths' stay in the facility. A longitudinal design would have provided a better insight in how youth experience living group climate throughout their stay. A second limitation is that we did not assess problem behaviour of youth. Severity of problem behaviour of youth, specifically trauma-related symptoms in girls, is important to consider when measuring group climate. Thirdly, the living group climate instrument used in the present study not only measures atmosphere at the living group in terms of social interactions between youth, containing items referring to feelings of safety and mutual trust, but also as the quality of the physical environment, which somewhat obscures how youth perceive interactions with other group members. Finally, due to the limited sample size, we were not able to examine measurement invariance across boys only, mixed gender and girls only groups.

Implications for Practice and Future Research

A number of implications for practice and future research can be formulated based on the findings of the present study. Since the results of this study indicate that in particular girls in correctional facilities experience a negative living group climate, this subject warrant further investigation. In correctional settings, youth cannot leave the facility voluntarily, it is more difficult for them to maintain pre-existing positive relationships with their family and peers, and therefore youth have very limited choice in people to interact with. This means that most social interactions among youth and between youth and staff take place at the living group. Therefore, in the context of secure residential care it is especially important to address specific needs of girls regarding their social interactions and need for support. In this regard, Lanctôt (2018) found that girls expected more from staff and their mentor than boys. According to Lanctôt (2018), staff members must be particularly responsive to the feelings and emotions of the girls, and must demonstrate a genuine desire to help them, whereas boys may need more supervision and guidance for dealing with rules and restrictions.

Future research should focus on what knowledge and skills group workers need for working with girls in secure youth care, and whether group workers could benefit from training in specific treatment approaches that are suitable within a sociotherapeutic context, such as a trauma-informed approach. It should be recognized that trauma-informed care requires a paradigm shift within any youth care facility, focusing more on understanding trauma, stress, and their impact on client-staff interactions, informed by principles of collaboration as well as shared decision making (Bryson et al., 2017; Roy, Morizot, Lamothe, & Geoffrion, 2020). This perspective is in line with principles of working on a positive living group climate, which not only requires effort and commitment from staff at the living group in terms of

providing support, autonomy granting, and refraining from repressive behaviour, but also a positive working climate of staff in terms of team functioning and a safe work environment (Stams & Van der Helm, 2017; Roy et al., 2020). Providing group workers tools to help youth cope during their stay and focusing on prosocial behaviour, specifically by stimulating positive peer interactions and relationships with their social network may improve treatment efficacy and increase motivation for change.

Future studies should focus on perception of living group climate of youth using a longitudinal design, taking into account correlates such as problem behaviour, trauma-related symptoms, aggressive behaviour at the living group, as well as motivation for treatment. Also, establishing measurement invariance of group climate scales is needed to examine whether group climate constructs can be measured in a conceptually identical way across boys and girls, which allows meaningful comparisons of perception of group climate between boys and girls. Further, qualitative methods are necessary to investigate how girls and boys in secure residential care perceive living group climate.

Finally, in addition to establish a clear understanding of how boys and girls in correctional facilities differ in their criminogenic and treatment needs the heterogeneity of needs of boys and girls should be addressed by recognizing that they are not homogeneous groups (Lanctôt, 2018). A more detailed understanding of how girls and boys differ in their perception of living group climate and acknowledging differences within girls and boys populations are important to advance knowledge on how youth may benefit from their stay in residential care. Future qualitative research on the differences can contribute to a deeper understanding of the gender differences that emerged in this study, which knowledge can be used to inform practice in order to facilitate gender-specific programming as well as a client-centred approach in residential youth care.

Conflicts of interest

The authors declare that they have no conflicts of interest.

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Tables

Table 2.1 *Descriptive Statistics of all Study Variables for Boys and Girls in Non-correctional and Correctional Residential Care Facilities.*

	boys				**girls**			
	Non-correctional (*n* = 40)		**Correctional (*n* = 196)**		**Non-correctional (*n* = 36)**		**Correctional (*n* = 72)**	
	M	***SD***	***M***	***SD***	***M***	***SD***	***M***	***SD***
Support	3.61	0.80	3.35	0.90	4.15	0.58	3.22	0.71
Growth	3.56	0.99	3.26	1.02	4.10	0.78	3.01	0.91
Atmosphere	3.35	0.81	3.20	0.85	3.71	0.71	2.74	0.75
Repression	2.83	0.81	3.45	0.72	2.71	0.67	3.54	0.65

Table 2.2 *Estimates for the Basic and Final Models with Support as Dependent Variable*

	Basic model			**Final model**		
	B (se)	***t***	***p***	**B (se)**	***T***	***p***
Intercept	3.34 (0.49)	6.96	<.001	3.42 (0.47)	7.31	<.001
Gender	0.04 (0.11)	0.36	.720	0.48 (0.19)	2.57	.011
Age	0.03 (0.03)	1.07	.284	0.01 (0.03)	0.46	.647
Type of facility	-0.54 (0.12)	-4.42	<.001	-0.29 (0.15)	-1.95	.052
Gender x Type of facility				-0.64 (0.23)	-2.83	.004
	Variance	Explained variance		Variance	Explained variance	
Living group	.078	32.6%		.053	54.2%	
Residual	.594	1.5%		.591	2.0%	
Model Comparison	df	LogLik		χ^2	*P*	
Basic model	6	-405.06				
Final model	7	-401.21		7.708	.005	

Table 2.3 *Estimates for the Basic and Final Models with Growth as Dependent Variable*

	Basic model			**Final model**		
	B (se)	***t***	***p***	**B (se)**	***t***	***P***
Intercept	3.08 (0.57)	5.45	<.001	3.16 (0.56)	5.64	<.001
Gender	-0.01 (0.13)	-0.05	.961	0.51 (0.22)	2.30	.020
Age	0.04 (0.03)	1.27	.204	0.02 (0.03)	0.70	.487
Type of facility	-0.58 (0.15)	-3.97	<.001	-0.27 (0.18)	-1.52	.129
Gender x Type of facility				-0.76 (0.27)	-2.80	.005
	Variance	Explained variance		Variance	Explained variance	
Living group	.110	29.6%		.100	36.0%	
Residual	.831	1.6%		.820	2.9%	
Model Comparison	Df	LogLik		χ^2	*P*	
Basic model	6	-461.38				
Final model	7	-457.43		7.895	.005	

Table 2.4 *Estimates for the Basic and Final Models with Atmosphere as Dependent Variable*

	Basic model			**Final model**		
	B (se)	***t***	***p***	**B (se)**	***T***	***p***
Intercept	2.74 (0.48)	5.68	<.001	2.81 (0.47)	5.91	<.001
Gender	-0.24 (0.11)	-2.26	.025	0.26 (0.18)	1.41	.158
Age	0.05 (0.03)	1.84	.067	0.03 (0.03)	1.19	.235
Type of facility	-0.43 (0.12)	-3.47	<.001	0.14 (0.15)	-0.90	.371
Gender x Type of facility				-0.74 (0.23)	-3.24	.001
	Variance	Explained variance		Variance	Explained variance	
Living group	.086	24.2%		.075	33.9%	
Residual	.597	2.4%		.587	4.0%	
Model Comparison	Df	LogLik		χ^2	*p*	
Basic model	6	-407.29				
Final model	7	-402.02		10.521	.001	

Table 2.5 *Estimates for the Basic and Final Models with Repression as Dependent Variable*

	Basic model			**Final model**		
	B (se)	***t***	***p***	**B (se)**	***t***	***p***
Intercept	3.49 (0.41)	8.42	<.001	3.47 (0.41)	8.38	<.001
Gender	0.05 (0.09)	0.55	.811	-0.06 (0.16)	-0.36	.723
Age	-0.04 (0.03)	-1.82	.161	-0.04 (0.03)	-1.63	.105
Type of facility	0.71 (0.10)	6.84	<.001	0.65 (0.13)	4.91	<.001
Gender x Type of facility				0.16 (0.20)	0.78	.435
	Variance	Explained variance		Variance	Explained variance	
Living group	.044	66.4%		.043	67.2%	
Residual	.460	1.4%		.461	1.7%	
Model Comparison	df	LogLik		χ^2	*P*	
Basic model	6	-357.69				
Final model	7	-357.75		0.640	.424	



Chapter 3

Peer Interactions in Residential Youth Care: A Validation Study of the Peer Interactions in Residential Youth Care (PIRY) Questionnaire

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Abstract

Interactions among peers in residential youth care are an important dynamic factor affecting behavioural adjustment and treatment success. Assessment and monitoring of quality of peer interactions are potentially important for promoting a positive peer culture at the living group, contributing to a positive social climate. However, currently there are no measures available to assess peer interactions in residential youth care. The present study describes the development, construct validity, and reliability of the Peer Interactions in Residential Youth Care questionnaire (PIRY) in a sample of 345 adolescents (age M = 15.45, SD = 1.59, 44.9% male) in the Netherlands. Confirmatory factor analysis of a two-factor model (peer support and acceptance, and relational aggression) showed a good fit to the data, and internal consistency reliabilities were good for both scales. Partial strict measurement invariance for gender was established, and no significant differences were found between boys and girls on latent factor means. The PIRY can be used in practice to assess and monitor both positive and negative peer interactions in residential youth care at the group level. Implications for research and practice are discussed.

Keywords

Peer interactions, relational aggression, residential youth care, group climate, group dynamics.

Practice implications

- The PIRY can be used in practice to assess and monitor supportive and negative peer interactions in residential living groups.
- Routine monitoring of the quality of peer interactions in living groups can be used in practice-oriented research.
- Routine monitoring of the quality of peer interactions can contribute to a positive social climate.

Introduction

Treatment of youth who display psychosocial and behavioural problems sometimes takes place in residential care settings where they receive professional mental health care provided by a team of group workers (Kendrick, 2015; Whittaker et al., 2016). This type of treatment is aimed at providing a safe and stable living environment for youth. The living group in which youth are placed consists of eight to ten adolescents, supervised by a team of trained group workers providing group treatment (sociotherapy), constituting the primary social environment of youth placed in residential care. In the Netherlands, approximately 17000 youth between 12 and 18 years live in institutions for residential care (Leloux-Opmeer, Kuiper, Swaab, & Scholte, 2016).

It is well-known that positive peer interactions, such as prosocial and supportive behaviour, are associated with positive developmental outcomes, and that negative interactions, such as rejection and bullying, are associated with psychosocial and behavioural difficulties (Rubin, Bukowski, Parker, & Bowker, 2008). In residential care settings, especially in secure care, youth are often referred for conduct problems and deficits in aggression regulation, which can make it difficult for youth to engage in positive interactions and meaningful relationships with each other (Van der Helm et al, 2013).

Interactions among youth are considered to be an important aspect of the social climate in residential youth care (Leipoldt, Harder, Kayed, Grietens, & Rimehaug, 2019). A positive social climate, characterized by a positive group atmosphere, support from staff, opportunities for growth and absence of repression, is associated with higher levels of treatment motivation and positive treatment outcomes (Van der Helm et al, 2018; Eltink et al., 2019; Leipoldt et al., 2019). Leipoldt et al. (2019) found that a positive social climate is positively associated with active coping strategies and less aggressive behaviour, bullying, and problems with solving social problems among youth in residential care settings. It is assumed that by providing a safe, structured, and supporting environment, in which a positive peer culture can be established consisting of trust and acceptance among youth, supportive behaviour, and absence of antisocial behaviour (aggressive behaviour and bullying) can contribute to positive developmental outcomes after departure from the institution.

Recent research has pointed out that proper assessment and monitoring of the quality of the social climate can improve treatment efficacy through discussing various aspects of social climate with youth and professionals (Levrouw, Roose, Van der Helm, Strijbosch, &

Vandevelde, 2018; Strijbosch, Wissink, Van der Helm, & Stams, 2019). Also, Moore, McArthur and Death (2019) state that residential care institutions should invest in a positive peer culture, because positive interactions among youth in residential care play an important role in prevention of peer violence as well as providing support. However, to the best of our knowledge, no questionnaires are currently available to measure the quality of peer interactions in residential care, specifically focusing on prosocial and antisocial behaviour among peers within the living group. The present study describes the development of a brief self-report questionnaire to measure the quality of peer interactions in residential youth care. Routine assessment and monitoring of the quality of peer interactions in residential youth care can be used in practice-oriented research to promote positive peer interactions at the group, contributing to a positive social climate (Stams & Van der Helm, 2017).

Peer interactions in residential youth care

During adolescence, peer interactions become important for the development of identity and morality (Erikson, 1968; Rageliene, 2016), and the formation of intimate relationships and sexuality (Fortenberry, 2013). As adolescents tend to separate from their parents, their relationships with peers, belonging to a peer group, and social status become more important (Nawaz, 2011; Rageliene, 2016). Interactions with non-deviant peers are recognized as an important protective factor against violent and deviant behaviour (Bender & Lösel, 1997; Lösel & Farrington, 2012), along with factors such as strong school bonding, a positive school climate, and living in a non-deprived and nonviolent neighbourhood. The probability of violence decreases as the number of protective factors increases (a dose-response relationship) (Lösel & Farrington, 2012).

Adolescents placed in residential care spend most of their time in the company of other adolescents. During their stay, positive interactions with other adolescents are often an important aspect of treatment, contributing to treatment aims and rehabilitation into society (Brendto, Mitchell, & McCall, 2007). Social interactions among youth and between youth and staff in residential care can be understood as a series of transactional processes (Sameroff, 2009). For example, failure of youth to engage in positive interactions with each other might result in negative and more restrictive reactions from staff, which may hamper the development of supportive (therapeutic) relationships with staff. Also, youth's perception of staff members as unavailable and unresponsive may result in reluctance to ask for help when faced with bullying (Khoury-Kassabri & Attar-Schwartz, 2014). Subsequently, positive staff-youth relationships might positively affect relationships among youth (Worthington, 2003).

When youth perceive staff as emotionally available and responsive to their needs, they will be more inclined to ask for help, for example when in conflict with peers at the living group. Staff have an important role in fostering a positive peer culture; being emotionally available, sensitive, and responsive, but also providing structure and supervision can prevent negative behaviour and bullying among youth (Moore et al., 2019).

The interactions among youth can be seen as a dynamic factor affecting treatment efficacy. First, adolescents showing antisocial behaviour may negatively reinforce deviant behaviour of their peers through deviancy training (De Haan, Overbeek, Nijhof, & Engels, 2010; Dishion & Tipsord, 2011), which might result in a hostile attitude toward staff members who deliver therapy, negatively affecting both therapeutic alliance and treatment motivation (Roest, Van der Helm, & Stams, 2016). Second, adolescents showing prosocial behaviour may positively affect treatment motivation through peer support. Moreover, they may help their peers in practicing what they have learned in treatment. Thus, negative or positive peer interactions may have an effect on both individual and, in particular, group treatment (Brendto et al., 2007). Therefore, for example, the program EQUIP, which has been developed to increase moral development and reduce criminal offending, first of all aims to build a positive peer group culture as a necessary condition for successful treatment of youth with complex needs, both in schools and residential institutions (Van Stam et al., 2014).

During adolescence, belonging to a (peer) group, being accepted by peers, and support from peers are found to be related to positive psychosocial outcomes (Heerde & Hemphill, 2018; La Greca & Harrison, 2005; Newman, Lohman, & Newman, 2007). In the literature, sense of group belonging, and group identification are recognized as psychological constructs based on social identity theory (Kiesner, Cadinu, Poulin, & Bucci, 2002; Newman et al., 2007; Tajfel & Turner, 1979; Tarrant, 2002). Peer acceptance can be defined as the extent to which peers are liked and welcomed to be part of a group (McDonald & Asher, 2018). Peer support refers to the process of giving and receiving emotional or practical support from shared experiences, in which peers face similar challenges or difficulties (Repper & Carter, 2011; Riessman, 1989). Informal peer support can be seen as a naturally occurring process of peer support (Davidson et al., 1999; Repper & Carter, 2011). The present study focuses on positive peer interactions in terms of youth's behaviours of peer acceptance and informal peer support in the context of residential youth care.

Although fewer studies have been conducted on peer support in residential youth care compared to studies on negative peer interactions, several studies have found that positive peer interactions can be an important protective factor and may prevent problem behaviours during residential treatment. Sekol (2013), Emond (2003), and Wulf-Ludden (2013) found that peers could support each other emotionally and give each other advice, helping each other to achieve their treatment goals. Cardoos, Zakriski, Wright and Parad (2015) found that social preference (in terms of acceptance by peers) was associated with an increase in prosocial behaviour after treatment. These studies indicate that peers can be effective reinforcers, because they best understand each other's problems and situations, and that peer acceptance and peer support are beneficial for treatment success.

Studies on peer interactions among troubled youth often focus on negative influences that youth might have on each other. For example, there has been an ongoing debate about the extent to which youth in residential care learn criminal behaviour from others during their stay, often referred to as peer contagion or deviancy training (Anderson, 1999; Bayer, Hjalmarsson, & Pozen, 2009; Chein, Albert, O'Brien, Uckert, & Steinberg, 2011; Dishion, Thomas, McCord, & Poulin, 1999; Dishion & Tipsord, 2011; Huefner, Handwerk, Ringle, & Field, 2009; Weiss et al., 2005; Welsh & Rocque, 2014). Parhar, Wormith, Derkzen, and Beauregard (2008) even argue that deviancy training in secure residential care hampers positive treatment outcomes so badly that placement is best to be avoided altogether.

Findings from a study by Lee and Thompson (2008) suggest that youth's association with deviant peers during treatment is linked to problem behaviour, and that some youth may be more vulnerable to deviancy training than others. However, in their study, the majority of youth did not show an increase in problem behaviour during treatment. Also, several other studies found that exposure to deviant peers during residential treatment was not related to increase in conduct behaviours (Huefner et al., 2009; Huefner & Ringle, 2012). A recent study by Huefner, Smith and Stevens (2018) in which both positive and negative peer influences in residential care were examined showed that positive peer influences were associated with lower rates of serious problem behaviour. Furthermore, negative peer influences had a relatively greater impact on peers' serious behaviour problems than did positive peer influences. Moreover, Huefner et al. (2018) found that caregiver experience reduced the impact of negative peer influence, but was not associated with positive peer influence. Other studies also found that caregiver experience, active monitoring and supervision are important in preventing and reducing negative peer influences (i.e., peer

contagion) (Gifford-Smith, Dodge, Dishion & McCord, 2005; Huefner & Ringle, 2012; Moore et al., 2019).

Another negative aspect of peer interactions in residential care settings is the occurrence of aggressive behaviour among youth, such as peer violence and bullying (Mazzone, Nocentini, & Menesini, 2018; Sekol, 2016). Bullying refers to serious and repeated attacks, whereas peer violence is often episodic and may involve various degrees of severity (Barter, Renold, Berridge, & Cawson, 2004; Mazzone et al., 2018). Barter et al. (2004) defined four types of violent peer behaviour in residential youth care: physical aggression, nonphysical aggression, verbal attacks, and sexual abuse. Barter (2011) mentions another type of aggression; 'non-contact attacks', such as invading personal space and harming personal belongings. Furthermore, several definitions for different aspects of nonphysical aggression are used in the literature, such as 'verbal aggression', 'indirect aggression', 'social aggression', and 'relational aggression' (Voulgaridou & Kokkinos, 2015). All definitions are characterized by the intention to emotionally harm others, to induce fear, and to take control over the behaviour of others (Barter et al., 2004).

Barter et al. (2004) found that physical aggression was present in situations in which there was competition among adolescents. Also, boys used physical aggression as a form of retaliation to show peers that they can stand up for themselves and to protect themselves from further victimization (see also Anderson, 1999; De Jong, 2007). Nonphysical forms of violence are often used proactively (Merrell, Buchanan, & Tran, 2006). Also, nonphysical violence is often used instrumentally to gain a higher social status within a group, for example, through rejecting and excluding others, or by embarrassing others by spreading rumours and malicious gossip (Archer & Coyne, 2005; Card, Stucky, Sawalani, & Little, 2008; Cheng, Tracy, & Henrich, 2010; Griffin, & Gross, 2004; Juvonen & Galván, 2008; Salmivalli, 2010). Of note, nonphysical kinds of aggression seem to have the most negative impact on adolescents' behaviour in residential youth care (Barter, 2011; Barter et al., 2004; Bowie, 2010; Krabbendam, 2016). In the present study, we use the term relational aggression to refer to all kinds of nonphysical aggression.

Relational aggression has been found to be embedded in the peer culture in residential youth care (Mazzone et al., 2018). Several studies have found that residential youth care groups are often characterized by a certain level of peer hierarchy, and that this hierarchy is part of the peer culture in residential groups (Mazzone et al., 2018; Sekol, 2013, 2016). In this hierarchy,

youth at the top exert power over their peers by means of physical strength or manipulation, which increases the likelihood of bullying and make youth more vulnerable to acts of physical and relational aggression, through exclusion of certain group members, and spreading malicious gossip (Barter et al., 2004; Sekol, 2016). The establishment of a hierarchy in residential group care is problematic for peer acceptance and peer support, because new youth at the living group can be viewed as a threat to the hierarchy rather than a new group member. Also, a high level of hierarchy fosters feelings of jealousy, distrust, and unsafety among youth.

The role of gender in peer interactions in residential youth care

The display of aggressive behaviour in groups is different between boys and girls. Boys are more competitive and more focused on establishing physical dominance, whereas girls are more focused on interpersonal concerns (Rose & Rudolph, 2006; Zimmer-Gembeck, Pronk, Goodwin, Mastro, & Crick, 2013). Mathys, Lanctôt, and Touchette (2013) found that girls' peer interactions in residential youth care were characterized by feelings of insecurity and physical-, relational-, and verbal aggression. Attar-Schwartz and Khouri Kassabri (2015) reported similar findings, such that girls in residential youth care were more susceptible to indirect (verbal-) violence than boys. Ford, Chapman, Connor and Cruise (2012) emphasized that relational aggression (e.g., humiliating and rejecting peers) is an important negative coping strategy for girls, although gender differences in the prevalence of relational aggression are usually found to be small (Vagos, Rijo, Santos, & Marsee, 2014; Voulgaridou, & Kokkinos, 2015).

Peer support is also affected by gender. Girls are more inclined than boys to go to peers for emotional support (Barter et al., 2004). These findings could be explained by Taylor's 'tend and befriend' hypothesis (Taylor, 2006; Taylor et al., 2000). Also, women reduce stress more often than men by seeking and giving emotional support. They rely on others in stressful circumstances as a way to reduce stress (Cardoso, Ellenbogen, Serravalle, Linnen, 2013). Mathys et al. (2013) found girls in residential youth care to be extra receptive for positive (peer-) relationships, a finding that has also been reported for incarcerated adult females (Slotboom, Kruttschnitt, Bijleveld, & Menting, 2011), which can be explained by girl's tendency to engage in interpersonal relationships (Buhrmeister & Furman, 1987). Girls' orientation toward engaging in interpersonal relationships might also be associated with deviancy-training through reinforcement of a friend's behaviour. De Haan et al. (2010) studied the process of deviant talk in a sample of girls, focusing on deviant (rule-breaking)

talk in dyads. De Haan et al. (2010) found that in non-delinquent, delinquent, and mixed dyads, deviant talk occurred through reinforcement of their interaction partner's rule-breaking talk during the conversation.

Measuring peer interactions in residential youth care

Youth's experiences with peers can be measured in different ways, depending on the type of experience, and the level of analysis (Fabes, Martin, & Hanish, 2008; Rubin et al, 2008). In the present study, we focus on interactions between youth at a group level, by focusing on interactions with their peers at the living group. Several self- report and other-report measures are available to measure interactions with peers (e. g., Social Skills Rating System [SSRS], Gresham & Elliott, 1990; Interpersonal Competence Scale, Cairns, Leung, Gest, & Cairns, 1995). However, these measures focus on individual interpersonal skills and competencies in general and are therefore not suited to assess peer interactions at the group level. To measure the quality of peer relationships, the Network Relationship Inventory (NRI, Furman & Buhrmester, 2009) may be used, but this measure focuses on interactions at a dyadic level and does not address interactions among youth in a group setting. Furthermore, sociometric methods can be used to assess the sociometric status of youth in peer groups, and to gain insight into positive and negative links between group members (Cillessen, 2008). Magalhães and Calheiros (2015a, 2015b) have adapted such measures for use in residential care, which focus on the youth's perception of the group in which they receive treatment during their stay and their sense of group identification. These measures do not focus on interactions among youth at the living group, but rather on perceived attributes of the group to which they belong, based on a social identity framework.

Recently, various measures to assess group climate in residential (youth) care have been developed. Tonkin (2015) identified three questionnaires for use in adolescents in secure facilities: the Correctional Institutions Environment Scale (CIES), the Ward Atmosphere Scale (WAS), and the Prison Group Climate Instrument (PGCI). These measures address peer interactions to some extent. However, none of these questionnaires or any other to our knowledge, measure both positive and negative peer interactions in (secure-) residential youth care.

To measure the quality of peer interactions in residential group care by means of a self-report questionnaire, it is important to address positive (prosocial) as well as negative (antisocial) peer interactions, and to take into account the group context by focusing on interactions

among peers at the living group. The aim of the present study was to develop and validate a self-report questionnaire that measures positive peer interactions (behaviours indicating peer acceptance, mutual trust, and peer support) and negative interactions (behaviours indicating acts of relational aggression, exclusion and rejection of peers, and deviancy training) in residential youth care. Another aim of the study was to examine measurement invariance for gender, to investigate whether the measure was suitable for both boys and girls.

Method

Participants

The study was conducted in twelve different organizations that provide residential youth care for adolescents with serious behaviour problems in the Netherlands. In total, 609 adolescents were treated at the time of the study. A total of 345 youth participated in the study (response rate of 57%). The sample consisted of N = 345 adolescents (44.9% male, M age = 15.45, SD = 1.59, Min = 10, Max = 23). Adolescents represented 64 different living groups, and consisted of boys-only (n = 34, 9.9%), girls-only (n = 82, 23.8%) and mixed-gender groups (n = 228, 66.3%). Of the participating adolescents, 162 (47%) were placed in secure facilities and 183 (53%) were placed in open facilities.

Procedure

Data were collected between March 2015 and January 2016, as part of an ongoing practice-oriented research project on group climate in the participating organizations. The parents or guardians of the participants agreed to the participation of their child or pupil when the child entered the residential facility, and the participants were informed about the study through an information letter that was attached to the questionnaire. The adolescents signed an informed consent form prior to filling out the questionnaire. The participants took part voluntarily and anonymously, and gave permission that the data could be used for scientific purposes. A research assistant issued the questionnaires to the groups and were collected after the participants completed the questionnaires. In two organizations, the researchers themselves handed the questionnaires to the participants. The adolescents filled out the questionnaire by themselves, without assistance from group workers or researchers. The study met all criteria (such as informed consent, data storage, and anonymity) as stated in the Netherlands Code of Conduct for Research Integrity (2018).

Measures

Peer Interactions in Residential Youth care questionnaire (PIRY). This questionnaire was developed to measure peer interactions in residential youth care in terms of positive (prosocial) interactions – including peer acceptance, mutual trust, and peer support – and negative (antisocial) interactions – including relational aggression, exclusion, rejection of peers, and deviancy training. The PIRY was modelled after a French measure of group climate developed for justice-involved girls (Questionnaire de Climat de Groupe en Centre de Réadaptation, QCGCR, Mathys et al., 2013. Items referring to peer (group) interactions were adapted for youth of both sexes, in particular items of the scale for Peer relation (e.g., 'I can ask the girls in my unit for help when I need it' and 'I have warm and friendly relationships with the girls in the unit').

The initial item pool contained 34 items indicative of negative (19 items) and positive (15 items) peer interactions. Examples of negative interactions are: threatening of peers, learning deviant behaviour from peers, excluding peers during group activities, behaving in a certain way to get accepted by peers, and jealous behaviour. Two sample items of this scale are 'Adolescents threaten each other here' and 'Youth learn bad things from each other'. Positive interactions were, for example, correcting each other when misbehaving, telling secrets to each other, giving each other advice, acceptance of new group members, and making friends. Two sample items of this scale are '*We accept each other as we are*' and '*Other youth try to help me with problems*'.

The items are brief statements of low cognitive complexity, so that they can be understood by adolescents with mild intellectual disabilities. Items are rated on a five-point Likert type scale ranging from 1 = 'I do not agree' to 5 = 'I totally agree'. Face validity of the items was examined through discussion of the items with an expert panel, consisting of three professionals working with youth in residential care as well as six researchers in the field of residential youth care, who gave feedback on the items, specifically whether items would be suitable for boys as well as for girls, and whether the items were suitable for adolescents with a mild intellectual disability.

A total of 18 items of the 34 items were retained. Items were excluded based on content (e. g., items did not refer to interactions among peers), complexity (e. g, items were too long or ambiguously worded), and relevance (e. g., items referring to situations that were not applicable to some institutions). Examples of items that were excluded were 'I try my best to

be nice to others at the group', 'Since my arrival at the group, other youth have been nice to me', and 'I cannot be myself at the group, others do not accept me as I am'. This process resulted in a short questionnaire that fits to the limited attention span and cognitive limitations of adolescents in residential youth care. Also, the questionnaire was discussed with youth in several living groups. During this session, youth were asked for feedback on the items. The participants had no problems understanding the items and filling out the questionnaire *Prison Group Climate Inventory* (PCGI). The PGCI was developed by Van der Helm et al. (2011) and consists of 36 items rated on a five-point Likert scale, ranging from 1 = 'I do not agree' to 5 'I totally agree'. The PGCI measures four dimensions of group climate: Repression, Support (from group workers), Growth, and Group atmosphere. Initially, the PGCI was developed for use in prison settings and secure care settings, but an adapted version (referred to as the Group Climate Instrument [GCI]) can also be used in open residential settings. In the present study, the scale Group atmosphere (7 items) was used. This scale measures youth's perspective of group atmosphere in terms of how adolescents treat and trust each other, feelings of safety toward each other, being able to get peace of mind, and whether there is enough fresh air and daylight. The scale consists of seven items. An example item of the Group atmosphere scale is: 'We trust each other here'. Reliability of the scale in the present study was $\alpha = .80$.

Statistical Analyses

First, assumptions were checked (missing data and normality). Also, intraclass correlations (ICCs) of the items were computed, to examine the amount of variability between groups, and the degree of non-independence of the data (Raudenbush & Bryk, 2002).

A Confirmatory Factor Analysis was conducted to examine construct validity. Mplus software version 6.11 was used to conduct the analyses (Muthén & Muthén, 1998-2010). A two-factor model was specified in which each item loaded on only one factor. The robust maximum likelihood estimation procedure (MLR) was chosen to estimate the model. Modification indices were used to improve model fit. Items that did not load significantly on their respective factor or cross-loading items were removed from the model. The 'type = complex' in Mplus was used to account for nested data (youth clustered within groups) and correct standard errors, using group as a cluster variable. We considered multilevel factor analysis (MCFA) to examine the factor structure at both the within- and between-group level. However, the sample size was relatively small.

Multiple group CFA was conducted to test measurement invariance for gender. We followed the procedures outlined by Van de Schoot, Lugtig, and Hox (2012). First, an unconstrained model was fitted to examine configural invariance. In this model, factor variances were fixed to 1 and factor means were fixed to 0 in each group for identification, and all item loadings, intercepts, and residual variances were freely estimated. Next, a model was fitted with loadings constrained to be equal across groups (metric invariance). The factor variances were fixed to 1 in the reference group (boys), and were freely estimated in the other group, while the factor means were held equal across groups. Third, a model was fitted with loadings and intercepts constrained to be equal across groups to examine scalar invariance. In the reference group, the factor variances and means were fixed to 1 and 0, respectively, but freely estimated in the other group. Finally, strict invariance was examined, by holding the residuals equal across groups.

Model fit was evaluated by using the following fit indices; comparative fit index (CFI), Tucker-Lewis index (TLI), the root mean square residual (RMSEA), and the standardized root mean residual (SRMR). Cut-off values CFI > .95, TLI > .95, and RMSEA < .05 are required for good model fit, and CFI > .90, TLI > .90, and RMSEA < .08 are indicative of acceptable model fit (Hu & Bentler, 1999; Kline, 2016). Also, change in CFI (Δ CFI) was used to examine change in model fit of multiple group analyses. A change in CFI by .01 or more is indicative of non-invariance between groups (Cheung & Rensvold, 2002).

Reliability analyses (Cronbach's alpha) were conducted to assess the reliability of the factors.

Finally, concurrent validity was examined by calculating correlations between the factors Peer support and acceptance and Relational aggression, and the scale Group atmosphere of the PGCI. Concurrent validity is demonstrated when Peer support and acceptance correlate positively with the Group Atmosphere scale, and when Relational aggression is inversely related or unrelated to the Group atmosphere scale.

Results

Descriptive statistics

Descriptive statistics of all items are depicted in *Table 3.1*. Skewness and kurtosis values for all items were within an acceptable range. ICCs ranged between .05 and .25.

Construct validity and reliability

A CFA was conducted in which a two-factor model was specified, consisting of Peer support and acceptance (eight items) and Relational aggression (ten items). Initial fit of the model was mediocre: $\chi 2$ 134 = 297.45; $p < .001$, CFI = .904, TLI = .890, RMSEA = .059 (90% CI = .050, .069). After deleting three items of the factor Peer support and acceptance ('When youth behave disrespectfully, we say something about it', 'At the group, we accept each other as we are', and 'At the group, we discuss relationship problems') with low factor loadings (<.30), and correlating residual variances of similarly worded items (e.g., 'Youth give each other advice on how to deal with problems' and 'Other youth try to help me with problems'), the model showed a good fit to the data: $\chi 2$ 87 = 117.51, TLI = .978, CFI = .973, RMSEA = .032 (90% CI = .014, .046). Standardized factor loadings ranged from .48 to .66 for peer support and acceptance, and from .56 to .76 for relational aggression.

Reliability was good, with Cronbach's alpha for 'peer support and acceptance' $\alpha = .72$, and 'relational aggression' $\alpha = .90$. The factors were significantly and negatively correlated ($r = -.242$, $p = .001$). These findings imply that both constructs have only 6% of shared variance and can be seen as distinct constructs.

Measurement invariance

Next, we tested for measurement invariance for gender (*Table 3.2*). A model without constraints across groups displayed a good fit (Model 1: configural invariance). Model 2, representing metric invariance, demonstrated a good fit. The change in CFI (<0.01) suggested that there was no significant deterioration in model fit compared to Model 1. Model 3, representing scalar invariance, demonstrated no significant deterioration in model fit across models. Because scalar invariance allows meaningful comparison of latent factor means, we tested differences in mean factor scores between boys and girls, however, no significant differences were found. Model 4, representing strict invariance, indicated significant deterioration in model fit. Partial strict invariance was demonstrated after freeing the residual variances of the items 'Youth behave tough to get accepted into the group' and 'Youth provoke each other here'.

We also tested for differences between boys and girls on individual items. A significantly higher score was found for girls compared to boys on the item 'Adolescents here gossip a lot' ($t(266) = 2.700$, $p = .007$), see *table 3.3*. Regarding the factor Peer support and acceptance, no significant differences were found, see *table 3.4*.

Concurrent validity

To examine concurrent validity, the correlations between the two factors and the scale Group atmosphere of the PGCI were calculated. Both peer support and acceptance ($r = .402$, $p < .001$) and relational aggression ($r = -.405$, $p < .001$) were significantly correlated with group atmosphere in the expected direction. These results indicate that a positive group atmosphere is associated with higher levels of peer support and acceptance, and lower levels of relational aggression, respectively.

Discussion

The purpose of this study was to examine the construct validity and reliability of a self-report questionnaire to assess peer interactions in residential youth care (PIRY). The PIRY was developed as a brief measure to assess both positive and negative peer interactions in residential youth care. The proposed two factor model (consisting of peer support and acceptance, and relational aggression) showed a good fit to the data. Reliability analyses indicated that both factors had good reliability. Also, partial strict invariance was demonstrated for gender, meaning that the PIRY can be used in boys as well as girls.

Most studies on peer interactions focus on the processes and mechanisms through which youth influence each other's behaviour (modelling, differential reinforcement, imitation) (e. g., Burgess & Akers, 1966; De Haan et al., 2010; Sijtsema & Lindenberg, 2018; Thornberry, 1998), or whether youth associate with and develop friendships with peers who display similar behaviour (social preference, selection) (e. g., Kornienko, Dishion, & Ha, 2018; Magalhães & Calheiros, 2015a, 2015b; Tarrant, 2002). Also, studies on peer interactions mostly focus on negative influences of peers, resulting in deviant or criminal behaviour, alcohol/drug use, or school dropout (Dishion & Tipsord, 2011).

The PIRY measures positive peer interactions in terms of peer support and acceptance, characterized by adolescents helping each other, providing each other emotional support, and accepting new group members. These behaviours are indicative of prosocial interactions among peers in the context of residential youth care, which are essential in building a positive peer culture in which youth feel accepted, safe, and in which youth can give and receive emotional and practical support (Brendto et al., 2007; Repper & Carter, 2011). The PIRY also measures negative peer interactions, specifically relational aggressive behaviour: excluding peers from the group, gossip, youth acting dominant, and threatening and provoking each other. These behaviours are indicative of antisocial interactions among youth at the living

group, and are detrimental to a safe and supporting environment, and may lead to bullying behaviour (Barter et al., 2004; Mazzone et al., 2018; Salmivalli, 2010; Sekol, 2016).

By measuring youths' interactions with peers at the living group, the PIRY focuses on an important aspect of the social climate in residential youth care. Several measures that assess social climate are aimed at capturing youths' perception of the overall social climate, in which interactions with peers are embedded in factors such as safety (EssenCes) or group atmosphere (PGCI). Moreover, the items included in the PIRY address behaviours that have actually occurred, according to youth. Existing scales that measure constructs that are related to peer interactions, such as sense of belonging to a group (peer acceptance) and social preference, are often based on sociometric approaches, such as peer nominations (Cillessen, 2008).

Recently, several measures have been developed to assess aspects of group dynamics in the context of residential care, such as group identification (Magalhães & Calheiros, 2015a) and group perception (Magalhães & Calheiros, 2015b). These measures assess either youth's perception of certain characteristics of the group, which can be ultimately characterized as a positive or negative perception, or youth's desire to belong to the group. The PIRY is therefore a new self-report measure that takes a different approach to measure peer interactions in residential youth care. The PIRY can be used in future research to assess peer interactions in residential youth care.

An important methodological limitation is that we used conventional single level CFA to examine the factor structure of the PIRY. It can be argued that perceptions of peer interactions vary across individuals, and groups vary in the average level of positive and negative peer interactions. Therefore, multilevel confirmatory factor analysis (MCFA) is required. An important advantage of MCFA is that the factor structure of a measure can be examined at both the within-group level and the between-group level (Muthén, 1994). However, in the present study, the sample size was insufficient to conduct MCFA. Another limitation is that only self-report ratings of peer interactions were used, and no other measures of peer support or relational aggression were used, hence convergent validity of the PIRY scores could not be examined. Finally, due to the cross-sectional nature of the study, it is unclear whether the PIRY can be used to measure positive and negative peer interactions throughout time.

Future studies should focus on examining test re-test reliability of the PIRY by examining the stability of the PIRY scores throughout a short period of time. In the present study, the relation between peer interactions and group atmosphere was examined. Concurrent validity could be further investigated by examining the relation between peer interactions and occurrence of aggressive incidents at the living group. Predictive validity could be established by examining the relation between peer interactions and youth's level of behavioural adjustment at the end of treatment. Future studies should also include data from other sources, such as observational data or information from staff on the quality of the interactions between peers at the living group. By examining quality of peer interactions at the living group from different perspectives, such as staff ratings and observational data (e. g., incident reports), convergent validity of the PIRY can be examined. Furthermore, future research should focus on studying antecedents of peer support in residential youth care, such as youth's sense of belonging and group identification, and factors associated with transactional processes in the context of residential care, such as support from group workers. Future research should address how these constructs are related to gain a better understanding of how peer support in residential care can be fostered. Limited research is available on this subject compared to negative interactions and aggressive behaviour in residential care.

The present study provides preliminary evidence for the construct validity and reliability of the PIRY, which can be used as an instrument to measure both positive and negative peer interactions in residential youth care at the group level. The PIRY can be used in practice-oriented research in residential youth care to improve the quality of the social environment through monitoring positive and negative peer interactions and, subsequently, the provision of continuous feedback to group workers (Stams & Van der Helm, 2017). Results from the PIRY may be used as input for a discussion between staff and youth about how youth experience interactions with their peers at the living group. Group workers in residential care have the important task to nurture a culture in which youth feel safe, accepted, promoting mutual trust, peer support, and healthy peer relationships (Worthington, 2003). It is important that residential youth care facilities undertake efforts to invest in a positive peer culture through which a therapeutic environment can be established, which contributes to positive developmental outcomes of at-risk youth.

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Conflict of interest

The authors have no conflict of interest to declare.

Data statement

Raw data were generated at twelve Dutch residential youth care centres. Derived data supporting the findings of this study are available from the first author [JS] on request.

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Tables

Table 3.1 *Means, standard deviations, range, skewness, kurtosis, and intraclass correlation coefficients of the items*

	M	SD	Range	Skewness	Kurtosis	ICC
Youth threaten each other here	2.63	1.35	4.00	0.31	-1.09	.16
Youth learn bad things from each other	2.89	1.22	4.00	0.03	-0.83	.06
Youth behave tough to get accepted into the group	3.44	1.32	4.00	-0.60	-0.78	.12
Youth gossip a lot here	3.67	1.31	4.00	0.25	-0.85	.25
Youth here are excluded from the group	2.66	1.25	4.00	0.06	-1.09	.10
Someone creates a bad atmosphere	2.95	1.33	4.00	0.25	-1.26	.11
Someone here acts bossy	2.73	1.45	4.00	-0.11	-0.76	.15
Other youth are often in a bad mood	3.03	1.19	4.00	0.13	-1.06	.08
Youth act jealously here	2.81	1.30	4.00	-0.37	-0.94	.05
Youth provoke each other here	3.34	1.32	4.00	-0.42	-0.90	.16
Youth give each other advice on how to deal with problems	3.12	1.23	4.00	-0.26	-0.78	.20
Other youth try to help me with problems	3.03	1.26	4.00	-0.21	-0.94	.15
There is someone here to whom I can tell my secrets	3.23	1.59	4.00	-0.27	-1.49	.10
We make sure that new youth here feel comfortable	3.61	1.20	4.00	-0.66	-0.34	.18
It is easy to make friends here	3.37	1.26	4.00	-0.37	-0.76	.05

Table 3.2 *Fit Statistics CFA Models PIRY*

	X2	Df	p	X2/df	RMSEA	SRMR	TLI	CFI	Δ CFI
Initial	144.634	87	<.001	1.662	.044	.050	.962	.968	-
Configural	257.087	174	<.001	1.478	.053	.059	.946	.956	-
Metric	265.114	187	<.001	1.952	.049	.062	.953	.958	.002
Scalar	280.437	200	<.001	1.402	.048	.063	.955	.957	.001
Strict	315.875	215	<.001	1.469	.052	.074	.947	.946	.011
Partial strict	300.431	213	<.001	1.410	.049	.070	.954	.953	.004

Note. X2 = Chisquare; df = degrees of freedom; CFI = comparative fit index; TLI = Tucker-Lewis Index; RMSEA = root mean square error of approximation; SRMR = standardized root mean square residual

Table 3.3 *Means, standard deviations, and differences between boys and girls in relational aggression items*

	boys (n = 155)		**girls (n = 190)**		
	M	**SD**	**M**	**SD**	**t (df)**
Relational aggression	2.92	0.88	3.09	0.98	-1.669 (343)
Youth threaten each other here	2.63	1.27	2.92	1.21	-0.039 (343)
Youth learn bad things from each other	2.85	1.24	3.53	1.29	-0.485 (343)
Youth behave tough to get accepted into the group	3.34	1.35	3.84	1.28	-1.292 (343)
Youth gossip a lot here	3.46	1.32	2.77	1.26	-2.700 (343)**
Youth here are excluded from the group	2.51	1.21	3.05	1.33	-1.966 (343)
Someone creates a bad atmosphere	2.83	1.32	2.84	1.41	-1.544 (343)
Someone here acts bossy	2.59	1.48	3.05	1.17	-1.559 (343)
Other youth are often in a bad mood	2.99	1.22	2.89	1.33	-0.457 (343)
Youth act jealously here	2.70	1.26	3.37	1.29	-1.324 (343)
Youth provoke each other here	3.30	1.35	2.63	1.41	-0.457 (343)

** $p < .01$.

Table 3.4 *Means, standard deviations, and differences between boys and girls in peer support and acceptance items*

	boys (n = 155)		**girls (n = 190)**		
	M	**SD**	**M**	**SD**	**t (df)**
Peer support and acceptance	3.23	0.85	3.31	0.94	-0.820 (343)
Youth give each other advice on how to deal with problems	3.15	1.20	3.10	1.26	-0.558 (343)
Other youth try to help me with problems	2.99	1.26	3.06	1.26	-0.893 (343)
There is someone here to whom I can tell my secrets	3.05	1.57	3.37	1.60	-1.913 (343)
We make sure that new youth here feel comfortable	3.59	1.13	3.63	1.26	-0.252 (343)
It is easy to make friends here	3.36	1.23	3.37	1.28	-0.091 (343)



Chapter 4

With connection, less correction: Gender-specific needs of girls' residential group climate: A mixed method non-randomized case-study

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Abstract

Background: A need-supportive group climate is a prerequisite for successful treatment in secure residential youth care. For girls, positive relationships with peers are an important part of group climate. Relational aggression threatens the residential group climate.

Objectives: This study explored whether the quality of the interrelationships between girls in a residential group in the Netherlands can be actively promoted by a group counselling program; the aim is to elucidate how residential group climate affects treatment results. The girls in this single gender residential group had been admitted because of (suspicions of) commercial sexual exploitation.

Methods: The study combined participatory observations with a case-based time series design. For 18 weeks changes in the residential group climate and the interrelationships between the girls as well as achievement of treatment goals over time were measured.

Results: The residential group climate in this group was negative at the onset, a lot of relational aggression between girls was found. Considering treatment, some girls were making significant progress but other mainly deteriorated. Moderate improvement of residential group climate was visible after a group social worker was permanently present in the group.

Conclusions: A group counselling program aimed at improving interrelationships cannot be a cure for an overall negative residential group climate. This article offers implications for preventing and recognizing deterioration of residential group climate and for improving residential group climate for girls.

Keywords: Treatment, Girls, Mixed methods, Relational aggression, Secure residential youth care, Group Counselling

Introduction

When adolescent girls, are victims of commercial sexual exploitation, are at risk of being involved in commercial sexual exploitation or are involved in a dependency relation in the Netherlands they can be coerced to receive treatment in Secure Residential Youth Care (SRYC). In the Netherlands each year, about 1.500 adolescents are treated in SRYC, about half of them are girls. SRYC is considered to be 'a last resort' for adolescents who need protection from themselves or their dangerous environment (Eltink et al., 2017; Harder, Knorth, & Kalverboer, 2015; Hickle & Roe-Sepowitz, 2018). In SRYC these girls are usually treated in single gender residential groups of 6-12 adolescents, guided by trained group social workers (group social workers). These traumatised girls combine internalising (depressed, anxious, self-harming and suicidal) with externalising (aggression, delinquency) problem behaviour with addictions and low IQ (Dirkse, Eichelsheim, Asscher & Van der Laan, 2018). This image corresponds with international descriptions of groups of girls in SRYC (Biswas & Vaughn, 2011; Leenarts, Hoeve, et al., 2013; Leve, Chamberlain, & Kim, 2015; Miller, Winn, Taylor, & Wiki, 2012; Van Vugt, Lanctôt, Paquette, Collin-Vézina, & Lemieux, 2014; Zahn, 2009).

The primary goal of SRYC is to prepare girls to return to society without being revictimized. In order to achieve this goal, the risk factors mentioned above have to be reduced; effective treatment should be in line with the intensity of the risks (Assink et al., 2019), the needs of the girls (Chesney-Lind, Morash, & Stevens, 2008) and the possibilities and learning style of each girl as defined by the Risks Needs Responsivity (RNR) model (Andrews & Bonta, 2010).

To our knowledge the best relevant figures about possible reduction of problems in Dutch SRYC come from a study by Dirkse and colleagues (2018) on the difference in problem behaviour as measured by the Child Behaviour Check List (CBCL) between the beginning and end of placement of 43 girls and 46 boys in Dutch SRYC. It showed that in 46% of the cases, there was a significant decrease in problems, in 22% of the cases there was no measurable difference, and in 31.5% of the cases there was a significant increase of problems. No differences were found between boys and girls.

A prerequisite for successful therapeutic change for girls during their stay at SRYC is a positive residential group climate appropriate to their needs and within which they are able to work on their normal developmental tasks such as preparing for a profession by schooling

(Leipoldt, Harder, Kayed, Grietens & Rimehaug, 2019; Somers et al., 2018); achieve a positive identity (Erikson, 1995) or discover their sexuality (Bancroft, 2008).

In a systematic review Leipoldt and colleagues (2019, p.434) found ‘associations between determinants of social climate and positive outcomes in in therapeutic residential youth care.’ The strongest associations with positive outcomes were found in studies describing an open (positive) climate, defined as an environment with high levels of staff support, peer support and youth autonomy, low levels of youth repression and anger, and a clean, safe, clear and structured environment’. Youths' perceived repression by staff members (De Valk et al, 2017), staff control and limiting youth’ autonomy as determinants of social climate are associated with negative outcomes of social climate in (S)RYC (Leipoldt et al, 2019). If daily life in the residential group frustrates the basic psychological needs for ‘autonomy’ (De Valk, 2019; Bryson et al, 2017), ‘relatedness’ (Ayotte, Lanctot, & Tourigny, 2017; Roest, Van der Helm, & Stams, 2016) and ‘competence’, as defined in self-determination theory (Ryan & Deci &, 2018; Van der Helm, Kuiper, & Stams, 2018), not only healthy development is if peercompromised but it also results in anger, reactance, (Parhar, Wormith, Derkzen, & Beauregard, 2008), negative relations to group social workers and peers (Leipoldt et al, 2019), aggression (Van den Tillaart, Eltink, Stams, Van der Helm, & Wissink, 2018) demotivation, depression and fear (Van der Helm, 2011).

During the last decade the body of research on gender specific needs in residential group climate of girls in (S)RYC is growing (Lanctôt, 2018; Lanctôt, Lemieux, & Mathys, 2016; Nijhof, 2011; Van Damme, Vanderplasschen, Fortune, Vandevelde, & Colins, 2019; Zimmerman & Messner, 2010). The results of these studies have in common that good relationships with group social workers and peers are important for girls to be safe and protected and in fact are a prerequisite for recovery. A supportive atmosphere is important in order to promote girls’ resilience after sexual abuse (Domhardt, Münzer, Fegert, & Goldbeck, 2015; Haffejee & Theron, 2017). Negative aspects of atmosphere as stigmatization, self-blame and shame hamper resilience (Kennedy & Prock, 2018). ‘Atmosphere’ is also related to the quality of peer interactions in the residential group (Heynen, Van der Helm, Cima, Stams, & Korebrits, 2016; Van der Helm, 2011). In peer relations in the residential group aggression is an important phenomenon (Pinchover & Attar-Schwartz, 2014; Ros, Van der Helm, Wissink, Stams, & Schaftenaar, 2013; Van den Tillaart et al., 2018). Although relational aggression is not a gender specific risk factor (Casper & Card, 2017; Card, Stucky, Sawalani, & Little, 2008; Eltink et al., 2017; Henington, Hughes, Cavell, & Thompson, 1998; Mrug,

Elliot, Davies, Tortolero, Cuccaro & Schuster, 2014) in studying residential group climate it is important to consider not only the open, physical forms of aggression when investigating the residential group climate but also the more indirect forms of aggression like bullying, harassment, gossip, exclusion and disqualification of others, as an aspect of atmosphere (Sekol, 2016; Sonderman et al., 2020). During adolescence, peers are essential sources of social support, vital for developing self-worth (Gorrese & Ruggieri, 2013).

Indirect aggression prevention and enhancing support from peers is a part of several programs developed to intervene after trauma from sexual abuse (Brauers, Kroneman, Otten, Lindauer, & Popma, 2016; Leenarts, Diehle, Doreleijers, Jansma, & Lindauer, 2013) which are used in SRYC. However, insight in the effectiveness (qualitative as well quantitative) of these programs and the relation with therapeutic outcomes in daily practice is scarce.

Current study

The aim of this study is twofold. Firstly, we want to explore whether the quality of the interrelationships between the girls in a single gender residential group and realization of the treatment goals can be actively promoted by a group counselling program, with which explicit attention is paid to relevant themes relating to the interrelationships between the girls during a weekly one-hour session. We expect that paying explicit attention to the quality of the interrelationships between the girls would successively improve the residential group climate and improve the girls' possibilities to work accordingly towards their treatment goals. Secondly, the aim is to elucidate more clearly *how* the residential group climate affects desired treatment results during the groups counselling program.

The case: the described secure residential group

The residential group (research unit) is part of a centre for SRYC. The centre is an independent division of a large organization for (residential-) youth care and education in the Netherlands. At the time the data were collected (start of 2018) youth care in general in the Netherlands was into a transition in which the government announced an organizational change and a general financial cutback of funding of youth care. This caused a great deal of organizational and financial turmoil for the centre. As a result, during the research phase, management discussed moving the Centre to another location which for many employees would mean not being able to continue working there, which reduced the resilience of employee. Reduced resilience of professional workers may have implications for the residential group climate (Souverein, 2013). The centre was situated in a former youth

detention centre located in an urban region in the Netherlands. In this building there were three secure single gender residential groups of 8 to 10 girls aged 12 to 18 and a school. Each residential group was counselled by at least two group social workers at a time. The main purpose of the delivered treatment as usual is to prevent revictimization (Bramsen et al., 2016).

Group counselling program

Since for girls in residential care positive social relations with peers are crucial, Bekker (2017) developed a series of group counselling sessions that were designed to actively influence group dynamics in order to improve the atmosphere in the residential group by stimulating positive peer relations. The program was (under supervision of the first author) designed to fit in with the working method used in the centre a year before the start of this study. It was based on theoretical expectations into the needs of girls in residential groups (Lanctot, 2018; Sekol, 2016; Sonderman et al., 2020) and on the solution focused approach as described by Berg (1994). Focus of the group counselling sessions was to reduce relational aggression and improve support and understanding among girls in the residential group. Twenty-seven group counselling sessions were arranged in three themes: '*Getting to know each other*', '*The individual in the group*' and '*Girls sticking up for each other*'. Group social workers could choose which session would meet the needs of the group at any moment in time. Before the start of this study there was a presentation to the professional team and a training for group social workers in how to use the program for group counselling.

Methods and Materials

Design

The study is a mixed method case study. The study consisted of two mutually reinforcing parts, a quantitative and a qualitative part. The quantitative part with 18 weekly measurements with self-report questionnaires used a case-based time series design. We compare the outcome measures of an individual participant with themselves, because in residential youth care there cannot be an experiment with randomized allocation of participants to investigate the effect of the admission. The case-based time series design is then an option to measure (significant) individual differences over time. The residential group is the research unit (n=1). We analysed data on an aggregated group level (Kazdin, 2019) and on the individual level of each participating girl using technical documentation on single case designs by Kratochwill et al (2010). In this part, we used the first 3 weeks of the study as a baseline to test change over

time, as there was no experimental design with a pre- and post-measurement (AB-design), but instead the evaluation of a change in an existing group of individuals.

Parallel to this quantitative part, we carried out a qualitative study using participating observations. Observations were done firstly into the way the program for group counselling was executed (second aim). And secondly, into the residential group climate as a means of understanding the quantitative findings on residential group climate (first aim).

A pragmatic stance was taken into the integration of methods. The qualitative part of the study fits into the tradition of action research (Lewin, 1946) in the way that during the study the researchers meant to influence the residential group climate by reflecting on action with the group social workers and (once) managers of the centre as well as to generate general knowledge about gender-specific needs in relation to girls' residential group climate. In any (qualitative-) research the researcher influences the data (Finlay, 2002), reflecting on the involvement of the researcher improves validity. This necessary reflection on influence of the researcher was done in two ways. First the observational notes by the first researcher (senior female youth social worker and psychologist) and that included reflective remarks (introspection) were halfway discussed with a team member that authored the paper (see also *Table 4.1.0*). And second, when analysing the observational data, a second independent researcher (senior male youth psychologist and therapist) was asked to take notice of the influence of the researcher on the observations done (intersubjective reflection).

Participants

All girls that lived in the residential group during the study participated in the quantitative part of the study, all were admitted because there was (suspected) commercial sexual exploitation. In total 14 girls were admitted during the study period. Nine of them participated long enough to gather a large enough data string to be able to analyse their individual data with the time series methodology: we accepted data strings larger than 11 weeks. Of these 14 girls, one girl was transferred to another centre after three weeks of stay after she deliberately started a fire in the centre. One girl only arrived when the study was already in an advanced stage, one of the girls was transferred to a residential group in the centre for children with mild intellectual disabilities. Two girls finished their treatment soon after the start of the study. In total nine girls (mean age 15.3) were therefore included in the quantitative part of the study. The data on residential group climate of all participants were analysed on the group level. The treatment progress data were analysed on individual level. We granted a financial reward to fill out the

questionnaires on a weekly basis. Loyal participation over the weeks of the study resulted in a rising reward. This reward added up to a maximum of 110 euros at the end of the study of 18 weeks. The girls were between 14 and 17 years old, were of various ethnicities. All but one of the girls were born in the Netherlands. Also, in terms of education there were large differences. One girl clearly had learning difficulties, another girl was in preparatory scientific education, most of them were somewhere between those extremes. Most girls combined internalising with externalising problems. Most girls were traumatised, some from an early age onwards and others starting at adolescence.

Ethics

In a group session, all inhabitants were asked to participate in the study. The first author led the group session, introducing the persons of the researchers, explaining the purposes and procedures of the study and distributed a flyer with information. Any newcomers during the 18 weeks the study lasted were also asked to enrol in the same manner. Written informed consent was signed. The centre informed parents and each parent was given an information letter with the possibility to ask the researcher for more information and to object to the participation of their child. None of them objected.

Procedure quantitative part of the study

For 18 weeks the four questionnaires (see further on) were weekly filled out by all residing adolescents of the specific residential group. Fill out sessions were scheduled weekly on the same day every week after a school break, at the kitchen table of the residential group. Two researchers (one the first author) not involved with the centre took turns in gathering the data. In the introduction we asked for a serious attitude in filling out the questionnaires in return for the reward. Seriousness is necessary to avoid a threat to response validity sometimes called the 'Jokester effect' in self-reports with adolescents (Fan et al., 2006). During the study researchers sometimes reminded girls of this agreement, because they didn't show the attitude needed. This reminder was enough to correct the behaviour.

Procedure qualitative part of the study (see also Table 4.1.0)

First, each time the researchers came to the centre for the quantitative measurements, they made notes in a log on how the girls participated in filling out the questionnaires. Second: all time spend by the first author apart from gathering quantitative data, she participated in daily social activities such as dinnertime or free interactions in evenings. After each visit of the centre observational notes were made, aiming to make a factual registration of everything that

happened. Reflective remarks on the observations and the possible relation to the observer's presence, were also made. In total in 22 instances during the 22 weeks from preparation until the end of the study observational notes were taken. Third, the first author participated in four sessions of the group counselling sessions about relational aggression. Two of them were recorded after oral informed consent by the participants. The third session was not suitable for recording because a film was also used, which literally gave too much noise. The other session was not recorded because the researcher felt that recording would be too big a challenge to the feelings of safety of the participants. Observational notes were made during these sessions. Focus of the participating observation was the way the group social workers lead the sessions and if the session was contributing to its aims. Each session was evaluated afterwards with the group social workers.

To merely observe is not possible, and in this case the researchers' aim was to influence the climate. In the current study the researcher was focusing on the social interactions between the professionals and girls in their work and daily lives. The aim to observe (scholarly research) was mixed with the aim to improve group climate (action research stance). Reflection on influence of the researcher on data gathering and interpretation was done in two ways. First the observational notes that included reflective remarks (introspection) on the relation to the behaviour of the researcher were halfway discussed with the second author (CK), familiar with, but not attached to, this specific centre for secure residential care. When analysing the observational data, a second independent researcher, an experienced youth cognitive behavioural therapist and psychologist, familiar with the target group but not with these specific girls, was asked to take notice of the influence of the researcher on the observations done (intersubjective reflection).

Quantitative measures

The residential group climate

We used the Group Climate Instrument (GCI). The GCI is a self-report questionnaire containing 29 items, an improved version of the Prison Group Climate Instrument (PGCI) developed and validated by Van der Helm (2011) to measure the perception of group climate in a secure residential setting. Reliability analysis of the GCI scores in this study, (Cronbach's alpha), showed that all dimensions of the questionnaire were sufficiently reliable. For 'Support' (11 items), $\alpha = .88$; 'Growth' (6 items), $\alpha = .89$; 'Repression' (7 items), $\alpha = .58$; and 'Atmosphere' (5 items), $\alpha = .65$. The total reliability of the questionnaire was $\alpha = .85$. Notice

that in the original validation studies by Van der Helm (2011) reliability score of the repression subscale was α = .65.

Peer interactions in the residential group

We used the Peer Interactions Residential Youth care (PIRY) developed and validated by Sonderman et al. (2020). This questionnaire consists of two subscales, 'Peer support and acceptance' (5 items) and for 'Relational aggression' (10 items) in residential groups with adolescents (Sonderman et al., 2020). Reliability analysis of the PIRY in this study measured for 'Peer support and acceptance' Cronbach's α = .83 and 'Relational aggression' Cronbach's α = .91. If the 'Peer support and acceptance' score exceeds the 'Relational aggression' score, it indicates positive peer interactions.

Treatment goals

Are measured by two outcome variables: problem behaviour and trauma symptoms.

Problem behaviour: was measured by the 19-item self-report Dutch version of the Brief Problem Monitor Youth (BPM-Y) developed and validated by Piper, Gray, Raber, & Birkett (2014). Using a 3-point Likert scale, ranging from 1 (not at all) to 2 (a little) to 3 (absolutely). Reliability analyses showed high internal consistency for the BPM-Y in this study: Cronbach's α = 0.80. The (6 items) sub-scale with internalising problems measured a Cronbach's α = .77; the (7 items) subscale that measures externalising problems measured a Cronbach's α = .62. The last (6 items) sub scale which measures attention deficits measured Cronbach's α = 0 .78.

Trauma symptoms: the Dutch Children's Revised Impact of Event Scale (CRIES-13), developed and validated by Verlinden et al. (2014), was used to measure trauma symptoms. In our sample, we found in this study Cronbach's α = .93 for the total scale. In this study, we used the total score that can serve as a brief screening for trauma symptoms.

Analysis of quantitative data

Considering the residential group climate

The GCI weekly mean scores were compared to a reference group of girls in SRYC with a Cohens d test (see *Table 4.1.2*). Furthermore the mean scores per week were analysed with the Simulation Modelling Analysis (SMA), the time series analysis program for short (<30) time-series data streams, version 8.3.3 (Borckardt et al., 2008a) that controls for autocorrelation, which is the dependence of a value on the value of one or more of the

immediately preceding measurements. This to depict the residential group climate per week (*see Figure 4.2*). The program uses bootstrapping technology to amplify single-subject data. It can be used to test hypotheses about correlations between an independent- (the adolescent or the residential group) and the dependent variable (the score on a specific questionnaire). The effect size used was Pearson's '*r*'. An '*r*' between .10 and .30 is a small correlation, an '*r*' between .30 and .50 was considered middle-sized, and '*r*'>.50 is large. All probability values (*p*) are two-sided and with a value of < .05* or < .01** considered significant. Changes between data points are reported about a change in 'level' or 'slope' when relevant (see also Kazdin, 2019; Kratochwill et al, 2010; Borckardt et al, 2008b). For instance, does a shift from a clinical level of trauma symptoms to a non- clinical level occur? Or with respect to a change in 'slope': for example, do external behaviour problems decrease?

Considering the peer interactions in the residential group

For the PIRY the weekly scores on the support and acceptance scales were compared (using SPSS 26) to the relational aggression scale with a Wilcoxon signed ranks test (see *Table 4.2.1* and *Figure 4.3*).

Considering treatment goals

Individual mean scores per week, per adolescent and per questionnaire were analysed with Simulation Modelling Analysis (SMA). The question answered was -although about five dimensions of possible change- univariate: does stay in the centre leads to improvement of the observed variable. To improve statistical power and reduce bias, we imputed missing data (see *Tables 4.3.1, 4.4.1, 4.5.1, 4.6.1 and 4.7.1*) with the average of the two surrounding data points (see on missing's with SMA: Graham, 2009). Furthermore, we determined the Reliable Change Index (RCI) of the BPM (see *Tables 4.3.3, 4.4.3, 4.5.3 and 4.6.3*) and Cries-13 see *Table 4.7.3*) scores. The RCI statistic determines the magnitude of the change of a given self-report measure to be considered statistically reliable. When using the RCI, the calculation of the standard error (SE) is important. Here the Cronbach's Alpha was used to calculate this. In case of the Cries-13, the Standard deviation (SD) and the Alpha of a clinical norm group were available (Verlinden et al., 2014). In case of the BPM, these data were not available, and the SD was calculated based on the first measurement in the present study and the Cronbach's Alpha's from this study (see Maassen, 2004).

Analyses of the qualitative data

On the group counselling sessions

Four (of 19 total) sessions of the group counselling program were observed. This selection was a convenience sample. Sessions took place in week 6; on the topic of 'girls bullying in groups'; in week 11 on 'getting to know each other'; in week 14 about the 'role's girls took in this group'; and in week 19 a quiz about bullying. The factual and reflective notes from the participating observations of the group session and the written notes after two audio taped sessions were cut in 28 meaningful pieces which were possible answers to the question of whether and how this program affected relations between the girls. The pieces were given codes and these codes were organized into three themes (see code tree; *Figure 4.1*).

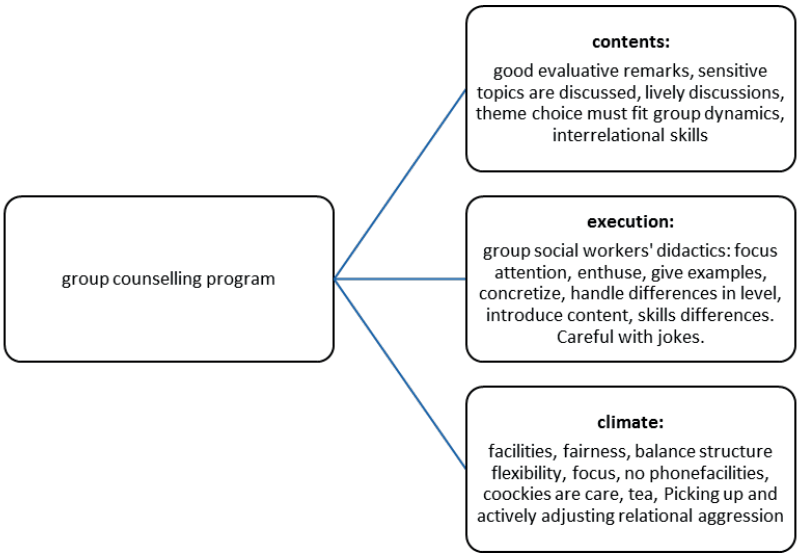


Figure 4.1 *Code tree group counselling program*

Using this code tree, a second researcher3 was asked to independently analyse the observational data from the group counselling sessions on the issue of training integrity: are they executed as intended? And second, what is noticed about the girls' behaviour during these sessions? The two researchers discussed their findings in order to agree on the results. On the basis of this discussion no themes were added.

[3] This was a senior children and youth psychologist and therapist with knowledge of his target group of girls and in counselling social workers in practice. He had no relation to the centre.

On the residential group climate

All observational notes were analysed using the following theory-based sensitizing concepts: 'relational aggression', 'peer support', and 'acceptance' (Sonderman et al, 2020) and the basic psychological needs of relatedness, autonomy and competence (Ryan & Deci, 2018). The influence of the researcher on the data was also considered. In addition, open coding was used to allow for other possible explanations of the qualitative findings on residential group climate. The theme 'organizational climate was added after coding. The second researcher analysed the observational notes independently on the same above-mentioned concepts. No new themes were added.

Results Quantitative Research

Residential group climate by GCI

The weekly mean scores of all girls (n=14) (see *Table 4.1.1* and *Figure 4.2*) were compared with the mean score of the reference group (n=71) of girls in SRYC. Hedges'g is suitable to test for significance when different sample sizes are used. The residential group climate in the study group at any moment in time, as measured by the GCI, was significantly worse than that of the reference group with effect sizes ranging from small to large. Subsequently, we also made a comparison between the GCI scores per scale over the total research period and the scale scores of the reference group (see *Table 4.1.2*). Here, too, it was found that the residential group climate in the studied group was significantly worse than that in the reference group on all scales, with an effect size from small to large.

After simulation modelling analysis (SMA) with correction for auto correlation we found that the residential group climate deteriorated significantly over time during the time of the study (see *Table 4.1.3*).

Because after week ten in the observational reports a change in residential group climate was noticed after one girl set a fire in the centre (see later on), we made a graph of the GCI scores (*Table 4.1.4*) per week (*Figure 4.2*) and noticed a change in slope after week ten. We ran a second SMA analysis to test the significance of the change in the level of the scores (see *Table 4.1.4*). We tested difference between weeks nine, ten and eleven as a baseline (before the fire) and the weeks starting from week twelve as test phase (after the fire) and found a significant improvement of residential group climate.

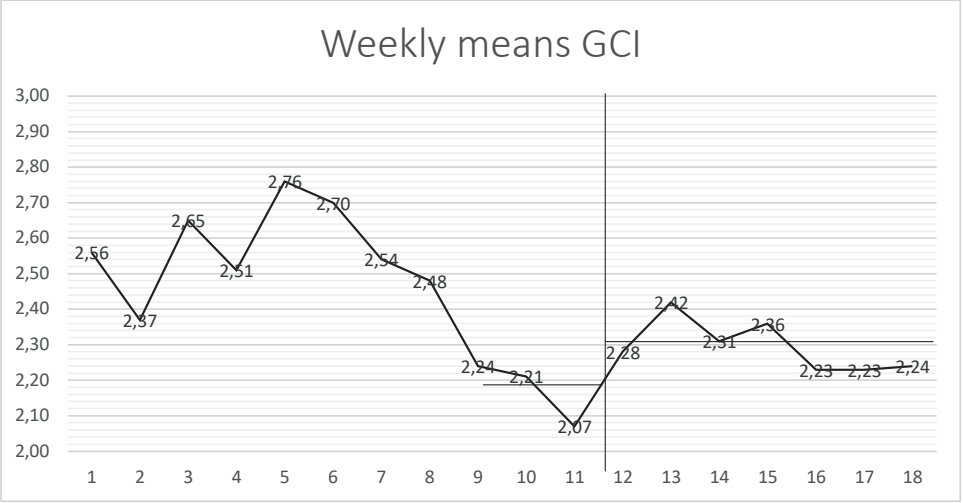


Figure 4.2 *SMA means group climate weeks before and after the fire (level p<0.00). See also Table 4.1.4*

Peer interactions by PIRY

We made a graph of the weekly scores (*Figure 4.3*) which shows that in half the time more relational aggression was given than support and acceptance and in the other half the other way around. The differences between the scales were tested with a Wilcoxon's signed rank test (see *Table 4.2.1*) which shows that the differences between the scales were nonsignificant (except in week 3).

SMA analysis of the peer interactions as measured by the PIRY shows that the support and acceptance of each other significantly declined over the 18 weeks of the study, compared to baseline (first 3 weeks), see *Table 4.2.2*. Relational aggression stayed the same over time, see *Table 4.2.1* for raw data.

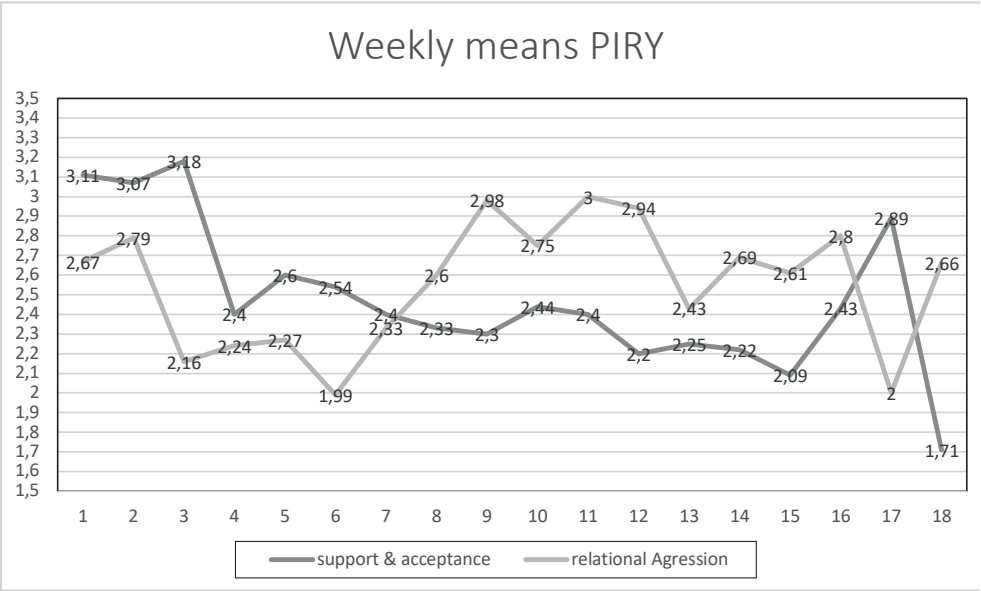


Figure 4.3 *Means peer interactions per week. See also Table 4.2.1*

Results treatment effect

Scores of Problem behaviour (respectively the BPM-Y Total (*Table 4.3.1*), the BPM-Internalising problems (*Table 4.4.1*), the BPM- Externalising problems (*Table 4.5.1*), The BPM Attentions deficits (*Table 4.6.1*) and the CRIES-13 (*Table 4.7.1*) are measured per girl and per week. Each girl's score has been tested with SMA for significant changes over time between baseline (week 1-3) and weeks 4 to 18. See *Table 4.3.2* for the BPM- Total, *Table 4.4.2* for the BPM Internalising problems, *Table 4.5.2* for the BPM Externalising problems, *Table 4.6.2* for the BPM Attention deficits and *Table 4.7.2* for trauma symptoms with the Cries-13. Some girls significantly improved, others significantly deteriorated, and some girls score no difference. The strength of any individual change in problem behaviour and trauma symptoms was tested with the RCI (see *Tables 4.3.3; 4.4.3; 4.5.3; 4.6.3 and 4.7.3*). In *Figure 4.4* an oversight of the changes per girl is shown.

	girl 1	girl 2	girl 3	girl 4	girl 5	girl 6	girl 7	girl 8	girl 9
BPM/T	i	i/m	i/m		d	d	d	d	i
BPM/I	i	i	i		d	d/m	d	d	i
BPM/E	i	i/m	i/m		d	d	d		
BPM/A	d	i/m	i/m		d	d/m	d/m		
Cries-13	i/m	i/m ocr	i/m	i	d icr	i	i/m ocr	i	d
Note: i= improvement, d= deterioration, no colour = no meaningful change; ocr= moved out of clinical range; icr =moved into clinical range; m = significant RCI									

Figure 4.4 *Change in treatment goals*

Results Qualitative Research

A. Group counselling sessions

In answering the question of whether and how this program affects the interrelations between the girls three themes arose from coding the observational data (see *Figure 4.1*). It is discussed in turn how the content of the sessions was appropriate for the girls, what can be learned about how the sessions were carried out by the group social workers and how the climate during the sessions influenced the results.

Content of the sessions observed

The themes that were discussed resonated with the girls. For example, when the girls were asked a question about online bullying during the quiz, they mentioned exposure of nude photos, a subject that several girls had experience with. And, the girls themselves asked -exited- in week six to talk about the subject of girls' roles and bullying strategies. This session was preceded by a conflict about the actual bullying of a new girl in the residential group earlier on. The new girl reacted verbally aggressive to the fact that someone trespassed her room without permission and left dirt in it. During the group session, girls didn't commit to the subject of bullying and kept their cards close to their chest. Demonstrating that the timing of thematic choices which is a prominent part of the design of the program, is indeed critical. The relevance of the topics showed furthermore in evaluative remarks made by girls: *'…knowing what other girls think about you is very useful…' or: '…One must remember*

about these group roles, one isn't a Simm's avatar, you can't pick and choose…sincerity and honesty are necessary ingredients…'.

The execution of the sessions needed basic didactic competence

Group counselling with these adolescents appeals to didactical skills that were not anticipated on in the design of the sessions and were not shown by most group social workers. Skills like creating and keeping attention focus, being alert on level differences, balancing between targeting the program and flexibly deviating from the structure when the objectives so require and at the same time guarding the pedagogical climate, turned out to be typical skills needed for leading a counselling session.

It takes a positive climate to make a positive climate

Responsivity to all the needs of the girls communicated in group sessions is in many ways a challenging task for group social workers. The way food and treats were handled is a terrain that was a continuous subject for communicating on the relational level for the girls. For example, during the group sessions the idea was to create a relaxed, homely atmosphere. Cookies were part of that setting. For example, the last time the first author came to observe in the group she brought special delicacies as a thank you and goodbye. The girls couldn't stop discussing the different flavours and superb quality. The toughest girl in the group came to join the session a bit later on. When she noticed that there were cookies saved for her, she beamingly said: *'…oooh, I have not been forgotten…'*

The girls used relational aggression during the sessions. Some group social workers reacted very responsive, naming it and correcting it. This behaviour was very effective in stopping the aggression. Other group social workers often seemed too busy to recognize the relational aggression expressed with food and other daily live issues.

Creating a learning atmosphere requires a balance between structure ('we share cookies in a fair way') and flexibility. Twice a session started and was later on interrupted to correct the sort of shoes the girls wore. Shoes had to be closed, slippers were not allowed. The atmosphere didn't improve, this led to the girls sticking together, talking out loud, and not paying attention to the group social worker, possibly to oppose this seemingly petty rule.

B. Residential Group Climate

To give meaning to the quantitative data, the observational notes were analysed along the sensitizing concepts of relational aggression and peer support and acceptance and the basic

psychological needs for relatedness, autonomy, and competence. After discussion between the two analysing researchers, the concept of 'organizational climate' as a sensitizing concept was added.

Parallel processes

Staff also need a safe working environment. During the training of the staff, it became clear that the board of directors decided that the centre had to move for financial reasons to a faraway location. Daily management was busy elsewhere and the director of a larger part of the organization trivialized the fears of employees concerning employment security. In the residential group the stress of staff was tangible on moments were there were many group social workers available and still everybody was very busy with all sorts of tasks in an office while no one was managing the residential group. Central figures in the team were on leave: a sick leave and a maternal leave of two seniors was stressful. Things really hit a low point in week ten when a girl in the residential group lit a fire. It seemed that the formerly known to be competent group social workers, had lost their responsivity to the needs of the girls that were locked in their room during the fire and were obviously extremely scared. Playing down their fear one group social worker said to the researcher: *'…Well, things like a fire happen, they are part of the deal here….'*.

Prying eyes can be scary

In this for employees unsafe times it took time for the researcher to gain trust. Not only from the girls, but also from staff, although the researcher was known to some of the staff and management due to previous pleasant collaboration in developing the general methodology and the peer interaction module, it was difficult to reflect on the things that happened on the residential group, staff often rationalized the observed repression: *'…We need to raise our children in this country with more rigor…'*. Discussing the findings on repression with the centre's pedagogue in the fifth week, seemed to help a bit. Group punishments were no longer executed. The girls, like the staff, took a long time to overcome their distrust to the researcher.

Group dynamics

During the first seven weeks of the study many girls left, and new girls came. This elicited strong reactions, girls reacted with physical and relational aggression. The girls that were there before, started to defend their positions in the pecking order by tormenting the newcomers. Newcomers often were very high in stress level, worn out by the life beforehand and ready to behave aggressively and putting up a mask of hardened toughness. At the same

time, group social workers were not present in the group, most of the time they very busy in an office.

Climate change is possible

During the period of the study there is a ‘before the fire’ and an ‘after the fire’ phase. Some of the beforehand observed unspeakable negative aspects of the group climate were discussed; a senior group social worker returned from maternal leave which calmed the colleagues. But the most relevant was the team’s decision that at all times at least one group social workers had to be available in the group, that is, not in the office. A series of positive actions were initiated. The living room was re-decorated, and the girls visibly flourished. Food was discussed with approval by them. When potential conflicts arose, the group social worker was in touch with what was going on and easily de-escalated. The atmosphere in the group was remarkably influenced by the extent to which efforts were made to promote normal domestic conviviality, empathetic handling of physical care for the girls was in place. Then mutual interactions became more positive.

Physical care

The girls reacted very sensitive to the state of their bodies, consistent with the hyper-sensitivity that traumatization can cause. Physical displeasures they experienced intensely. Negative emotions may have been translated into physical complaints and psychosomatic complaints were clearly perceptible. Harsh coping by group social workers exacerbated the negative attention calling and perceptible gloominess of some girls. One new girl entered the centre skinny, hunted and uptight. After a few weeks she had gained a lot of weight and developed a really nasty eczema and was denied access to a GP. After the fire when the girl did see a GP; the eczema improved at the same time as the gloominess. Attention to and care for physical complaints is experienced as very beneficial by the girls.

Peer support

Peer support was more common when the group social workers were present and stimulating. In those circumstances it strengthens itself. After the fire for instance, one of the girls had a dislocated shoulder and, in the household, it was her job to change the garbage bag. The group social worker asked if someone would take over that task. Four girls jumped up to help out.

Relational aggression

A great deal of relational aggression was observed during the study. It was noticed that if a group social worker simply mentioning what happened was often enough to make it stop. Also, if someone openly took it up for the person who was lowest in the pecking order, then that also reduced the aggression. In case of more serious forms of bullying, those strategies were not enough. Serious bullying was witnessed towards new girls. This behaviour needs a clear boundary. Twice (before the fire) the researcher witnessed serious bullying of newcomers and she tried to correct the behaviour in the absence of present group social workers. This was not accepted by the girls. Behavioural corrections were only accepted when there was a relationship with the person giving the correction. After the fire less of such corrections were needed because the group social workers were present in the group and there were no newcomers.

Discussion

The aim of this research was first, to explore whether the quality of the interrelationships between the girls in a single gender residential group and realization of the treatment goals can be actively promoted by the group counselling program. The results of the quantitative measures and observational data did not support this expectation. Although the content of the program was observed to be relevant and engaging for the girls the execution and implementation of the program could be improved. The explanation for the lack of improvement in interrelationships between the girls may lay in the baseline situation: the measurements with the GCI, and the observational data show that from the start of the study there was an integral negative social climate on this residential group. It turned out that it is not feasible to expect an hour a week to be sufficient to improve integral negative social group climate. This leads to the conclusion that the program itself seems relevant and promising to influence the interrelationships because it uses ‘positive psychology’ (Berg, 1994; Leipoldt et al., 2020; Sonderman et al., 2020). But it is not a sufficient means to turn around an integrally poor residential group climate in a positive way where repression of the psychological need for autonomy generates anger and anxiety (De Valk, 2019; Van der Helm, 2011).

The second aim of this study was to elucidate more clearly *how* the residential group climate for girls affects treatment results. Throughout the research period in this study location the residential group climate was poor in all respects. Under these circumstances no progression in achieving the treatment goals can be expected, although some girls made meaningful

progress, there was also meaningful decline, and compared to the study by Dirkse and collegues (2018) also the amount of deterioration seems meaningful. The qualitative participatory observations suggest six important factors that contribute to the aim of building knowledge about *how* gender specific needs in residential group climate relate to results in treatment.

First, the observed parallel transactional processes between the work climate and the residential group climate are pertinent in understanding climate in SRYC (Bronfenbrenner & Morris, 2007; Leipoldt et al., 2019; Souverein, Van der Helm, & Stams, 2013; Van Gink et al., 2018). The administrative and social conditions in which the centre had to operate caused feelings of fear and insecurity among employees. Staff also need a safe environment within the organization, in order to be able to function. Sturdy, present senior managers, directors who see their people create safety necessary for a work climate that allows substantive reflection. The will to reflect on action is essential in secure environment where power imbalance is always a risk (De Valk, 2019). Inviting outsiders is a good opportunity to look critically at one's own actions, which can also contribute to effectiveness in SRYC (Leipoldt et al, 2019; Zimbardo, 2007). The participating observations resulted in concrete tailor-made advice for improvement such as in the advice to stop group punishments. But these prying eyes did not feel safe for the team. Reflection on action was really stimulated by the return of a trusted senior group social worker.

Second, the harsh and repressive ways in which the team acted were visible and measurable. In addition to the confinement, coercive measures should be avoided as much as possible and should only be aimed at maintaining structure, with an appropriate balance between structure and flexibility being sought in each case (De Valk, 2019; Van Der Helm, Beunk, Stams & Van Der Laan, 2014; Van der Helm, Klapwijk, Stams & van der Laan, 2009). Also, according to the recent systematic review by Leipoldt et al (2019) it is the repressive behaviour of staff that showed the most associations with negative outcomes.

Thirdly, the atmosphere in this study group could be characterized by mutual distrust between girls and staff. The girls behaved badly and showed a lot of relational aggression. The fact that there were many changes of girls and staff made it more difficult to turn the tables. That makes it difficult for the girls to keep up the treatment motivation and make progress (see also Brauers et al., 2016). Their need for autonomy (Ryan & Deci, 2018) was frustrated, also by petty rules that contribute to a repressive group climate (De Valk, 2019).

Fourthly, the results demonstrate that residential group climate is not static but a process (Levrouw, Roose, Van der Helm & Strijbosch, 2018; Strijbosch, Wissink, Van der Helm & Stams, 2019). There was a crisis in this group in the form of a fire which was the start of a successful series of actions to restore residential group climate.

Fifthly, the team decision to always have at least one group social worker available in the group was the essential restorative step in accordance with the basic psychological need for relatedness (Ayotte et al., 2017; Cantora, Mellow, & Schlager, 2014; Van der Helm et al., 2018). Whereby it is important in interacting with these traumatised girls to be particularly sensitive and empathetic in responding to physical needs such as nutrition and medical care. (Azough Governamental Committee, 2014).

Sixthly, in this residential group, new girls were increasing the risk associated with the occurrence of relational aggression and reduced the observed support to each other among peers. It also showed that this negative circle can and must be actively countered by group social workers. It seems that merely being there, is a good start to see and hear the needs of the girls. This demonstrates that the risks, needs, responsivity principles (Andrews & Bonta, 2010) may also have a place in understanding group dynamics: when the risks for a negative group process are high, professional efforts to reduce risks must be intense.

Limitations and strengths

In qualitative participation research, the researcher is the central person who influences interpretation and even the constructing of data as was the intention in this instance. The researcher noticed on several occasions to feel as not only to be a neutral observant but also as a strict assessor for the group social workers in this residential group. Triangulation of data-sources helped to make these effects explicit, hence improving validity.

In action research (Kemmis, McTaggart & Nixon, 2013) the *stakeholders* can act as co-researchers. We were aiming for a larger contribution from the group social workers as co-researchers, especially to improve the group counselling sessions. However, the stress in the team was so intense that there was no room to perform this task. Also, serious reflection on the research findings with the management was not possible as often as needed to improve the functioning of the residential group as intended.

Set aside the aforementioned limitations, we believe that the method used in this study, which combines well-targeted measuring instruments in a case-based time series design with

qualitative clarification of the results, can be given a valuable place in research on effect of SRYC. In principle, treatment effect can be demonstrated with this method. Although the relation between residential group climate and treatment result in this design is correlational and not causal, the combination of quantitative measures and qualitative interpretation provides structured feedback that can contribute to more positive treatment outcomes. Findings are in line with the idea that growth is only possible when the basic psychological needs are met (Ryan & Deci, 2018; Van der Helm, Kuiper & Stams, 2018), and support notions on the importance of trauma informed care (Roy, Morizot, Lamothe, & Geoffrion at the international level, (2020) in which it is important for girls that group leaders pay explicit attention to fostering peer relationships in the residential group (Sonderman et al., 2020).

A well-known saying in youth psychology is ‘first the connection and then the correction’. Our research findings suggest that in addition: ‘with connection less correction’ is needed. These findings are of mayor importance for tailoring residential group climate to specific target groups (like girls) in practice.

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Tables

Table 4.1.0: *Scheme of data collection*

Week	Action
1	• Information session team social workers
2	• Training group social workers • Group session girls, introducing the researchers, explanation research aims, means and gathering informed consent • Group social workers and girls informed parents and guardians
3	• Waiting time
4	• Quantitative measure 1(second researcher) • Start peer interaction module
	• Quantitative measure 2(second researcher)
5	• Quantitative measure 3(first researcher) • Observation after school until after dinner situation • Observation group social workers choosing session from peer interaction module
6	• Quantitative measure 4 (first researcher) • Observation after school until after dinner situation • Feedback session about observations with behavioural scientist • conversation about observations with research supervisor
7	• Quantitative measure 5 (second researcher)
8	• Quantitative measure 6(first researcher) • Observation after school situation • Observing choosing and (first) performing peer interaction module about bullying
9	• Quantitative measure 7(second researcher)
10	• Quantitative measure 8 (second researcher)
11	• Quantitative measure 9(second researcher)
12	• Quantitative measure 10 (second researcher)
13	• Quantitative measure 11 (second researcher) • Second observation peer interaction module on getting to know each other
14	• Quantitative measure 12 (first researcher • Planned feedback management cancelled • Third observation peer interaction module on group roles
15	• Quantitative measure 13 (second researcher) • Observation period dinner until bedtime
16	• Quantitative measure 14 (second researcher)
17	• Quantitative measure 15 (second researcher)
18	• Quantitative measure 16 (first researcher) • Planned feedback management cancelled • Observation after school till bedtime
19	• Quantitative measure 17 (first researcher)
20	• Final Quantitative measure 18 (first researcher) • Observation period dinner until bedtime
21	• Fourth and final observation peer group module session bully quiz
22	• Evaluation with management cancelled

Reference group n=71, mean 2.89, sd .60
Hedges' g <.19 not significant; .20 < Hedges' g. <.49= small difference*; .50 < Hedges' g <.79=middle size difference**; .80 < Hedges' g < 1.29=large difference***

Table 4.1.1: *Group Climate Inventory (GCI) over time compared to reference group*

Week	N	Min	Max	Mean	SD	Hedges' g ref group
1	9	1.66	3.79	2.56	.70	.54**
2	9	1.83	3.76	2.37	.72	.84***
3	9	1.66	3.28	2.65	.47	.40*
4	7	1.83	3.07	2.51	.47	.64**
5	9	2.07	3.52	2.76	.51	.22*
6	7	2.14	3.21	2.70	.43	.32*
7	8	1.93	3.17	2.54	.44	.59**
8	10	1.52	3.17	2.48	.58	.68**
9	10	1.52	2.97	2.24	.53	1.09***
10	10	1.34	2.97	2.21	.54	1.14***
11	9	1.21	2.79	2.07	.54	1.37***
12	9	1.24	3.17	2.28	.60	1.01***
13	7	1.93	3.59	2.42	.61	.78**
14	9	1.52	3.41	2.31	.55	.97***
15	9	1.55	2.79	2.36	.39	.90***
16	7	1.28	2.93	2.23	.62	1.09***
17	9	1.41	2.93	2.23	.51	1.11***
18	7	1.34	2.93	2.24	.57	1.08***

Table 4.1.2: *Group Climate Inventory (GCI) total score and score per scale; current study compared to reference group*

GCI-scale	Min Current study (n=14)	Max Current study	Mean Current study	SD Current study	Mean Reference group (n=71)	SD Reference group	Hedges' g
Total	1.21	3.79	2.41	.56	2.89	.60	-.81***
Support	1.00	4.36	2.62	.69	3.14	.77	-.69**
Growth	1.00	4.50	2.19	.94	3.39	.61	-.69**
Repression	2.14	5.00	4.02	.60	3.92	.68	.78**
Atmosphere	1.00	4.80	2.68	.75	2.75	.81	-.26*

Hedges' g < .19 not significant; .20 < Hedges' g < .49 = small difference*; .50 < Hedges' g <.79 = middle size difference**; .80 < Hedges' g < 1.29 = large difference***

Table 4.1.3: *SMA Group Climate Inventory (GCI) total score over time*

Mean phase 1[a]	2.53
Mean phase 2[b]	2.37
level r	-0.31
level p	1
slope r	0.70
slope p	0.00**

Note: [a] phase 1 is week 1-3; [b] phase 2 is week 4-18;
Significance levels: *p<0.05 * p<0.01**.

Table 4.1.4: *SMA Group Climate Inventory (GCI) total score over time before and after fire*

Mean Before Fire [a]	2.17
Mean After Fire[b]	2.30
level r	.63
level p	.00*
slope r	-.006
slope p	1

Note: [a] Before fire is week 9-11; [b] After Fire is week 12-18; Significance levels: *p<0.05 * p<0.01**.

Table 4.2.1*: Peer Interactions Residential Youth-care (PIRY) subscales over time*

Peer support and acceptance scale						**Relational aggression scale**				**Difference Subscales**
Week	**N**	**min**	**max**	**Mean**	**SD**	**min**	**max**	**Mean**	**SD**	**P**
1	9	1.40	4.40	3.11	1.07	1.50	4.40	2.67	.93	.14
2	9	2.20	4.20	3.07	.67	2.00	4.20	2.79	.82	.40
3	9	1.80	4.40	3.18	.90	1.20	3.70	2.16	.83	.02*
4	7	1.40	3.40	2.40	.78	1.20	3.60	2.24	.82	.50
5	9	1.40	4.20	2.60	.95	1.00	3.80	2.27	1.04	.44
6	7	1.40	3.80	2.54	.94	1.20	2.50	1.99	.51	.13
7	8	1.20	3.80	2.40	1.07	1.00	4.80	2.33	1.14	.67
8	10	1.00	3.80	2.33	.95	1..00	4.60	2.60	1.05	.76
9	10	1.00	3.40	2.30	.96	1.20	4.40	2.98	.98	.24
10	10	1.00	3.80	2.44	1.02	1.40	4.20	2.75	.80	.59
11	9	1.00	3.60	2.40	1.06	1.00	4.80	3.00	1.12	.33
12	9	1.00	4.20	2.20	1.05	1.00	4.40	2.94	1.07	.11
13	7	1.40	3.20	2.25	.76	1.00	3.50	2.43	.91	.73
14	9	1.00	3.40	2.22	.87	1.00	3.50	2.69	.80	.23
15	9	1.00	4.00	2.09	1.07	1.00	4.50	2.61	1.00	.24
16	7	1.00	4.00	2.43	1.04	1.60	4.50	2.80	.95	.62
17	9	1.00	4.40	2.89	1.21	1.40	4.40	2.0	.89	.50
18	7	1.00	3.20	1.71	.76	1.20	4.20	2.66	1.03	.08

Table 4.2.2: *SMA Peer Interactions Residential Youth-care (PIRY) subscales over time*

	Peer Support and acceptance scale	**Relational aggression scale**
Mean phase 1[a]	3.12	2.54
Mean phase 2[b]	2.35	2.55
level r	-0.78	0.02
Level p	0.00**	1.00
slope r	0.57	-0.26
slope p	0.00**	1.00

Note: [a] phase 1 is week 1-3; [b] phase 2 is week 4-18; Significance levels: *p<0.05 * p<0.01**.

Table 4.3.1: *Means Brief Problem Monitor- Y (BPM-T) over time*

Week	**girl 1**	**girl 2**	**girl 3**	**girl 4**	**girl 5**	**girl 6**	**girl 7**	**girl 8**	**girl 9**
1	.79	.74	.63	.11	.37	.16	.79		
2	.79	.53	.58	.05	.42	.47	.58		
3	.79	.47	.42	.05	.42	.47	.42		
4	.63	.53	.37	.05	.37	.47[a]	.84		
5	.68	.37	.47	.05	.32	.47	.58		
6	.53	.37[a]	.32	.05	.53	.53	.58	.26	
7	.74	.37[a]	.32	.05	.42	.84	.68	.05	.84
8	.74	.37	.32	.05	.53	.79	.79	.00	.79
9	.84	.26	.37	.05	.95	.63	.95	.11	.89
10	.63	.11	.32	.05	1.16	.74	.95	.21	.79
11	.53	.00	.21	.05	.82[a]	.63	.89	.16	.68
12	.58	.00	.32	.05	.47		.68	.42	.84
13	.68	.00[a]	.32	.05	.37		.68	.32	.84[a]
14	.68	.00	.21	.05	.53		.84	.32	.84
15	.53	.05	.26	.26	.58		.89	.16	.68
16	.63	.00	.26	.26	.66[a]		.68	.21	.89
17	.53	.00	.26	.26	.74		.89	.21	.68
18			.16	.11	.58		.74	.16	.84

Note [a] means that a missing is replaced by the mean of two surrounding data points

Table 4.3.2: *SMA Brief Problem Monitor Youth-Total (BPM-T) over time*

BPM-Y total	**girl 1**	**girl 2**	**girl 3**	**girl 4**	**girl 5**	**girl 6**	**girl 7**	**girl 8**	**girl 9**
Mean phase 1[a]	.79	.58	.54	.07	.40	.32	.69	.10	.84
Mean phase 2[b]	.64	.17	.30	.10	.60	.62	.75	.23	.79
level r	-.57	-.66	-.77	**.13**	**.34**	**.64**	**.15**	**.48**	-.31
level p	.00**	.00**	.00**	**.00****	**.00****	**.00****	**.00****	**.00****	.00**
slope r	.52	.88	.74	**-.63**	-.36	**-.67**	**-.44**	-.29	.12
slope p	.00**	.00**	.00**	**.00****	1.00	**.00****	**.00****	1	1

Note: [a] phase 1 is week 1-3; [b] phase 2 is week 4-18; bold scores mean deterioration*;* Significance levels: *p<0,05 * p<0.01**

Table 4.3.3: *Reliable Change Index Brief Problem Monitor Youth-Total (BPM-T); meaning of difference between first and last score*

	girl 1	**girl 2**	**girl 3**	**girl 4**	**girl 5**	**girl 6**	**girl 7**	**girl 8**	**girl 9**
RCI BPM-T[ab]	1.53	4.35**	2.77**	0	-1.24	-1.53	.29	.58	0

Note[a] RCI>1.96** = strong improvement; >1.65<1.96* = some improvement; <1.65>-1.65= stable; <-1.65>-1.96* = some deterioration; <-1.96** = Strong deterioration
Note[b] used are SD week 1 of .27 and Cohens Alpha this study .80

Table 4.4.1: *Means Brief Problem Monitor-Youth; subscale Internal problems (BPM-I) over time*

Week	**girl 1**	**girl 2**	**girl 3**	**girl 4**	**girl 5**	**girl 6**	**girl 7**	**girl 8**	**girl 9**
1	.29	.29	.57	.00	.29	.29	1.00		
2	.00	.00	.43	.00	.29	.71	.57		
3	.14	.00	.29	.00	.29	.71	.71		
4	.00	.00	.29	.00	.29	.64[a]	1.00		
5	.00	.00	.43	.00	.14	.57	.86		
6	.00	.07[a]	.43	.00	.43	.71	.71	.57	
7	.14	.07[a]	.43	.00	.29	.86	.86	.00	1.29
8	.00	.14	29	.00	.57	1.00	.86	.00	1.57
9	.00	.43	.29	.00	1.29	.71	1.29	.00	1.14
10	.00	.00	.43.	.00	1.43	.71	1.29	.29	1.14
11	.00	.00	.14	.00	.86[a]	.71	1.29	.14	1.00
12	.00	.00	.57	.00	.29		1.00	.29	1.29
13	.29	.00[a]	.57	.00	.14		1.00	.71	1.15[a]
14	.14	.00	.57	.00	.43		1.14	.71	1.00
15	.00	.14	.57	.00	.86		1.14	.43	1.14
16	.00	.00	.57	.00	.93[a]		.86	.57	1.43
17	.00	.00	.43	.14	1.00		1.43	.43	1.00
18			.43	.00	.57		1.14	.43	1.57

Note [a] means that a missing is replaced by the mean of two surrounding data points

Table 4.4.2: *SMA Brief Problem Monitor-Youth; subscale Internal problems (BPM-I) over time*

BPM-I	**girl 1**	**girl 2**	**girl 3**	**girl 4**	**girl 5**	**girl 6**	**girl 7**	**girl 8**	**girl 9**
Mean phase 1[a]	0.14	0.10	0.43	0.00	0.29	0.57	0.76	0.19	1.33
Mean phase 2[b]	0.04	0.06	0.43	0.01	0.64	0.74	1.06	0.40	1.19
level r	-.39	-.12	.002	.11	**.34**	**.45**	**.49**	**.36**	-.31
level p	.00**	1	1	.00**	**.00****	**.00****	**.00****	**.00****	00**
slope r	.07	.13	-.40	-.37	-.42	-.30	-.60	-.63	-.19
slope p	1	1	1	1	1	1	.00**	.00**	1

Note: [a] phase 1 is week 1-3; [b] phase 2 is week 4-18 ; ; bold scores mean deterioration*;*
Significance levels: *p<0,05 * p<0.01**

Table 4.4.3: *Reliable Change Index BPM-I; subscale internalizing problems, meaning of difference between first and last score*

	girl 1	**girl 2**	**girl 3**	**girl 4**	**girl 5**	**girl 6**	**girl 7**	**girl 8**	**girl 9**
RCI BPM-I[ab]	1.45	1.45	.70	0	-1.40	-2.50**	-.7	.7	-1.40

Note[a] RCI>1.96** = strong improvement; >1.65<1.96* = some improvement; <1.65>-1.65= stable; <-1.65>-1.96* = some deterioration; <-1.96** = Strong deterioration
Note[b] used are SD week 1 of .30 and Cohens Alpha this study .77; SDIF=.20

Table 4.5.1: *Means Brief Problem Monitor Youth Scale Externalizing problems (BPM/E)*

Week	**girl 1**	**girl 2**	**girl 3**	**girl 4**	**girl 5**	**girl 6**	**girl 7**	**girl 8**	**girl 9**
1	1.00	.71	.29	.14	.14	.00	.14		
2	1.00	.43	.43	.00	.29	.14	.43		
3	.71	.29	.29	.00	.29	.00	.00		
4	.57	.43	.14	.00	.14	.07[a]	.43		
5	.57	.14	.00	.00	.14	.14	.57		
6	.29	.07[a]	.14	.00	.43	.14	.43	.14	
7	.86	.07[a]	.14	.00	.29	.71	.57	.00	.29
8	.57	.00	.14	.00	.29	.43	.43	.00	.00
9	.86	.00	.14	.00	.57	.29	.57	.14	.14
10	.43	.00	.00	.00	.57	.29	.57	.00	.00
11	.29	.00	.00	.00	.43[a]	.29	.43	.00	.00
12	.29	.00	.00	.00	.29		.43	.57	.14
13	.29	.00[a]	.00	.00	.14		.43	.00	.22[a]
14	.43	.00	.00	.00	.29		.43	.14	.29
15	.29	.00	.00	.29	.14		.57	.00	.14
16	.57	.00	.00	.14	.22[a]		.57	.00	.14
17	.43	.00	.00	.14	.29		.43	.00	.14
18			.00	.00	.29		.43	.00	.00

Note [a] means that a missing is replaced by the mean of two surrounding data points

Table 4.5.2: *SMA Brief Problem Monitor Youth Scale Externalizing problems (BPM/E)*

BPM/E	**girl 1**	**girl 2**	**girl 3**	**girl 4**	**girl 5**	**girl 6**	**girl 7**	**girl 8**	**girl 9**
Mean phase 1[a]	.90	.47	.34	.03	.20	.05	.19	.05	.14
Mean phase 2[b]	.48	.05	.04	.04	.33	.31	.49	.09	.14
level r	-.66	-.79	-.85	.09	**.43**	**.57**	**.75**	.11	-.00
level p	.00**	.00**	.00**	1	**.00****	**.00****	**.00****	1	1
slope r	.54	.64	.70	**-.49**	.15	-.57	-.34	.16	-.07
slope p	.00**	.00**	.00**	**.00****	1	.00**	1	1	1

Note: [a] phase 1 is week 1-3; [b] phase 2 is week 4-18; **bold scores mean deterioration***;*
Significance levels: *p<0,05 * p<0.01**

Table 4.5.3: *Reliable Change Index BPM-E; subscale externalizing problems, meaning of difference between first and last score*

	girl 1	**girl 2**	**girl 3**	**girl 4**	**girl 5**	**girl 6**	**girl 7**	**girl 8**	**girl 9**
RCI BPM-E[ab]	2.11**	2.63**	1.07	.52	-.56	-1.07	-1.07	.52	1.07

Note[a] RCI>1.96** = strong improvement; >1.65<1.96* = some improvement; <1.65>-1.65= stable; <-1.65>-1.96* = some deterioration; <-1.96** = Strong deterioration
Note[b] used are SD week 1=.31 and Cohens Alpha this study .62; SDIF= .27

Table 4.6.1: *Means Brief Problem Monitor Youth Scale Attention deficits (BPM/A)*

Week	**girl 1**	**girl 2**	**girl 3**	**girl 4**	**girl 5**	**girl 6**	**girl 7**	**girl 8**	**girl 9**
1	1.20	1.40	1.20	.20	.80	.20	1.40		
2	1.60	1.40	1.00	.20	.80	.60	.80		
3	1.80	1.40	.80	.20	.80	.80	.60		
4	1.60	1.40	.80	.20	.80	.80[a]	1.20		
5	1.80	1.20	1.20	.20	.80	.80	.20		
6	1.60	1.20[a]	.40	.20	.80	.80	.60	.00	
7	1.40	1.20[a]	.40	.20	.80	1.00	.60	.20	1.00
8	2.00	1.20	.60	.20	.80	1.00	1.20	.00	.80
9	2.00	.40	.80	.20	1.00	1.00	1.00	.20	1.60
10	1.80	.40	.60	.20	1.60	1.40	1.00	.40	1.40
11	1.60	.00	.60	.20	1.30[a]	1.00	1.00	.40	1.20
12	1.80	.00	.40	.20	1.00		.60	.40	1.20
13	1.80	.00[a]	.40	.20	1.00		.60	.20	1.30[a]
14	1.80	.00	.00	.20	1.00		1.00	.00	1.40
15	1.60	.00	.20	.60	.80		1.00	.00	.80
16	1.60	.00	.20	.80	.90[a]		.60	.00	1.20
17	1.40	.00	.40	.60	1.00		.80	.20	1.00
18			.00	.40	1.00		.60	.00	1.00

Note [a] means that a missing is replaced by the mean of two surrounding data points

Table 4.6.2: *SMA Brief Problem Monitor Youth Scale Attention deficits (BPM/A)*

BPM /A	**girl 1**	**girl 2**	**girl 3**	**girl 4**	**girl 5**	**girl 6**	**girl 7**	**girl 8**	**girl 9**
Mean phase 1[a]	1.53	1.40	1.00	0.20	0.80	0.53	0.93	0.07	1.13
Mean phase 2[b]	1.70	0.50	0.47	0.31	0.97	0.98	0.80	0.16	1.05
level r	**.31**	-.55	-.57	**.22**	**.31**	**.70**	-.17	**.25**	-.09
level p	**.00****	.00**	0.00**	**.00****	**0.00****	**.00****	.00**	**.00****	1
slope r	.02	.93	.79	**-.68**	-.34	**-.58**	.08	.45	.63
slope p	1	.00**	.00**	**.00****	1	**.00****	1	1	.00**

Note: [a] phase 1 is week 1-3; [b] phase 2 is week 4-18; **bold scores mean deterioration***;*
Significance levels: *p<0,05 * p<0.01**

Table 4.6.3: *Reliable Change Index BPM-A; subscale attention problems, meaning of difference between first and last score*

	girl 1	**girl 2**	**girl 3**	**girl 4**	**girl 5**	**girl 6**	**girl 7**	**girl 8**	**girl 9**
RCI BPM-A[ab]	-.63	4.38**	3.13**	-.63	-1.25	-2.5**	2.5**	0	0

Note[a] RCI>1.96** = strong improvement; >1.65<1.96* = some improvement; <1.65>-1.65= stable; <-1.65>-1.96* = some deterioration; <-1.96** = Strong deterioration
Note[b] used are SD week 1= .48 and Cohens Alpha this study .78 ; SDIF=.32

Table 4.7.1: *Raw scores trauma symptoms Cries-13*

Week	girl 1	girl 2	girl 3	girl 4	girl 5	girl 6	girl 7	girl 8	girl 9
1	39.00	43.00	24.00	19.00	25.00	32.00	33.00		
2	33.00	32.00	22.00	19.00	21.00	31.00	29.00		
3	27.00	36.00	22.00	15.00	15.00	26.00	23.00		
4	26.00	13.00	22.00	15.00	13.00	26.50[a]	29.00		
5	29.00	13.00	17.00	15.00	14.00	27.00	25.00		
6	29.00	25.50[a]	16.00	15.00	15.00	28.00	19.00	23.00	
7	27.00	25.50[a]	16.00	13.00	33.00	29.00	25.00	23.00	49.00
8	25.00	38.00	15.00	15.00	27.00	30.00	24.00	21.00	42.00
9	29.00	17.00	15.00	15.00	39.00	29.00	26.00	13.00	45.00
10	28.00	13.00	14.00	15.00	46.00	28.00	28.00	23.00	49.00
11	25.00	13.00	14.00	15.00	42.50[a]	29.00	18.00	19.00	47.00
12	25.00	26.00	14.00	15.00	39.00		22.00	20.00	51.00
13	25.00	19.50[a]	14.00	15.00	35.00		26.00	15.00	49.50[a]
14	26.00	13.00	14.00	15.00	35.00		30.00	16.00	48.00
15	20.00	13.00	14.00	15.00	35.00		24.00	16.00	47.00
16	22.00	13.00	14.00	15.00	35.50[a]		17.00	17.00	47.00
17	18.00	13.00	14.00	17.00	36.00		19.00	16.00	46.00
18			14.00	15.00	18.00		18.00	16.00	47.00

Note [a] means that a missing is replaced by the mean of two surrounding data points

Table 4.7. 2: *SMA trauma symptoms Cries-13*

Cries-13	**girl 1**	**girl 2**	**girl 3**	**girl 4**	**girl 5**	**girl 6**	**girl 7**	**girl 8**	**girl 9**
Mean phase 1[a]	33	37	23	18	20	30	28	22	45
Mean phase 2[b]	25	18	15	15	30	28	23	17	48
level r	-.63	-.71	-.83	-.70	**.38**	-.34	-.41	-.68	**.51**
level p	.00**	.00**	.00**	.00**	**.00****	.00**	.00**	.00**	**.00****
slope r	.71	.53	.75	.14	**-.53**	-.27	.49	.94	-.002
slope p	.00**	.00**	.00**	1	**.00****	1	.00**	1	1

Note: [a] phase 1 is week 1-3; [b] phase 2 is week 4-18; **bold scores mean deterioration***;*
Significance levels: *p<0,05 * p<0.01**

Table 4.7.3: *Reliable Change Index CRIES-13; meaning of difference between first and last score trauma symptoms*

	girl 1	**girl 2**	**girl 3**	**girl 4**	**girl 5**	**girl 6**	**girl 7**	**girl 8**	**girl 9**
RCI-CRIES-13[ab]	3.83**	5.46**	1.82*	.73	1.28	0.55	2.73**	1.28	.55

Note[a] RCI>1.96** = strong improvement; >1.65<1.96* = some improvement; <1.65>-1.65= stable; <-1.65>-1.96* = some deterioration; <-1.96** = Strong deterioration
Note[b] used are SD norm group of 16.56 and Cohens Alpha of norm group .89 ; SDIF= 5.49



Chapter 5

Can a mixed-gender residential group be safe and therapeutic for girl victims of sexual abuse and exploitation?

Submitted as:

Sonderman, J., Kuiper, C.H.P., Van der Helm, G. H. P., & Van de Mheen, D. Can a mixed-gender residential group be safe and therapeutic for girl victims of sexual abuse and exploitation?

Abstract

In the Netherlands girls who are victims of commercial sexual exploitation are often treated in secure residential youth care in single gender groups. Groups with only girls are considered safer but also limiting the development of these girls. This study in a mixed gender secure residential group (n=11) uses a case-based time series design to investigate whether this residential group is safe (measuring residential group climate) and whether treatment results (problem behaviour and trauma symptoms) can be achieved for these adolescents. Concluding that safety cannot be solely related to gender and, that treatment effects can be achieved in a safe environment.

Keywords

Commercial sexual exploitation; secure residential youth care; gender; case-based time series; residential group climate

Practice implications

- Female group members may also recruit girls in SRYC for commercial sexual abuse
- Carefully mixing boys in with in a group of girls with CSE experience normalizes the pedagogical environment in SRYC groups
- With time series studies, treatment effects can be measured in SRYC

Introduction

A quarter of trafficking victims in Europe are children, and the primary goal of human traffickers is commercial sexual exploitation (CSE) (Save the Children, 2019). The Dutch national reporter on human trafficking (2020) estimated 1300 to be the annual number of underage female victims. In the Netherlands, in 2017, 13 centres for residential youth care (RYC) offered specialized care for these girls: 5 in open RYC, 8 in secure residential youth care (SRYC). In 11 out of 13 centres with specialized care (Inspection Health Care & Youth, 2018), girls were treated in single-gender residential groups. The adolescents admitted to SRYC differ from the RYC youth in their need to be protected against themselves or dangers from outside can get their treatment in SRYC. The placement in SRYC is explicitly not intended as a punitive measure in connection with offenses. It is considered ‘a last resort’ (Eltink et al., 2017; Harder, Knorth, & Kalverboer, 2015; Hickle & Roe-Sepowitz, 2018). The necessity of the placement in SRYC is always subjected to a judge's review. In the Netherlands, in the year 2017, 1533 adolescents between 12 and 18 were admitted to SRYC, 660 (43%) were girls. Approximately 31% of these girls were placed in SRYC because there were concerns about commercial sexual exploitation (Dirkse, Eichelsheim, Asscher, & Van der Laan, 2018). These girls often withdraw from treatment; they fail to see themselves as victims and often consider their abusers to be ‘lovers’ to whom they consequently want to return. Fear, and the feeling that there is no escape, also explains part of their wish to withdraw from treatment (Albright, Greenbaum, Edwards, & Tsai, 2020). The perpetrators use coercion and violence (Raphael, Reichert, & Powers, 2010; Serie, Krumeich, Van Dijke, De Ruiter, & De Ruiter, 2017), and possibly supply drugs (Walker-Rodriguez & Hill, 2011).

Girls in (S)RYC

When we write (S)RYC, we mean residential youth care, including secure residential youth care. The girls admitted in (S)RYC have more severe and complicated problems than boys (Abram, Teplin, McClelland, & Dulcan, 2003; Costello, Foley & Angold 2006; Pajer, 1998; Van Damme, 2015). Girls were subject to more adverse childhood experiences, more severe trauma (Ayotte, Lanctôt, & Tourigny, 2017; Leenarts et al., 2013), more psychopathology (Kroneman, 2009; Lanctôt, Reid, & Laurier, 2020; Nijhof, 2011; Van der Molen et al., 2013) and more problematic social-functioning (Krabbendam, 2015).

Most of all, these girls are more often and earlier victims of sexual abuse (Assink et al., 2019; Kerig & Schindler, 2013). The difference in the amount of sexual abuse in the history of girls as compared to the boys seems to be the most robust finding to explain the heightened

complexity of the problems of girls as opposed to the boys entering the (S)RYC (Assink et al., 2019; Miller Winn, Taylor, & Wiki, 2012; Leve, Chamberlain, & Kim, 2015). With sexual abuse in their history, girls are more vulnerable to abusive relationships later in life (Buss & Duntley, 2008), and often they re-enact earlier trauma (Van der Kolk, 2014). The abuse consequences are disastrous for their entire further development (Selvius Wijkman, Slotboom, & Hendriks, 2018). They disrupt personality development (Lanctôt et al. 2020; Van der Molen et al., 2013) , the sexual development (Postma, Bicanic, Van der Vaart & Laan, 2013) , social-emotional and cognitive development. It deregulates the stress system (Van der Kolk, 2014) and disrupts social and familial relations (Cole, Sprang, Lee, & Cohen, 2016; Farley et al., 2004; Garg, Panda, Neudecker, & Lee, 2020). Self-harming and suicidal behaviour are often encountered (Rabinovitch, Kerr, Leve, & Chamberlain, 2015). The risk of revictimization is high (Bright Ward & Negi, 2011; DeHart & Moran, 2015; Scoglio, Kraus, Saczynski, Jooma, & Molnar, 2019), and there is possibly intergenerational transfer of problems (Haselschwerdt, Savasuk-Luxton & Hlavatyr, 2019; Leve et al., 2015). In CSE, the vulnerabilities accumulate (Barnert, Kelly, Godoy, Abrams & Bath, 2020; Franchino-Olsen, 2019; Palines, Rabbitt, Pan, Nugent, & Ehrman, 2020). The general Risks Needs Responsivity (RNR) principles or ‘What Works’ principles, gleaned from research on effective interventions to prevent recidivism in criminal behaviours (Andrews & Bonta, 2010) are also applicable to preventing adverse developmental outcomes (Assink et al., 2019; Harder, Knorth & Kalverboer, 2015; Witt, Milner, Spittal, Hetrick, Robinson, Pirkis & Carter, 2019). It follows from these principles that it is wise to intervene strongly in case of major risks, and in that sense the placement in a SRYC centre fits in with the developmental risks mentioned above.

Residential group climate

Effective treatment in SRYC should also fit to the ‘needs’ of the placed youngsters. Care in (S)RYC is provided by a team of trained social workers aiming to offer a safe and stable living environment for youth. The residential group usually consists of 8 to 10 adolescents. Ideally, the way in which the social workers support young people is ‘responsive’, appropriate to the possibilities and motivation of the young people. In addition to individual therapies which aim to reduce the individual risk factors, in SRYC, even more than in RYC in general, adolescents spend most of their time in social groups in school and the living group. The quality of the residential group climate during ‘the other 23 hours’ -as Trieschman, Whitaker & Brendtro (1969) already stated- is crucial in pursuing treatment success. Adolescents need a

pedagogical approach, a climate wherein they can attain typical developmental tasks suitable for their age.

If daily life frustrates the basic psychological 'needs' such as 'autonomy,' 'relatedness' and 'competence,' as defined in self-determination theory (Deci & Ryan, 2015; Van der Helm, Kuiper, & Stams, 2018), healthy development is compromised. It also interferes with motivation for treatment and results in anger, depression, or fear (Van der Helm, 2011). There is an urgency to identify proper evidence-based interventions to improve the outcomes (Special Issue Child Abuse and Neglect, vol. 100, 2020). The treatment given in (S)RYC aims to prepare youth to return to society and develop a perspective that can differ from either returning to their parents or other network members or creating motivation to transfer to an assisted or independent living environment (De Valk, Kuiper, Van der Helm, Maas & Stams, 2017).

The evidence that an open, safe, and needs-supporting social climate in a population in (S)RYC is a prerequisite for achieving treatment goals is growing. Leipoldt, Harder, Kayed, Grietens, & Rimehaug (2019) concluded after a systematic review that positive outcomes in (S)RYC were best predicted by an open climate, support, and autonomy. A recent meta-analysis (Eltink et al., 2019) found a significant relationship between group climate and antisocial behaviour in all youth receiving care in a residential facility with a 'therapeutic group climate.' 'Experienced safety' was the factor that was the most strongly related to the reduction of antisocial behaviour.

In experiencing a residential group climate, girls may differ from boys (Hubbard & Matthews, 2008). Research findings on gender-specific needs show that boys and girls both share the need to fulfil the basic psychological needs in their everyday lives in (S)RYC. Both genders require the support and understanding of group social workers, and that need transcends the need for structure and control. The need for support and understanding is more important for girls, but structure is more vital for boys (Lanctôt, 2018). The needs of girls in residential groups (Ayotte, Lanctôt, & Tourigny, 2015; Lanctôt et al., 2016; De Valk et al., 2017; Mathys et al., 2013; Van Vugt et al., 2014; Zimmerman & Messner, 2010) bear down to the notion that girls *'need to feel safe and protected'* (Lanctôt, 2018, p.117). Relations with group social workers and peers on the residential group are the significant sources for creating this feeling of safety and protection. Albright and colleagues (2020) described in a systematic review, a

strength-based and trauma-informed approach aiming for trust in interactions with victims as essential recommendations.

Moreover, Barnert and colleagues (2020) confirmed trust and autonomy (shared decision making) to be essential requirements for girls to accept help. There are also focus differences between genders concerning were the motivation for treatment originates. De Valk and colleagues (2017) found that boys were relatively more motivated by the alluring perspective of freedom, while girls derive their motivation from the awareness that they are working on their treatment goals. Interactions among youth are considered an essential aspect of the social climate in residential youth care (Good & Mishna, 2019; Leipoldt et al., 2019). Sonderman and colleagues (2020) studied the interaction between residing adolescents in residential groups. Peers gossip: they bully and support each other. Regarding these aspects of the interaction between peers, differences in emphasis between the genders were found; girls experience relatively more gossiping than boys.

Mixed or single-gender residential groups

An unanswered question is whether it is wise to place sexually abused girls with boys in a residential group. A mixed-gender group may offer more real-life training to foster healthy development than a single-gender group. Supporting peer relations can be a significant source of resilience for abused girls (Landers et al., 2020). If a treatment setting resembles normal life, the generalization of change to everyday life is facilitated. Since '*girls live in a gendered society where they are more powerless than boys*' (Chesney-Lind, 1997, p 169), it may be relevant to learn to handle this power imbalance in a safe treatment context. Feeling (relational) safe is a challenge for abused traumatised girls and a necessary condition for seeking and accepting, and benefiting from help (Garg et al., 2020).

However, in the Netherlands, the policy is to place these victims in 'girls only' residential groups (Azough, 2014). Arguments are based on the following notions. Firstly, abused girls are vulnerable to revictimization (Scoglio et al., 2019). Since the boys in RYC typically display externalising and aggressive behaviour, the risk for revictimization is considered high. Estimated is that in half of the sexual abuse in residential and foster care in the Netherlands, the perpetrator is a peer (Samson committee, 2012). Secondly, abused girls often show risky sexual behaviours (Niehaus, Jackson, & Davies, 2010). It is thought wise to learn about the effect of this behaviour in a girls-only environment. Thirdly, contact with boys can lead to fear and may trigger traumatic re-experiences of sexual abuse (Dishion & Tipsord, 2011),

which does not improve recovery. Peers can increase the risk of entering a CSE situation (Franchino-Olsen, 2019). Fourthly, sexual abuse can lead to feelings of shame (Kennedy & Prock, 2018), and sharing feelings with fellow victims can support recovery and build treatment motivation.

Set aside all the aforementioned valid reasons to be cautious about mixing genders in (S)RYC for abused girls, no empirical evidence for the decision on mixing gender of residential groups for sexually abused girls is available as far as we know. The only recent study into mixing genders in RYC is a small qualitative study based on seven interviews on six Scottish RYC groups from a single RYC location (Copley & Johnson, 2016), reporting no sexual abuse issues the research subjects. The subjects in that study concerned the mixed-gender living groups as 'normal.' Living together in a residential group is hard, but gender was not the issue.

Current study

The aims of this study are twofold. Firstly, we want to investigate whether the residential group climate in a mixed-gender group with sexually abused and CSE girls can harbour a safe climate, and secondly, whether in such a group there can be progress in achieving treatment goals for both girls and boys. Therefore, questionnaires on residential group climate and treatment goals were collected for 18 weeks from all residents of a residential group.

Method

The residential group and its context

The SRYC- group under study treated sexually abused and CSE girls in a mixed-gender group. This residential group was part of a centre for SRYC This centre built to resemble a street in an ordinary Dutch suburb with 12 ordinary newly built brownstone houses and a school with different secondary education sorts. This manner of building underscored the vision of the centre that even SRYC should match everyday life. In light of this vision, the centre chose to create a mixed-gender residential group for girls who are victims of sexual abuse and commercial sexual exploitation combined with boys, the admittance selection for this residential group aimed to minimize the risk of revictimization. The girls should outnumber the boys; the preferred mix was to have six girls and three boys. The admitted boys were screened for not having exhibited intimidating or sexually transgressive behaviour towards girls before.

Participants

During the research period, 11 young people lived in the residential group. All of them participated in the project. At the beginning of the study period, two girls were already at the end of the stay and soon went to their follow-up locations. Another girl was placed in a different living group within the centre, where she fitted better according to the management. In the residential group climate analysis, all young people's data are used, including these three girls (n=11).

Procedure

All procedures performed in this study were in accordance with the institutional and national research committee's ethical standards. In a group session, all the residents of the group (n=8) were asked to participate in the study. The first author led the group session, and an administrative officer of the centre assisted. The study's purposes and procedures were described on a flyer with information, and all participants gave written informed consent. The centre obtained informed consent from the parents or guardians. For the 18 weeks the study lasted, any newcomers (n=3) were also asked to enrol in the same manner, everybody enrolled. We granted small rewards for filling in the questionnaires where the weekly reward increased if there was loyal participation. Throughout the study, it occurred twice that an adolescent was not serious in filling in the questionnaires. This attitude posed a threat to response validity, sometimes called the ‘Jokester effect’ in self-reports with adolescents (Fan et al., 2006) . The administrative officer spoke to the adolescent, after which the reward for that week was stopped. This talk turned out to be an effective intervention. We excluded these questionnaires from the analysis. The adolescents' data of which the data string was long enough (>10 measurements) were used to analyse individual treatment progress. Four girls and three boys met this inclusion criterion. Four questionnaires were filled in each week by all residing adolescents. Sessions were scheduled twice a week on the same day after a school break at the residential group's kitchen table. Two researchers, the first author, and an administrative officer from the centre, took turns attending the filling in sessions. For a scheme of data collection see *Table 5.1.0* in the supplementary data.

Design

We used a case-based time-series design. These designs can show the efficacy of treatment and the trajectory of change and clinical improvement across time (Borckardt et al., 2008a). For 18 weeks, we performed weekly measurements of the residential group climate and therapeutic change. The SCRIBE guidelines (Tate eta al, 2016) were used to report this study.

These guidelines also requires that the raw data be attached (*Tables 5.3.1, 5.4.1, 5.5.1, 5.6.1, 5.7.1*). The residential group is the research unit (n=1). We analysed the weekly residential group climate on the group level (Kazdin, 2019) and therapeutic change on each participating adolescent (Kratochwill et al., 2010) . The question answered was - Does staying in the centre lead to improvement of the observed variables, i.e., residential groups' climate and therapeutic change?

Measures

Residential group climate

Group Climate Instrument (GCI). The GCI was used for measuring the residential group climate. The GCI is a self-report questionnaire containing 29 items. It is an improved version of the Prison Group Climate Instrument (PGCI) developed and validated by Van der Helm (2011) to measure group climate perception in a secure residential setting. Using a 5-point Likert scale ranging from (not at all) 1 to (yes completely) 5. The reliability analysis of the GCI scores in this study was measured with Cronbach's alpha =.91. The CGI consists of 4 sufficiently reliable subscales. For 'Support', α = .91; 'Growth', α = .79; 'Repression', α = .74; and 'Atmosphere', α = .80.

Therapeutic change

The therapeutic change was measured by two outcome variables: problem behaviour and trauma symptoms.

Problem behaviour

Problem behaviour was measured by the 19-item self-report Dutch version of the Brief Problem Monitor Youth (BPM-Y) developed and validated by Piper Gray, Raber, and Birkett (2014). Using a 3-point Likert scale, ranging from 1 (not at all) to 2 (a little) to 3 (absolutely). Reliability analyses showed high internal consistency for the BPM-Y in this study: Cronbach's α = 0.84. The BPM consists of 3 subscales. The sub-scale with internalising problems (7 items) measured a Cronbach's α = .89; the subscale that measures externalising problems (7 items) measured a Cronbach's α = .71. The last subscale, which measures attention deficits (5 items), measured Cronbach's α = 0 .75.

Trauma symptoms

Trauma symptoms were measured by the 13 item Children's Revised Impact of Event Scale (CRIES-13). Developed and validated by Verlinden and colleagues (2014) . Adolescents rate

the frequency with which they have experienced each item during the past week using a 4-point Likert-like scale (0 = not at all, 1 = rarely, 3 = sometimes, 5 = often). The questions are about the intrusion, avoidance, and hyperarousal. The total score reflects the severity of the posttraumatic stress response. In our sample, we found Cronbach's α = .95 for the total scale.

Data analysis

Residential group climate

The difference between the group's weekly mean GCI scores was compared to a reference group of 55 residents from all groups in the SRYC-centre. With an independent samples T-test, the differences were tested for significance with Cohens d effect size.

Therapeutic change

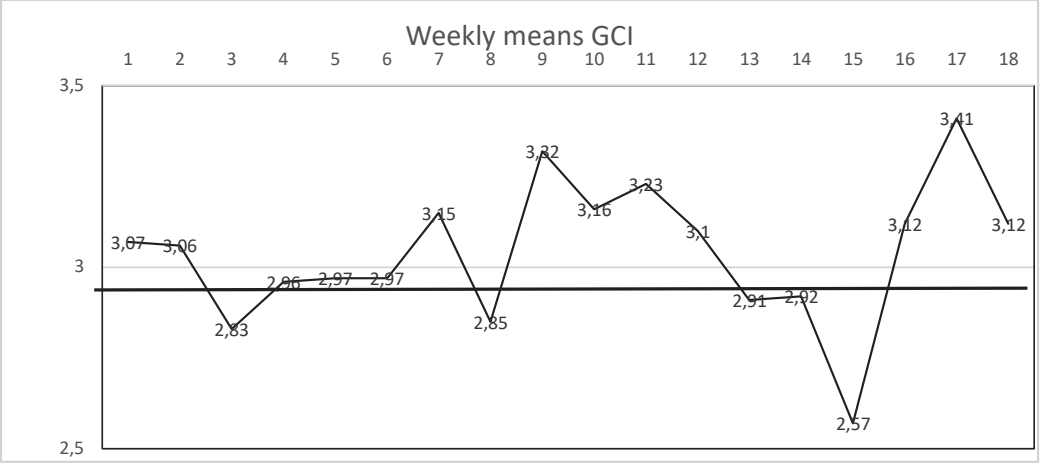
Simulation Modelling Analysis (SMA) was used to test weekly change. Individual weekly mean scores for all scales of the BMP-Y and Cries-13 for each adolescent was analysed with the SMA, the time series analysis program for short (<30) time-series data streams, version 8.3.3 (Borckardt et al., 2008a). The program controls autocorrelation, which dependence of a value on the value of one or more of the immediately preceding measurements. The program uses bootstrapping technology to amplify single-subject data. It is used to test hypotheses about correlations between an independent- (the adolescent or the residential group) and the dependent variable (the score on a specific questionnaire). The effect size used was Pearson's 'r'. An 'r' between .10 and .30 is a small correlation, an 'r' between .30 and .50 was considered middle-sized, and 'r'>.50 is large. All probability values (p) are two-sided and with a value of < .05* or < .01** is considered significant and >0.05<0.10. a trend. Changes between data points are reported about a change in 'level' or 'slope' when relevant (see also Kazdin, 2019; Kratochwill et al., 2010; Borckardt et al., 2008b). Does a shift from a clinical level of trauma symptoms to a non- clinical level occur? Or a change in 'slope': for example, do external behavioural problems decrease? To improve statistical power and reduce bias, we imputed missing data (see raw scores in the *Tables 5.3.1, 5.4.1, 5.5.1, 5.6.1, 5.7.1* in the supplementary data) with the average of the two surrounding data points (Graham, 2009). If a graph of the weekly score pattern of an individual showed an eye-catching deflection of the weekly score pattern (Bulté & Onghena, 2012), we tested for significance of the difference before and after the change in pattern. If this choice was made, the baseline-length in weeks is visible between brackets at '*mean phase 1*' in *Tables 5.2-5.6*. However, by default, we took the first three measurements in the treatment as a baseline to test the difference with the

following measurements for significance (no brackets in mean phase 1). These choices reduce the chance of ignoring real changes, errors of both types 1 and 2.

Results

Residential Group Climate

GCI During the study, the mean climate, as measured by the GCI in the residential group, was most of the time either significantly better or the same as the climate in the reference group of the entire centre. Only for week 15 (M=2.57 SD 87, Cohens d 0.45*) (*Table 5.1* and *Figure 5.1*), the residential group's GCI was significantly worse.



Note: the bold horizontal line indicates the means score on the GCI of the reference group

Figure 5.1 *Weekly means GCI*

Table 5.1 *CGI residential group vs reference group*

Scale	Mean group (n=11)	SD group	Mean Ref. group (N=55)	SD Ref. group	Cohens d
GCI-Support	3.47	.54	2.99	1.03	.58**
GCI-Growth	3.33	.59	2.79	.89	.72**
GCI-Repression	3.32	.28	3.45	1.29	-.14
GCI-Atmosphere	3.50	.33	3.20	.57	.64**
GCI-Total	3.16	.54	2.95	.85	.29*

Cohens d <.19 not significant; .20 < Cohens d <.49= small difference*; .50 < Cohens d <.79=middle size difference**; .80 < Cohens d < 1.29=large difference***

Therapeutic change

The SMA results- analysis of changes in level or slope of problems and trauma symptoms as measured by the BPM and Cries-13 is presented in *Tables 5.2-5.6* (For raw scores see *Tables 5.3.1, 5.4.1, 5.5.1, 5.6.1, 5.7.1* in the supplementary data). The deviation from the default baseline can be seen as a number in between brackets in the row '*Mean phase 1*'.

BPM-total A significant decrease during the 18 weeks of the study in overall problems measured by the BPM-Total (*Table 5.2*) was seen in girl 1 (slope r=0.91; p<0.00), girl 3 (slope r=0.56; p<0.04) and in boy 2 (level r = -0.83; p<0.04).

Table 5.2 *SMA BPM-total*

	girl 1	girl 2	girl 3	girl 4	boy 1	boy2	boy3
Mean phase 1	(7)23.57	17.33	19.00	4.33	8.00	(8)20.5	12.00
Mean phase 2	20.64	13.23	16.00	6.42	8.25	14.80	11.60
level r	-0.36	-0.45	-0.33	0.63	0.06	-0.83	-0.21
level p	0.50	0.06	0.22	0.13	0.13	0.04*	0.45
slope r	0.91	-0.04	0.56	-0.63	-0.61	0.35	0.42
slope p	0.00**	0.86	0.04*	0.15	0.13	0.55	0.11

Note: Significance levels: *p<0.05 * p<0.01**

BPM-internalising A significant decrease in internalising problems measured by the BPM-I (*Table 5.3*) was seen in girl 1 (slope: r.77; p<0.01), and boy 2 (slope: r.-0.92; p=0.00). Boys 1 and 3 reported (almost) no internalising problems on the BPM-I. Girl 4 showed significant

increase of internalising problems (Level r=0.87; p<0.00) although she reported minor internalising problems.

Table 5.3 *SMA BPM-I*

	girl 1	**girl 2**	**girl 3**	**girl 4**	**boy 1**	**boy2**	**boy3**
Mean phase 1	9.33	5.00	6.33	2.00	0	(8)9.20	0.00
Mean phase 2	7.73	4.62	7.13	**3.10**	0.43	2.40	0.00
level r	-0.18	-0.20	0.16	0.87	0.24	-0.92	-
level p	0.60	0.41	0.55	**0.00****	0.53	0.00**	-
slope r	0.77	-0.13	0.23	-0.24	0.54	0.14	-
slope p	0.01**	0.58	0.40	0.69	0.28	0.81	-

Note: bold scores mean significant deterioration*;* Significance levels: *p<0.05 * p<0.01**

BPM-externalising Girl 2 (level r = -0.57; p<0.02), girl 3 (level r=-0.78; p<0.01) showed significant decrease in externalising problem behaviour (*Table 5.4*). Girl 4 reported only minor externalising problems.

Table 5.4 *SMA BPM-E*

	girl 1	**girl 2**	**girl 3**	**girl 4**	**boy 1**	**boy2**	**boy3**
Mean phase 1	5.00	6.67	(5)4.4	1.33	3.67	4	6.33
Mean phase 2	5.47	4.15	1.85	1.00	3.67	3.67	6.83
level r	0.10	-0.57	-0.78	-0.11	0.00	-0.17	0.34
level p	0.72	0.02*	0.01**	0.72	1.00	0.65	0.12
slope r	-0.27	0.01	0.45	-0.05	0.50	0.64	-0.14
slope p	0.35	0.93	0.23	0.87	0.18	0.14	0.51

Note: Significance levels: *p<0.05 * p<0.01**

BPM-attention Girl 2 (level: r=-0.25; p< 0.00), reported significant decrease of attention deficits as measured by the BPM-attention scale (*Table 5.5*). All adolescents reported having attention deficits.

Table 5.5 *BPM-A*

	girl 1	**girl 2**	**girl 3**	**girl 4**	**boy 1**	**boy2**	**boy3**
Mean phase 1	7.33	9.33	7.33	1.33	4.66	6.67	5.66
Mean phase 2	7.93	7.46	6.93	3.29	4.33	6.87	4.92
level r	0.17	-0.25	-0.12	0.55	-0.16	0.08	-0.55
level p	0.64	0.00**	0.66	0.21	0.55	0.80	0.10
slope r	0.40	0.26	0.38	-0.70	0.39	0.40	0.55
slope p	0.33	1.00	0.16	0.11	0.15	0.26	0.16

Note: Significance levels: *p<0.05 * p<0.01**

Cries-13 Girl 1 (slope r = 0.63; p<0.04), girl 2 (level r-0.86; p<0.01) report significant decrease of trauma symptoms (*Table 5.6*). A trend to significant decrease is seen in the score of all boys (p<0.06) were boy 1 exits the clinical range (<25). Girl 4 reported little trauma symptoms.

Table 5.6 *SMA Cries-13*

	girl 1	**girl 2**	**girl 3**	**girl 4**	**boy 1**	**boy2**	**boy3**
Mean phase 1[a]	45	(4)44.6	50	17.66	(10)31.3	43.67	43.66
Mean phase 2[b]	43.8	40	47.46	17.0	20.25	36.42	36.43
level r	-0.13	-0.86	-0.23	-0.14	-0.64	-0.40	-0.40
level p	0.69	0.01**	0.36	0.73	0.19	0.30	0.31
slope r	0.63	0.25	0.03	0.01	-0.82	0.81	0.81
slope p	0.04*	0.67	0.91	1.00	0.06	0.06	0.06

Note: bold scores mean deterioration; Significance levels: *p<0.05 * p<0.01**

	girl 1	**girl 2**	**girl 3**	**girl 4**	**boy1**	**boy 2**	**boy 3**
BPM-T	P		P	M		P	
BPM-I	P			I M	M	P	M
BPM-E		P	P	M			
BPM-A		P					
Cries-13	P	P		M	T	T	T

Note: green/ P means significant progress; yellow/T means progressive trend; red/I increase problems, grey/M minor symptoms beforehand, no colour=no significant change.

Figure 5.2 *Overview of the results of treatment progress after SMA analyses*

Discussion

In this mixed-gender residential group, the residential group climate was mostly positive during the study period (the first aim of the study). A safe environment that meets the basic psychological needs (Deci&Ryan, 2015) is a prerequisite for intended therapeutic change meant to reduce the risks (Andrews & Bonta, 2010; Leipoldt, 2019). The protection against revictimization related to CSE proved to be incomplete even within a SRYC, which, in our opinion, casts doubt on the legitimacy of the incarceration. There was a significant dip in the measured group climate in week 15 (*Figure 5.1*). When asked, the team of professionals stated that girl one undertook a suicide attempt in that week. The week after (week 16), girl two ran away, and the team suspected that she returned to her trafficker. This underlines the vulnerability of this target group to revictimization (Bright, et al., 2011; DeHart & Moran, 2015; Scoglio et al., 2019; Barnert et al., 2020; Franchino-Olsen, 2019) as well as the severity of the problems caused by the sexual abuse and exploitation (Rabinovitch et al., 2015; Palines et al., 2020). However, it is important to note that gender was not the issue concerning the risk of revictimization; it was not related to one girl in the residential group (Dishion & Tipsord, 2011) and to traffickers outside of the centre. The team also suspected girl two of having tried to entice girl one to join her. The staff had reason to believe that the suicide attempt of girl one, which is not uncommon from victims of CSE (Rabinovitch et al.,2015), was also a reaction to the grooming behaviour of girl two, possibly eliciting the feelings of hopelessness as a reaction to CSE, that Albright Samson (2020) describe. After this incident, an unexplained peak in residential group climate with an all-time high of 3.14 in week 17 occurs. An unambiguous conclusion about this residential group's social safety is not possible based on these data. The residential group climate was overall positive, but also fluctuating related to the severe problems of the young people that posed a continuing challenge to both employees and residents. This finding is consistent with the conclusions of Strijbosch (2018) that residential group climate is a continuous ‘work in progress’ and Leipoldt (2019) that ‘a positive social climate must constantly be evaluated and recreated’ (Leipoldt, 2019). Precisely because the residential groups climate seems to fluctuate regularly, it is important to identify what changes are associated with. In this study, the climate proved to be resilient after severe incidents. Perhaps the rebounding positive experience of the climate can be explained by the contrast with the experience before, a return to ‘homeostasis’ as described in the Subjective Wellbeing Homeostasis Theory (Tomyn, Weinberg & Cummins, 2015).

The second aim of this study was to evaluate treatment effects for both girls and boys. In three girls and one boy, significant progress was measured in some respects (*Figure 5.2*). There was a measurable trend towards reducing trauma symptoms in all three boys, with one boy exiting the clinical range. Deterioration was seen in girl four: a significant increase in internalising problems was found but not considered meaningful. This girl reported minor problems before, and after there were more but still not many problems reported. This girl's low scores on BPM and trauma symptoms are deviating in what is to be expected in this target group. Girl two improved in reducing trauma symptoms (but not out of the clinical range) and problem behaviour, but she also withdrew from treatment and was suspected of returning to her trafficker (Albright et al., 2020), whom she considered being her lover according to staff and young people.

A positive residential group climate is a prerequisite for treatment progress but, unfortunately, there is no proper reference to compare the measured treatment progress against (Selvius et al., 2018). To our knowledge the best relevant figures about possible reduction of problems come from a study by Dirkse and colleagues (2018) on the difference in problem behaviour as measured by the Child Behaviour Check List (CBCL) between the beginning and end of placement of 43 girls and 46 boys in Dutch SRYC. It showed that in 46% of the cases, there was a significant decrease in problems, in 22% of the cases there was no measurable difference, and in 31.5% of the cases there was a significant increase of problems. No differences were found between boys and girls. Our study and the Dirkse study investigate similar populations and use similar instruments: the BPM is an abbreviated version of the CBCL (Piper, et al., 2014). In our study self-reporting was used as a measure, in the Dirkse study the CBCL was filled in by professionals. Despite this difference, compared to the youngsters in the Dirkse study, were 31.5% of them showed significant increase of problems, with the necessary caution, the measured progress and the absence of perceived deterioration by our population, seems meaningful and promising. It is possible that the living climate in this group that generally seemed to sufficiently meet the psychological basic needs (Deci & Ryan, 2015) of these youngsters explains part off the differences with the results from the study by Dirkse and colleagues, in which no analysis of residential group climate has been reported.

Strengths and limitations

There are drawbacks to SRYC, which, by its nature, restricts the rights of young people. It is seen as an expensive last resort to protect young people from themselves and dangers from

outside. Legitimation of those disadvantages must be found in its effectiveness. Randomized control trials in the search for effect are not possible because a control condition does not exist for these vulnerable groups of girls. This study's value is also that it shows that a time-series design in SRYC can offer a methodological robust (Kazdin, 2019) focus on effectiveness in practice-oriented research. This study also used complete and well-validated measuring instruments, distinguishing them from other practice-based time-series research where short indicators of change are often used.

Several factors limit the contributions of this study. To be able to assess whether this contribution to normalizing the living environment of sexual abuse victims and victims of CSE by mixing genders in SRYC is valuable, in the sense that it offers more real-life training abilities to stimulate the development, cannot be answered based on this research. A more holistic understanding of the involved adolescents' experiences about a mixed-gender residential group is needed (Tate et al., 2016): does mixing genders promote accepting help (Barnert, et al., 2020)? Is it a source of resilience (Landers et al., 2020)? Or on the contrary, does it promote trauma reliving (Albright, et al., 2020) or impair sharing feelings with fellow victims (Kennedy & Prock, 2018)?

Apart from the gender difference, individual differences in RNR (Andrews & Bonta, 2010) profiles are possible explanations for the measured variation in treatment progress.

Conclusions and further research

In this residential group, the living climate was fluctuating but usually such that that treatment results for many of its residents turned out to be possible. The data did not corroborate the notion that a single-gender group is safer for these girls; concerning safety, gender did not seem to be the main issue. It is more likely that the unsafety in the residential group climate was related to withdrawal from treatment and the suicide attempt, often reported in literature on CSE victims (Barnert et al., 2020; Bright et al., 2011; DeHart & Moran, 2015; Franchino-Olsen, 2019; Rabinovitch et al., 2015; Raphael et al., 2020; Scoglio et al., 2019; Witt et al., 2019). The measured progress in reducing problems of all but one resident seems meaningful and promising. But the fact that these incidents could take place touches on the legitimacy of the measure to confine these young people. If gender is not the main issue that affects safety in SRYC groups, what can be said about the individual profiles of risks and protection factors of these young people and a convalescent group composition (Andrews & Bonta, 2010)? Sound evidence-based decisions about normalizing the pedagogical environment for girl

victims of sexual abuse and CSE in SRYC is important. Synthesis must be sought between scientific knowledge, professional knowledge, and clients' knowledge and experience. A deeper understanding of the individuals within this target group and their experience of the pedagogical environment is missed searching for ‘what works for whom’.

Declaration of interest statement

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper. The centre has paid the girls' rewards. The centre did not influence this publication.

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Supplementary data - Tables

Table 5.1.0 *Scheme of data collection*

Week	Action
1	• Information session team social workers
2	• Training group social workers • Group session girls, introducing the researchers, explanation research aims, means and gathering informed consent • Group social workers and girls informed parents and guardians
3	• Waiting time
4	• Quantitative measure 1 (second researcher) • Start peer interaction module
	• Quantitative measure 2 (second researcher)
5	• Quantitative measure 3 (first researcher) • Observation after school until after dinner situation • Observation group social workers choosing session from peer interaction module
6	• Quantitative measure 4 (first researcher) • Observation after school until after dinner situation • Feedback session about observations with behavioural scientist • conversation about observations with research supervisor
7	• Quantitative measure 5 (second researcher)
8	• Quantitative measure 6 (first researcher) • Observation after school situation • Observing choosing and (first) performing peer interaction module about bullying
9	• Quantitative measure 7 (second researcher)
10	• Quantitative measure 8 (second researcher)
11	• Quantitative measure 9 (second researcher)
12	• Quantitative measure 10 (second researcher)

Week	Action
13	• Quantitative measure 11 (second researcher) • Second observation peer interaction module on getting to know each other
14	• Quantitative measure 12 (first researcher • Planned feedback management cancelled • Third observation peer interaction module on group roles
15	• Quantitative measure 13 (second researcher) • Observation period dinner until bedtime
16	• Quantitative measure 14 (second researcher)
17	• Quantitative measure 15 (second researcher)
18	• Quantitative measure 16 (first researcher) • Planned feedback management cancelled • Observation after school till bedtime
19	• Quantitative measure 17 (first researcher)
20	• Final Quantitative measure 18 (first researcher) • Observation period dinner until bedtime
21	• Fourth and final observation peer group module session bully quiz
22	• Evaluation with management cancelled

Reference group n=71, mean 2.89, sd .60
Hedges' g < .19 not significant; .20 < Hedges' g < .49 = small difference*; .50 < Hedges' g < .79 = middle size difference**; .80 < Hedges' g < 1.29 = large difference***

Table 5.1.1 *Group Climate Inventory (GCI) over time compared to reference group*

Week	**N**	**Min**	**Max**	**Mean**	**SD**	**Hedges g ref group**
1	9	1.66	3.79	2.56	.70	.54**
2	9	1.83	3.76	2.37	.72	.84***
3	9	1.66	3.28	2.65	.47	.40*
4	7	1.83	3.07	2.51	.47	.64**
5	9	2.07	3.52	2.76	.51	.22*
6	7	2.14	3.21	2.70	.43	.32*
7	8	1.93	3.17	2.54	.44	.59**
8	10	1.52	3.17	2.48	.58	.68**
9	10	1.52	2.97	2.24	.53	1.09***
10	10	1.34	2.97	2.21	.54	1.14***
11	9	1.21	2.79	2.07	.54	1.37***
12	9	1.24	3.17	2.28	.60	1.01***
13	7	1.93	3.59	2.42	.61	.78**
14	9	1.52	3.41	2.31	.55	.97***
15	9	1.55	2.79	2.36	.39	.90***
16	7	1.28	2.93	2.23	.62	1.09***
17	9	1.41	2.93	2.23	.51	1.11***
18	7	1.34	2.93	2.24	.57	1.08***

Table 5.1.2 *Group Climate Inventory (GCI) total score and score per scale; current study compared to reference group*

GCI-scale	**Min Current study (n=14)**	**Max Current study**	**Mean Current study**	**SD Current study**	**Mean Reference group (n=71)**	**SD Reference group**	**Hedges' g**
Total	1.21	3.79	2.41	.56	2.89	.60	-.81***
Support	1.00	4.36	2.62	.69	3.14	.77	-.69**
Growth	1.00	4.50	2.19	.94	3.39	.61	-.69**
Repression	2.14	5.00	4.02	.60	3.92	.68	.78**
Atmosphere	1.00	4.80	2.68	.75	2.75	.81	-.26*

Hedges' g <.19 not significant; .20 < Hedges' g .<.49= small difference*; .50 < Hedges' g <.79=middle size difference**; .80 < Hedges' g < 1.29=large difference***

Table 5.1.3 *SMA Group Climate Inventory (GCI) total score over time*

Mean phase 1[a]	2.53
Mean phase 2[b]	2.37
level r	-0.31
level p	1
slope r	0.70
slope p	0.00**

Note: [a] phase 1 is week 1-3; [b] phase 2 is week 4-18; Significance levels: *p<0.05 * p<0.01**.

Table 5.1.4 *SMA Group Climate Inventory (GCI) total score over time before and after fire*

Mean Before Fire [a]	2.17
Mean After Fire[b]	2.30
level r	.63
level p	.00*
slope r	-.006
slope p	1

Note: [a] Before fire is week 9-11; [b] After Fire is week 12-18; Significance levels: *p<0.05 * p<0.01**.

Table 5.2.1 *Peer Interactions Residential Youth-care (PIRY) subscales over time*

Peer support and acceptance scale						**Relational aggression scale**				**Difference Subscales**
Week	**N**	**min**	**max**	**Mean**	**SD**	**Min**	**max**	**Mean**	**SD**	**P**
1	9	1.40	4.40	3.11	1.07	1.50	4.40	2.67	.93	.14
2	9	2.20	4.20	3.07	.67	2.00	4.20	2.79	.82	.40
3	9	1.80	4.40	3.18	.90	1.20	3.70	2.16	.83	.02*
4	7	1.40	3.40	2.40	.78	1.20	3.60	2.24	.82	.50
5	9	1.40	4.20	2.60	.95	1.00	3.80	2.27	1.04	.44
6	7	1.40	3.80	2.54	.94	1.20	2.50	1.99	.51	.13
7	8	1.20	3.80	2.40	1.07	1.00	4.80	2.33	1.14	.67
8	10	1.00	3.80	2.33	.95	1..00	4.60	2.60	1.05	.76
9	10	1.00	3.40	2.30	.96	1.20	4.40	2.98	.98	.24
10	10	1.00	3.80	2.44	1.02	1.40	4.20	2.75	.80	.59
11	9	1.00	3.60	2.40	1.06	1.00	4.80	3.00	1.12	.33
12	9	1.00	4.20	2.20	1.05	1.00	4.40	2.94	1.07	.11
13	7	1.40	3.20	2.25	.76	1.00	3.50	2.43	.91	.73
14	9	1.00	3.40	2.22	.87	1.00	3.50	2.69	.80	.23
15	9	1.00	4.00	2.09	1.07	1.00	4.50	2.61	1.00	.24
16	7	1.00	4.00	2.43	1.04	1.60	4.50	2.80	.95	.62
17	9	1.00	4.40	2.89	1.21	1.40	4.40	2.0	.89	.50
18	7	1.00	3.20	1.71	.76	1.20	4.20	2.66	1.03	.08

Table 5.2.2 *SMA Peer Interactions Residential Youth-care (PIRY) subscales over time*

	Peer Support and acceptance scale	**Relational aggression scale**
Mean phase 1[a]	3.12	2.54
Mean phase 2[b]	2.35	2.55
level r	-0.78	0.02
Level p	0.00**	1.00
slope r	0.57	-0.26
slope p	0.00**	1.00

Note: [a] phase 1 is week 1-3; [b] phase 2 is week 4-18; Significance levels: *p<0.05 * p<0.01**.

Table 5.3.1 *Means Brief Problem Monitor- Y (BPM-T) over time*

Week	**girl 1**	**girl 2**	**girl 3**	**girl 4**	**girl 5**	**girl 6**	**girl 7**	**girl 8**	**girl 9**
1	.79	.74	.63	.11	.37	.16	.79		
2	.79	.53	.58	.05	.42	.47	.58		
3	.79	.47	.42	.05	.42	.47	.42		
4	.63	.53	.37	.05	.37	.47[a]	.84		
5	.68	.37	.47	.05	.32	.47	.58		
6	.53	.37[a]	.32	.05	.53	.53	.58	.26	
7	.74	.37[a]	.32	.05	.42	.84	.68	.05	.84
8	.74	.37	.32	.05	.53	.79	.79	.00	.79
9	.84	.26	.37	.05	.95	.63	.95	.11	.89
10	.63	.11	.32	.05	1.16	.74	.95	.21	.79
11	.53	.00	.21	.05	.82[a]	.63	.89	.16	.68
12	.58	.00	.32	.05	.47		.68	.42	.84
13	.68	.00[a]	.32	.05	.37		.68	.32	.84[a]
14	.68	.00	.21	.05	.53		.84	.32	.84
15	.53	.05	.26	.26	.58		.89	.16	.68
16	.63	.00	.26	.26	.66[a]		.68	.21	.89
17	.53	.00	.26	.26	.74		.89	.21	.68
18			.16	.11	.58		.74	.16	.84

Note [a] means that a missing is replaced by the mean of two surrounding data points

Table 5.3.2 *SMA Brief Problem Monitor Youth-Total (BPM-T) over time*

BPM-Y total	**girl 1**	**girl 2**	**girl 3**	**girl 4**	**girl 5**	**girl 6**	**girl 7**	**girl 8**	**girl 9**
Mean phase 1[a]	.79	.58	.54	.07	.40	.32	.69	.10	.84
Mean phase 2[b]	.64	.17	.30	.10	.60	.62	.75	.23	.79
level r	-.57	-.66	-.77	**.13**	**.34**	**.64**	**.15**	**.48**	-.31
level p	.00**	.00**	.00**	**.00****	**.00****	**.00****	**.00****	**.00****	.00**
slope r	.52	.88	.74	**-.63**	-.36	**-.67**	**-.44**	-.29	.12
slope p	.00**	.00**	.00**	**.00****	1.00	**.00****	**.00****	1	1

Note: [a] phase 1 is week 1-3; [b] phase 2 is week 4-18; **bold scores mean deterioration***;*
Significance levels: *p<0,05 * p<0.01**

Table 5.3.3 *Reliable Change Index Brief Problem Monitor Youth-Total (BPM-T); meaning of difference between first and last score*

	girl 1	**girl 2**	**girl 3**	**girl 4**	**girl 5**	**girl 6**	**girl 7**	**girl 8**	**girl 9**
RCI BPM-T[ab]	1.53	4.35**	2.77**	0	-1.24	-1.53	.29	.58	0

Note[a] RCI>1.96** = strong improvement; >1.65<1.96* = some improvement; <1.65>-1.65= stable; <-1.65>-1.96* = some deterioration; <-1.96** = Strong deterioration
Note[b] used are SD week 1 of .27 and Cohens Alpha this study .80

Table 5.4.1 *Means Brief Problem Monitor-Youth; subscale Internal problems (BPM-I) over time*

Week	**girl 1**	**girl 2**	**girl 3**	**girl 4**	**girl 5**	**girl 6**	**girl 7**	**girl 8**	**girl 9**
1	.29	.29	.57	.00	.29	.29	1.00		
2	.00	.00	.43	.00	.29	.71	.57		
3	.14	.00	.29	.00	.29	.71	.71		
4	.00	.00	.29	.00	.29	.64[a]	1.00		
5	.00	.00	.43	.00	.14	.57	.86		
6	.00	.07[a]	.43	.00	.43	.71	.71	.57	
7	.14	.07[a]	.43	.00	.29	.86	.86	.00	1.29
8	.00	.14	29	.00	.57	1.00	.86	.00	1.57
9	.00	.43	.29	.00	1.29	.71	1.29	.00	1.14
10	.00	.00	.43.	.00	1.43	.71	1.29	.29	1.14
11	.00	.00	.14	.00	.86[a]	.71	1.29	.14	1.00
12	.00	.00	.57	.00	.29		1.00	.29	1.29
13	.29	.00[a]	.57	.00	.14		1.00	.71	1.15[a]
14	.14	.00	.57	.00	.43		1.14	.71	1.00
15	.00	.14	.57	.00	.86		1.14	.43	1.14
16	.00	.00	.57	.00	.93[a]		.86	.57	1.43
17	.00	.00	.43	.14	1.00		1.43	.43	1.00
18			.43	.00	.57		1.14	.43	1.57

Note [a] means that a missing is replaced by the mean of two surrounding data points

Table 5.4.2 *SMA Brief Problem Monitor-Youth; subscale Internal problems (BPM-I) over time*

BPM-I	**girl 1**	**girl 2**	**girl 3**	**girl 4**	**girl 5**	**girl 6**	**girl 7**	**girl 8**	**girl 9**
Mean phase 1[a]	0.14	0.10	0.43	0.00	0.29	0.57	0.76	0.19	1.33
Mean phase 2[b]	0.04	0.06	0.43	0.01	0.64	0.74	1.06	0.40	1.19
level r	-.39	-.12	.002	.11	**.34**	**.45**	**.49**	**.36**	-.31
level p	.00**	1	1	.00**	**.00****	**.00****	**.00****	**.00****	00**
slope r	.07	.13	-.40	-.37	-.42	-.30	-.60	-.63	-.19
slope p	1	1	1	1	1	1	.00**	.00**	1

Note: [a] phase 1 is week 1-3; [b] phase 2 is week 4-18, **bold scores mean deterioration***;*
Significance levels: *p<0,05 * p<0.01**

Table 5.4.3 *Reliable Change Index BPM-I; subscale internalising problems, meaning of difference between first and last score*

	girl 1	**girl 2**	**girl 3**	**girl 4**	**girl 5**	**girl 6**	**girl 7**	**girl 8**	**girl 9**
RCI BPM-I[ab]	1.45	1.45	.70	0	-1.40	-2.50**	-.7	.7	-1.40

Note[a] RCI>1.96** = strong improvement; >1.65<1.96* = some improvement; <1.65>-1.65= stable; <-1.65>-1.96* = some deterioration; <-1.96** = Strong deterioration

Note[b] used are SD week 1 of .30 and Cohens Alpha this study .77; SDIF=.20

Table 5.5.1 *Means Brief Problem Monitor Youth Scale Externalising problems (BPM/E)*

Week	**girl 1**	**girl 2**	**girl 3**	**girl 4**	**girl 5**	**girl 6**	**girl 7**	**girl 8**	**girl 9**
1	1.00	.71	.29	.14	.14	.00	.14		
2	1.00	.43	.43	.00	.29	.14	.43		
3	.71	.29	.29	.00	.29	.00	.00		
4	.57	.43	.14	.00	.14	.07[a]	.43		
5	.57	.14	.00	.00	.14	.14	.57		
6	.29	.07[a]	.14	.00	.43	.14	.43	.14	
7	.86	.07[a]	.14	.00	.29	.71	.57	.00	.29
8	.57	.00	.14	.00	.29	.43	.43	.00	.00
9	.86	.00	.14	.00	.57	.29	.57	.14	.14
10	.43	.00	.00	.00	.57	.29	.57	.00	.00
11	.29	.00	.00	.00	.43[a]	.29	.43	.00	.00
12	.29	.00	.00	.00	.29		.43	.57	.14
13	.29	.00[a]	.00	.00	.14		.43	.00	.22[a]
14	.43	.00	.00	.00	.29		.43	.14	.29
15	.29	.00	.00	.29	.14		.57	.00	.14
16	.57	.00	.00	.14	.22[a]		.57	.00	.14
17	.43	.00	.00	.14	.29		.43	.00	.14
18			.00	.00	.29		.43	.00	.00

Note [a] means that a missing is replaced by the mean of two surrounding data points

Table 5.5.2 *SMA Brief Problem Monitor Youth Scale Externalising problems (BPM/E)*

BPM/E	**girl 1**	**girl 2**	**girl 3**	**girl 4**	**girl 5**	**girl 6**	**girl 7**	**girl 8**	**girl 9**
Mean phase 1[a]	.90	.47	.34	.03	.20	.05	.19	.05	.14
Mean phase 2[b]	.48	.05	.04	.04	.33	.31	.49	.09	.14
level r	-.66	-.79	-.85	.09	**.43**	**.57**	**.75**	.11	-.00
level p	.00**	.00**	.00**	1	**.00****	**.00****	**.00****	1	1
slope r	.54	.64	.70	**-.49**	.15	-.57	-.34	.16	-.07
slope p	.00**	.00**	.00**	**.00****	1	.00**	1	1	1

Note: [a] phase 1 is week 1-3; [b] phase 2 is week 4-18; **bold scores mean deterioration***;*
Significance levels: *p<0,05 * p<0.01**

Table 5.5.3 *Reliable Change Index BPM-E; subscale externalising problems, meaning of difference between first and last score*

	girl 1	**girl 2**	**girl 3**	**girl 4**	**girl 5**	**girl 6**	**girl 7**	**girl 8**	**girl 9**
RCI BPM-E[ab]	2.11**	2.63**	1.07	.52	-.56	-1.07	-1.07	.52	1.07

Note[a] RCI>1.96** = strong improvement; >1.65<1.96* = some improvement; <1.65>-1.65= stable; <-1.65>-1.96* = some deterioration; <-1.96** = Strong deterioration

Note[b] used are SD week 1=.31 and Cohens Alpha this study .62; SDIF= .27

Table 5.6.1 *Means Brief Problem Monitor Youth Scale Attention deficits (BPM/A)*

Week	**girl 1**	**girl 2**	**girl 3**	**girl 4**	**girl 5**	**girl 6**	**girl 7**	**girl 8**	**girl 9**
1	1.20	1.40	1.20	.20	.80	.20	1.40		
2	1.60	1.40	1.00	.20	.80	.60	.80		
3	1.80	1.40	.80	.20	.80	.80	.60		
4	1.60	1.40	.80	.20	.80	.80[a]	1.20		
5	1.80	1.20	1.20	.20	.80	.80	.20		
6	1.60	1.20[a]	.40	.20	.80	.80	.60	.00	
7	1.40	1.20[a]	.40	.20	.80	1.00	.60	.20	1.00
8	2.00	1.20	.60	.20	.80	1.00	1.20	.00	.80
9	2.00	.40	.80	.20	1.00	1.00	1.00	.20	1.60
10	1.80	.40	.60	.20	1.60	1.40	1.00	.40	1.40
11	1.60	.00	.60	.20	1.30[a]	1.00	1.00	.40	1.20
12	1.80	.00	.40	.20	1.00		.60	.40	1.20
13	1.80	.00[a]	.40	.20	1.00		.60	.20	1.30[a]
14	1.80	.00	.00	.20	1.00		1.00	.00	1.40
15	1.60	.00	.20	.60	.80		1.00	.00	.80
16	1.60	.00	.20	.80	.90[a]		.60	.00	1.20
17	1.40	.00	.40	.60	1.00		.80	.20	1.00
18			.00	.40	1.00		.60	.00	1.00

Note [a] means that a missing is replaced by the mean of two surrounding data points

Table 5.6.2 *SMA Brief Problem Monitor Youth Scale Attention deficits (BPM/A)*

BPM /A	**girl 1**	**girl 2**	**girl 3**	**girl 4**	**girl 5**	**girl 6**	**girl 7**	**girl 8**	**girl 9**
Mean phase 1[a]	1.53	1.40	1.00	0.20	0.80	0.53	0.93	0.07	1.13
Mean phase 2[b]	1.70	0.50	0.47	0.31	0.97	0.98	0.80	0.16	1.05
level r	**.31**	-.55	-.57	**.22**	**.31**	**.70**	-.17	**.25**	-.09
level p	**.00****	.00**	0.00**	**.00****	**0.00****	**.00****	.00**	**.00****	1
slope r	.02	.93	.79	**-.68**	-.34	**-.58**	.08	.45	.63
slope p	1	.00**	.00**	**.00****	1	**.00****	1	1	.00**

Note: [a] phase 1 is week 1-3; [b] phase 2 is week 4-18; **bold scores mean deterioration***;*
Significance levels: *p<0,05 * p<0.01**

Table 5.6.3 *Reliable Change Index BPM-A; subscale attention problems, meaning of difference between first and last score*

	girl 1	**girl 2**	**girl 3**	**girl 4**	**girl 5**	**girl 6**	**girl 7**	**girl 8**	**girl 9**
RCI BPM-A[ab]	-.63	4.38**	3.13**	-.63	-1.25	-2.5**	2.5**	0	0

Note[a] RCI>1.96** = strong improvement; >1.65<1.96* = some improvement; <1.65>-1.65= stable; <-1.65>-1.96* = some deterioration; <-1.96** = Strong deterioration
Note[b] used are SD week 1= .48 and Cohens Alpha this study .78 ; SDIF=.32

Table 5.7.1 *Raw scores trauma symptoms Cries-13*

Week	girl 1	girl 2	girl 3	girl 4	girl 5	girl 6	girl 7	girl 8	girl 9
1	39.00	43.00	24.00	19.00	25.00	32.00	33.00		
2	33.00	32.00	22.00	19.00	21.00	31.00	29.00		
3	27.00	36.00	22.00	15.00	15.00	26.00	23.00		
4	26.00	13.00	22.00	15.00	13.00	26.50[a]	29.00		
5	29.00	13.00	17.00	15.00	14.00	27.00	25.00		
6	29.00	25.50[a]	16.00	15.00	15.00	28.00	19.00	23.00	
7	27.00	25.50[a]	16.00	13.00	33.00	29.00	25.00	23.00	49.00
8	25.00	38.00	15.00	15.00	27.00	30.00	24.00	21.00	42.00
9	29.00	17.00	15.00	15.00	39.00	29.00	26.00	13.00	45.00
10	28.00	13.00	14.00	15.00	46.00	28.00	28.00	23.00	49.00
11	25.00	13.00	14.00	15.00	42.50[a]	29.00	18.00	19.00	47.00
12	25.00	26.00	14.00	15.00	39.00		22.00	20.00	51.00
13	25.00	19.50[a]	14.00	15.00	35.00		26.00	15.00	49.50[a]
14	26.00	13.00	14.00	15.00	35.00		30.00	16.00	48.00
15	20.00	13.00	14.00	15.00	35.00		24.00	16.00	47.00
16	22.00	13.00	14.00	15.00	35.50[a]		17.00	17.00	47.00
17	18.00	13.00	14.00	17.00	36.00		19.00	16.00	46.00
18			14.00	15.00	18.00		18.00	16.00	47.00

Note [a] means that a missing is replaced by the mean of two surrounding data points

Table 5.7. 2 *SMA trauma symptoms Cries-13*

Cries-13	**girl 1**	**girl 2**	**girl 3**	**girl 4**	**girl 5**	**girl 6**	**girl 7**	**girl 8**	**girl 9**
Mean phase 1[a]	33	37	23	18	20	30	28	22	45
Mean phase 2[b]	25	18	15	15	30	28	23	17	48
level r	-.63	-.71	-.83	-.70	**.38**	-.34	-.41	-.68	**.51**
level p	.00**	.00**	.00**	.00**	**.00****	.00**	.00**	.00**	**.00****
slope r	.71	.53	.75	.14	**-.53**	-.27	.49	.94	-.002
slope p	.00**	.00**	.00**	1	**.00****	1	.00**	1	1

Note: [a] phase 1 is week 1-3; [b] phase 2 is week 4-18; **bold scores mean deterioration***;* Significance levels: *p<0,05 * p<0.01**

Table 5.7.3 *Reliable Change Index CRIES-13; meaning of difference between first and last score trauma symptoms*

	girl 1	**girl 2**	**girl 3**	**girl 4**	**girl 5**	**girl 6**	**girl 7**	**girl 8**	**girl 9**
RCI-CRIES-13[ab]	3.83**	5.46**	1.82*	.73	1.28	0.55	2.73**	1.28	.55

Note[a] RCI>1.96** = strong improvement; >1.65<1.96* = some improvement; <1.65>-1.65= stable; <-1.65>-1.96* = some deterioration; <-1.96** = Strong deterioration
Note[b] used are SD norm group of 16.56 and Cohens Alpha of norm group .89; SDIF= 5.49



Chapter 6

Is cohabitation of genders in secure residential youth care valuable for sexually abused girls? A qualitative case-study

Submitted as:

Sonderman, J., Van der Helm, G. H. P., Kuiper, C.H.P., & Van de Mheen, D. Is cohabitation of genders in secure residential youth care valuable for sexually abused girls? A qualitative case-study

Abstract

Girls admitted to secure residential youth care, who have been sexually abused and are victims of commercial sexual exploitation are often treated in groups that consist solely of girls. This is thought to be safer and to meet their needs. In this study, qualitative research is conducted in a secure residential group consisting of boys and girls to investigate whether mixing of genders can be of additional value in the treatment. Results show that danger of revictimization turned out to be not gender related and the genders were able to learn from each other. Implications for practice are drawn.

Introduction

In the Netherlands, it is general policy to place girl victims of Commercial Sexual Exploitation (CSE) in single-gender residential groups because it is assumed to foster safety and to fit their rehabilitation needs. However, a quantitative study on the safety of girl victims of CSE and the treatment effects in a mixed-gender Secure Residential Youth Care (SRYC) group showed a safe residential group climate and positive treatment effects (Sonderman et al., 2021). Nevertheless, as far as we know, insight in the experiences of girl victims of CSE in mixed-gender residential groups as a form of normalization of the pedagogical environment lack. These experiences are necessary to enable an evidence-based decision on the cohabitation of genders for victims of CSE and other sexual abuse.

Secure Residential Youth-Care in the Netherlands

In the Netherlands about 25% of the 45000 children and adolescents that are raised out of their homes (Harder et al., 2020, p16) receive residential youth care (Dutch Central Bureau of Statistics, 2020). These adolescents need intensive and sometimes restrictive care (Eltink, 2020; Gutterswijk et al., 2020). In 2018, when the data were collected for this study, 1433 adolescents between 12 and 18 years of age were placed in one of 12 Secure Residential Youth Care (SRYC) facilities. Of these adolescents 44% were female and 56% male (Jeugdzorg Nederland, 2018). SRYC in the Netherlands aids adolescents with complex and severe problems who live in adverse family circumstances. They are admitted to SRYC because they need to be protected from themselves or dangers in the outside world, but most of all, to provide intensive 24-hour care and effective treatment for complex problems (Van der Helm et al., 2018).

Girl victims of commercial sexual exploitation

When the admission in SRYC concerns a girl, they are often victims of sexual abuse (Assink et al., 2019; Lanctôt, 2018). Approximately 30% of the girls Dutch SRYC were placed due to concerns about commercial sexual exploitation (CSE) (Dirkse et al., 2018)? These figures roughly match with Lanctôt's findings (2018) and Cole and colleagues (2016) found in a clinical sample that the complexity of the trauma of sexual abuse was even stronger in the case of victims of CSE than in the case of other sexual abuse. The rationale for restricting liberties by placement in SRYC lies first in the dependency that results from the CSE. Girls themselves consider their abusers sometimes ‘lovers,’ to whom they consequently want to return. Fear as a reaction to coercion and violence used by the perpetrators and the feeling that there is no escape also explains their wish to withdraw from treatment (Serie et al., 2017),

resulting in revictimization. A second rationale for placement in SRYC is to prevent them from related self-harm and suicidality (Le et al., 2018).

Residential group climate and gender

Care in Dutch SRYC is provided by therapists, a school, and a team of trained social workers. The residential group usually consists of 8 to 10 adolescents. A positive residential group climate is a necessary precondition for achieving treatment goals. (Eltink et al., 2020; Van der Helm et al., 2018). A positive climate is characterized by a positive group atmosphere, support from staff, opportunities for growth, and the absence of repression. Such a climate is associated with higher treatment motivation and positive treatment outcomes (Leipoldt et al., 2019). Boys and girls share basic psychological needs (Deci & Ryan, 2015; Van der Helm et al., 2018), but in the fulfilment of these psychological needs, gender differences are seen. Both genders require the support and understanding of group social workers, and that need transcends the need for structure and control. Nevertheless, support and understanding are more important for girls, while structure is more vital for boys (Lanctôt, 2018). There are also differences between genders concerning the source of the motivation for treatment. De Valk and colleagues (2017) found that boys were relatively more motivated by the alluring perspective of freedom, while girls derive their motivation from the awareness that they are working on their treatment goals.

Interactions among youth are an essential aspect of the social climate in residential youth care (Good & Mishna, 2019; Moore et al., 2019). In a study on residential group climate, boys and girls in open residential youth care and SRYC were compared (Sonderman et al., 2020). Peers gossip and bully as well as support each other (Moore et al., 2019; Sonderman et al., 2020). Regarding the interaction between peers, differences in emphasis between the genders and between subgroups of girls were found. Girls experience relatively more gossip than boys do. Moreover, especially abused girls, perceive the overall climate as positive with supporting peer relations (Cantora et al., 2014). The more traumatised girls are, the more aversive they perceive peer interactions (Lanctôt et al., 2016). CSE experience among girls predicts higher levels of general post-traumatic symptoms, anxious arousal, intrusive experiences, defensive avoidance, and dissociation (Cole et al., 2016; Lanctôt et al., 2020). Internationally, placements in groups with only one gender are common in SRYC, deviating daily life from the ordinary. The only study into mixing genders in Residential Youth Care that we know of is a qualitative study based on seven interviews about six residential groups in Scotland (Copley & Johnson, 2016). They reported: '…Gender should be considered but is not a

priority … Mixed-gender living is normal and beneficial...' (p. 372). This study did not report issues on sexual abuse of the subjects. Supporting youth and facilitating a more contemporary resilience-oriented and ecologically informed approach to treatment is a legitimate wish but interactions between peers of different genders in residential groups pose risks. In CSE, sexual abuse and exploitation vulnerabilities accumulate (Barnert et al., 2020; Palines et al., 2020).

Rehabilitation needs and gender

Effective treatment is based on the 'What Works Principles' (Andrews & Bonta, 2010), which indicate that treatment should be tailored to the individual needs of the person: the intensity of treatment should be in line with the risk for recidivism or revictimization, should fit the criminogenic and development threatening needs (Assink et al., 2019; Harder et al., 2015), and should be responsive to the motivation and capabilities of the individual. There is growing attention for gender-responsive programs in practice and research (Anderson et al., 2019; Cantora et al., 2014; Kerig, 2018; Lanctôt, 2018). Results often emphasize the necessity to balance between making programs gender-neutral and making them gender-specific so that they are instead gender-responsive (Hubbard & Matthews, 2008; Kerig & Schindler, 2013). This needs validating the heterogeneity of the experiences, characteristics, and needs of adolescent girls (Aussems et al., 2020; Lanctôt, 2018; Sonderman et al., 2020). For instance, in a qualitative study (Aussems et al., 2020), the girls did not see their victimization as defining those needs, opposed to the professionals' view. For example, they objected to the suggestion that all the boys and men around them were out to harm them. They also expressed the need to learn from mistakes and thought of themselves as 'street-wise' related to coping with peers.

Normalization of the pedagogical environment

Since 2015, there is a new legal framework for youth care in the Netherlands: the 'Youth Act.' One of the fundamental principles underlying this law is that youth care supports: '…de-medicalization and normalization by strengthening the child-rearing environment …' (López et al., 2019, p.180). Residential treatment has moved away from models favouring isolated and self-contained settings toward models promoting family and community integration (Anglin, 2019; Johnson et al., 2015). However, in SRYC, rules and regulations are even more restrictive than in open facilities. Peer interactions are limited and supervised by staff, less contact with the opposite gender is also a restriction and, too many restrictions hamper development (De Valk, 2019).

Abused girls often show risky sexual behaviours (Biswas & Vaughn, 2011), probably due to trauma (Van der Kolk, 2014). In a scoping review of McKibbin (2017) of the prevention of harmful sexual behaviour and CSE in residential centres, attention should be paid to grooming and placement management that ensures that offenders and victims of sexual abuse and CSE remain separate. Peers can increase the risk of entering a CSE situation (Franchino-Olsen, 2019; Reed et al., 2019). It is thought that contact with these boys can also lead to fear and may trigger traumatic re-experiences of sexual abuse (Albright, 2020). Furthermore, the abuse is often surrounded with shame and a low sense of self-esteem (Cole et al., 2016; Kennedy & Prock, 2018), grounded in myths about rape which are maintained by men and by women (Suarez & Gadalla, 2010) and even professionals (Gaarder et al., 2004). Sharing feelings with fellow victims are thought to be beneficial (Landers, 2020).

Current study

This study depicted the inhabitants of a mixed-gender group in a SRYC facility in the Netherlands and their perception of the residential group climate and how that is related to placing boys and girls together by interviewing them and analysing their files, following quantitative study on this group (Sonderman et al., 2021).

Aim and research questions

The general aim of this study is to enable an effective evidence-based decision on the value of cohabitation of genders for victims of CSE and other sexual abuse. Synthesis is sought between scientific knowledge, professional knowledge, and the knowledge and experience of adolescents. Is normalization in the form of cohabitation of genders worthwhile considering the risks involved? Are gender specific needs met? Legitimizing such a decision requires in-depth knowledge of risks, strengths, and needs of the individuals involved. (Assink et al., 2019; Aussems et al., 2020).

To meet this aim, we firstly examined how these youth are described in their files, how these youth describe themselves, and how these two descriptions relate to each other: what are the risks and needs that could be found in the files and how are they related to the risks and needs that emerged from adolescents' perspective?

Secondly, we examined whether the pedagogical environment and treatment in this mixed-gender residential group are responsive to the risks and needs of girl victims of CSE and other sexual abuse.

Methods

Throughout the study, we have considered the consolidated criteria for reporting qualitative research Coreq (Tong et al, 2007) see appendix for checklist.

Setting: the residential group

'Ordinary where possible, special where necessary' was the motto of the SRYC facility where this case study has been conducted. The facility includes a school, and ten ordinary brownstone houses in a suburban street, designed to resemble an everyday environment. In light of this vision, the centre chose to create a mixed-gender residential group for girl victims of sexual abuse and CSE combined with boys, the research unit of this study. The admittance selection for this residential group aimed to minimize the risk of revictimization. In the composition of the group, it was conditional that the girls should outnumber the boys. The preferred mix was to have six girls and three boys and, the admitted boys had been screened for not having exhibited intimidating or sexually transgressive behaviour towards girls before.

Procedure and participants

In a group session, all inhabitants of the residential group (n=8) were asked to participate in the study. All enrolled in the study. The first author led the group session, an administrative officer of the centre, and a bachelor student of Social Work assisted. All researchers were female. The study's purposes and procedures were described on a flyer with information about improving SRYC in the long run based on their input and the study's methods. All participants gave written informed consent. The centre obtained informed consent from the parents or guardians. During the 18 weeks the study lasted, one girl ran away, one girl finished the treatment, and one boy and one girl was newly admitted to the group, who also enrolled in the study. Eight adolescents were interviewed. The girl that ran away was interviewed only once, the others twice. The girl that finished treatment was interviewed for the second time at her following home address. Of these nine participants, six were girls and three boys. The age of the participants ranged from 13 -18 years. Two girls had a non-Western migration background. No reward was given for participation in the interviews. The first author, an experienced social worker and youth psychologist, lecturer of Social Work at the University of Applied Sciences, and PhD-candidate was present at least weekly in the residential group to collect quantitative data. The researcher paid attention to building up rapport and became known by spending time for coffee and chatting on the residential group. The first author conducted the series of interviews, often accompanied by the student of social work.

Files and life stories

To assess the developmental risks and needs of the inhabitants of this residential group, we analysed the youth care files. Many professionals reported their findings of the youth and their families before admission to the SRYC. The files also included the reports of the SRYC professionals.

Second, we interviewed all residents of the selected mixed-gender group (n=9) on their perception of their life narrative based on social constructivism (Nijhof, 2000; Riessman, 2008). Asking the adolescents to tell their life stories and intervening as little as possible with questions, the words and language used supposed to convey the meaning they give to their experiences. We supported the memory of the adolescent and the sense of chronology withdrawing a timeline picturing 'from your mothers' pregnancy until today' during the interview. The attention span differed from person to person. The interviews differed in time between 38 minutes and an hour and a quarter. At the end of the interview, we checked relevant domains from the LIJ questionnaire (see further on, Assink, 2019; Van der Put et al., 2011). The last question was always focused on achieving a cheerful ending: what enhanced resilience. All interviews were recorded and transcribed.

Third, we interviewed eight of nine adolescents a second time to assess whether the pedagogical environment and treatment were responsive to the developmental needs and risks and to depict how the cohabitation of genders in the residential group contributes to or detracts from these needs and risks. This interview was a semi-structured topic interview. We invited the youth to describe the experience of their stay in the centre from the onset till now. Again, they were in charge; we checked relevant topics on residential group climate such as repression, atmosphere, support from peers and group social workers, sexuality and contact with family members (Lanctôt, 2018; Leipoldt et al., 2019; Van der Helm et al., 2018; Sonderman et al., 2020).

Analysis

To analyse the files, we used a screening instrument derived from a risks and strengths assessment to instrument for delinquent youth that is used nationwide, the 'LIJ' (Van der Put et al., 2011). The LIJ questionnaire has 256 items divided into 10 domains such as 'school', 'aggression', and ' family'. These items were then compressed and supplemented with gender-sensitive topics for use on girls in SRYC and youth prisons (Laheij, 2015).

The life stories interviews were analysed to understand the research questions: who are the individuals in this group? The life stories were first thematically analysed by a bachelor student of social work and afterward discussed and refined with the first author using Atlas-ti (Version 8.4.2) for coding. We used the life cycle to organize the results. This description of the lives of the adolescents was afterward analysed a second time by the first author, deducting overarching concepts to answer the research question to focus on the 'narrative' (Kohler- Riessman, 2007) of their life as the young people had outlined it.

The second interviews on the experience of their stay in the centre were analysed in two ways. At first, they were coded using Atlas-ti (open coding). The first author inductively looked for answers to the research question: are the pedagogical needs of these adolescents met in this residential group? The basic psychological needs of 'relatedness, autonomy, and competence' were sensitizing theoretical concepts (Glesne, 2008) in analysing the data. The interviews were cut into pieces using Atlas-ti. The pieces were given codes, and these codes were organized into the three theoretical themes (see *Figure 6.1* code tree). In addition to this adolescents' feelings, thoughts and behaviours relating to the mixed-gender aspect of the residential group were analysed. The second interviews were read by two researchers: the first author and an experienced child and youth therapist. They were both not involved in treating these adolescents (Braun & Clarke, 2006). After done this, both wrote a short memo with their findings on each interview and discussed the differences and similarities. These notes resulted in overarching deductive notes on each interview that framed the results. Four themes that describe the experience of the cohabitation of the genders in the group remained: atmosphere, learning, sex and relations, and danger.

Results

Files and Life-stories matched

The files of the professionals and the life stories matched on most occasions, all youth have complex problems in many domains and all files mentioned extensive (psychiatric) and co-morbid diagnoses for all adolescents. PTSS (all files), reactive attachment disorder (two girls one boy), ADHD (one boy one girl), ODD (one girl, one boy), depression (one boy, two girls), suicidal and self-injuries (one boy, four girls), eating problems (two girls), developing personality disorders (two girls), and addiction to hard drugs (1 girl, one boy) were mentioned. In the interviews, we did not ask about diagnoses. However, mental health problems which often did fit the stated diagnoses from the files were brought up by these young people. For two girls, a below-average IQ was suspected but not tested in the files. One

of these girls (age 15) did not seem to understand what was happening in her life entirely. In the following, we report only the differences between the two data sources.

One difference between the information from the files and the information in the interviews concerned the report on criminal behaviour. The girls' files (2, 3, and 4) did mention some minor misdemeanours of three girls and no convictions. However, in the life stories of these three girls, when asked (we guaranteed confidentiality), stories of severe violence and often drug-related crimes were reported. For example, one of these girls (2, age 18) reported -when asked- trafficking girls for prostitution. There was also underreporting in the file of criminal offenses committed by one boy (3, 15). Of the three boys, this boy illustrated the most antisocial profile in the interview. He bragged about his delinquent family history and boasted about guns that he could get his hands on.

Lifestories

Regardless of gender, violence, alcohol and drug abuse, and delinquency were significant in the lives of the adolescents. Only concerning sexuality, fundamental differences in the lives of the investigated boys and girls emerged.

Violence

All youth experienced violence towards them, most from an early age on. Also, youth witnessed violence towards other people and animals, and all the respondents behaved violently towards others. All adolescents described situations of physical child abuse and neglect by (step-) parents. As a child, one girl was abducted by her father. In their experience, all parents suffered from many problems themselves. Respondents thought alcohol and drug abuse and psychiatric disorders were an essential source of misbehaviour: *'My dad is an alcoholic …I came home after school, and I felt dad was in the wrong mood, angry. So, I went to my room and closed it. Then I heard a loud sound. Next thing, I saw a chainsaw coming through the door'* (boy 1, age 17). Witnessing violence between parents was reported. Two boys (boy 1 and 3) and one girl (6, 15) fought back, and they used physical force to the (step-) parent involved. One girl (4, age 17) was forced to witness the criminal behaviour of her stepdad from the age of four up. At eight years of age, she earned money for him by participating in cage fights with other children for the public to gamble.

Delinquency

All but one (girl) adolescent reported about their delinquent behaviour, varying from shoplifting (both genders), robbery (boy), drug dealing (both genders), to physical abuse and even torture (girl), talking about this during the interview was very upsetting for her. One girl arranged other girls to be prostituted *'…I help other girls (not from the SRYC) with contacting interested men for paid sex…this is easy money for me…'* (girl 2, 18).

Substance abuse:

All but one (girl 6, age 15) youth reported having experience with soft and hard drugs. Two of them (boy 1 and girl 4) reported dealing and producing (boy 1) drugs. Dealing drugs and addiction to drugs were also sources of (extreme) violence; they said drugs numbed empathy toward their victims. The three girls (1, 2, and 3) who talked about themselves being prostituted told us they (too) used drugs to ease the experience of the sexual abuse.

Sexuality

None of the boys reported sexual abuse. None of the girls' life stories mentioned sexual abuse in preadolescence. All girls reported having sexual experiences with boys/men. Some girls kept their boyfriend a secret from their family, with one girl (girl 5, age 14) this was related to family honour. Four (girl 1, 2, 3, 4) girls thought about ex-boyfriends as *'bad'*. They were raped and hit by them, and three times used by them for prostitution purposes. The violence by their boyfriends was even sometimes found to be feeling as a form of concern: *'…Hitting me, proves I am important to him…'* one girl (girl 2, age 18) said. One of the girls (1, age 16) said she had been pregnant at age 12. None of the girls wanted to elaborate in the interviews on the sexual abuse. Their abusive relations filled them with shame. The boys were less talkative about any possible sexual relations.

Education

All youth but one girl (6, age 15) dropped in the level of education from what seemed possible at the end of primary education. This one girl was almost taking her finals when entering the centre. She was very much driven to take her exams and succeeded. She was the only participant that did not have residential stays in her history. None of these youth received schooling on their potential level as estimated at 11-12 (standard procedure in the Netherlands).

Continuity

All but one girl (6, age 15) had a history with alternating care facilities. They had been in foster care, RYC, or residential forensic care.

Strengths

No matter how complicated and ambivalent the relationship with parents may be for these young people, seven of them experience their mothers as a source of love and emotional support. Mothers are not always competent but are primarily concerned about them. The girls say that helping others (mother, brothers, sisters, pets, or friends and peers in the residential group) in their lives is a source of strength. The boys mentioned that they find it easy to make friends and considered this a source of strength. One boy (1, age 17) and one girl (1, age 16) also mentioned making music comforting.

Life in SRYC

We organized the results from the second interviews about the life in SRYC according to the code tree (*Figure 6.1*) after which we will review general results on the cohabitation of genders.

Relatedness to Peers (A), Professionals (B) and Social Network (C)

(A1) Empathy to peers

The adolescents spoke about being consoled by others and give consolation to others. They felt they understood the others' difficulties and that others understood them.

(A2) Caring

Three girls (1, 3, and 4) and one boy (1) practiced self-harming behaviour in the past, and girl one and boy one still did. One girl (1, age 16) attempted to commit suicide during the time of the study. These four adolescents showed compassion and understanding for each other's suffering, took pride in having someone to care for, and found consolation in not being the only one.

(A3) Trust issues

All adolescents said their life experiences have led to a lack of trust in general (negative social information processing). One girl reflected on her ability to relate to other people in general and said: *'...I have serious trust issues, you know…'* (girl 4). Trusting the other adolescents in the residential group is risky. All adolescents said that they were cautious in relating to the other adolescents.

(B1) Relating to professionals is, worthwhile and fragile

Each adolescent felt supported by at least one of the group social workers. One boy who trusted almost no one in or outside the centre said: *'... I am tough, and I do not care being locked up... they (the professionals) mean nothing to me…they go to work, get paid, and do not give a fuck. Except for C., my mentor. He cares about me, and I care about him. …'* (boy 3). Girl 4 told that she witnessed the suicide attempt of girl 1 where the staff was so busy that no one was paying attention to her fear and terror.

(B2) Offering relational continuity by professionals is running the gauntlet

The team of professionals decided that a girl (2) would benefit significantly from continuing the therapeutic relationship with her mentoring social worker in her next housing facility. Three of the remaining adolescents (girls 1 and 4 and boy 1) mentioned that this discontinuity of staff was very unsettling. They felt attached to that social worker. They were hurt because they thought her leaving was unwarranted and that there had been no proper farewell, which was feeding 'trust issues' (girl 4).

(C1) Parents

All adolescents spoke about the importance of contact with parents and family. They were involved in all adolescents' trajectories, depending on the individual needs. Some youth spoke about family therapy. Others about a vacation with parents. Another about her father finally agreeing to meet her boyfriend.

(C2) Friends

A boy (3) said: *'…A friend is someone you know since you were five years of age. I have three…none are forbidden contacts…I have no forbidden contacts…'*. One girl (1) told us that the team is too cautious about having contact with boys when she is on leave. That caused her to lie. She thought that that was not helping her recovery *'…. You need to learn from mistakes...'* several participants said.

Autonomy: Therapy (A), Autonomy granting (B), Limit setting (C)

(A) Related to therapy

Many youths reported that they had to wait too long for individual therapy to start. They felt that was very unjust, locked up to wait: *'…after four months' inside EMDR started'* (boy 1). Sometimes they thought they were not taken seriously in the choice of therapies offered. When therapy related to treatment goals was shared by the adolescent, it feels right: *'…I*

needed to learn to become more assertive…' (girl 1), and if the choice of therapy sort was felt to be a shared decision, youth reported to be able to follow their path.

(B) Autonomy granting

When youth earned more freedom to go where they wanted, this was highly appreciated by the youth. Doors of rooms that were not locked after them, a tag key that allowed them to move outside the residential group made them feel they were on the way to recovery and on the way out. Moreover, if the centre restricted their freedom, often youth felt they had needed the restrictions in retrospective; to prevent them from self-harm for instance, when a boy is reflecting on his needs in the beginning: *'....they can take measures here you know like stripping your room …or let you sleep in the relaxation room which is just a room or in isolation…it's not nice, but necessary…'* (boy 1).

(C) Limit setting

Balancing the scale between asserting power to offer safety and facilitating the need for autonomy lies very much in the way power is exerted: extreme measures are accepted if youth were under the impression that it was for their good. For example, the centre uses random urine controls for drugs. That is an accepted procedure. However, the way it was done matters in how humiliating it feels to urinate in front of someone else: *'…she always turns her back on me in the toilet… that is sweet…'* (girl 4). When youth breached rules like smoking soft drugs, they accepted the punishment as just.

Competence: Treatment goals (A), Transition to adulthood (B)

(A) Treatment

Personal growth makes the stay in the SRYC useful. The participants talked about all sorts of individual and family therapies. One girl said that she was amazed by the effect of the therapy and especially the trauma therapy. She said she had to move stuff into a cellar. In a cellar, terrible traumatic events took place when she was a kid. Cellars were places she avoided because they triggered traumatic memories. But now: *'…I was a bit anxious to go in there... But I went through. Nothing happened (surprised tone of voice)! I was amazed. That is the effect of the EMDR for sure!'* (girl 4).

(B) Transition to adulthood:

Talking about their futures, the image of the ideal life as a 'normal' life arises – a partner, a job, a place to live and friends, and sometimes kids. Two adolescents (one boy and one girl)

were learning for a career in the catering industry. Both were busy trying to acquire internships outside the centre. That filled them with confidence. They talked about their education and educators in the centre with pride: *'In ten years? Married, living with someone, kids, a dog, and still be a chef...Yes, then I will be a sous-chef. No, in ten years, I will not be a chef, in twenty perhaps ...today I am already a soup-chef (haha). That is quite an accomplishment for here!'* (girl 4).

Cohabitation of genders

Four overarching themes arose from the second interviews: (A) the atmosphere in the residential group is differs from single gender groups; (B) the contact with the other gender is a learning possibility; (C) possibilities for sex and romance and gender in the residential group is not the issue; (D) danger and protection stem from other sources.

(A) Atmosphere

All but one adolescent thought positively or neutral about the atmosphere in a mixed-gender group. One girl experienced living in a girl's only residential group before and compared the atmospheres. She said, *'...it feels more relaxed [in the mixed group] ... girls can bear grudges, and they bully one another even more…when girls are creating huge problems, boys, do not…'* (girl 1). Others described the effect of the mixed-gender population as *'...relaxing...I do not have to fight to be the top dog as boys do'* (boy 3). *'...homely, it feels like sort of family…'* (girl 4) or simply *'...cosy…'* (girl 5).

(B) Learning

Living with the other gender is also a learning opportunity. Adolescents were proud to be criticasters of each other's choices: *'...Fortunately, I have enough status to be listened to; I think that the influence of peers is sometimes larger than the influence of group social workers…I protect the girls…I have been able to prevent some girls from falling in the same trap over and over…but not all…'* (boy 1). One girl brought up that in case of romantic troubles, she could learn *'...boys-logic…'* (girl 3) by talking about her problems.

(C) Sex and romance

Romantic relationships between adolescents within the residential group were not reported. They saw their group members as *'...sort of a family… a nuisance…attention seeker …in need for aid…'* and sometimes (only four times) as *'friend'*. The search for sexual and love relationships was more focused on youth from other groups. However, talking about this

subject with peers in the residential group was a hot topic in the residential group. The way a girl – very much aroused – talked about how she met her boyfriend *'…in school ... and then I kissed him (giggle)…'* (girl 5) sounded very much like the normal development. One boy mentioned that he could teach girls about how boys think about relationships and sex (boy 1).

(D) Danger of revictimization

The data show that in considering the risk of revictimization by fellow group members, gender is not the issue. It is the individuals' profiles that enhance risks. The girl without experience in RYC (girl 6) did not think about this aspect at all. It is merely 'normal' that boys and girls live together. One boy (boy 2, age 13) felt the same way. However, most girls thought of these guys in the residential group as no threat *'... you see they are not gay, but you know, they could be in a way judging their behaviour…'* (girl 1); they had similar problems, and that created a common ground for support more than for danger, as was intended by the centre. The one girl (girl 4) that was not positive about the mixed gender, worried about the safety of the other girls. She had not been subject to sexual abuse. Nevertheless, in her eye's boys pose a danger. She formulated many worries about one boy's dangerous and criminal behaviour, the one with the most antisocial profile (boy 3).

Discussion

The purpose of this study was to promote a balanced decision about placing boys and girls together in SRYC when there was sexual abuse and CSE in girls' histories. The results of this study suggest that the mixing of the genders can be of additional value in the treatment. To decide on gender composition it seems wise to look closely at the profiles of individuals, regardless of gender, in order to maximize the benefits of gender composition while minimizing the risks.

The individual risks and needs

This group of young people had several factors in common that increased risks for revictimization and recidivism. All these young people were traumatised by violence experienced from an early age on, all youth suffer from multiple mental health and behavioural problems, almost all had troubles with substance use, some were addicted, and a multitude of problems characterizes all their families. These boys and girls fit into the high ends of the needs spectrum as described by Lanctôt (2018), justifying an intensive intervention (Andrews & Bonta, 2010) in which trauma sensitivity in general and specific individual trauma treatment are important. An important gender-specific common

denominator in the girls' risk and need profiles was -as expected- the sexual abuse (Aussems, 2020; Assink et al., 2019; Dirkse et al., 2018; Lanctot, 2018; Lee et al., 2018; Serie et al., 2017). Sexual abuse by boyfriends from twelve up happened to five of six girls; in four of six life stories and files, CSE was mentioned.

There were unexpected indications of a shared protective factor. Most of the mothers of these young people continue to play an important positive role. We found that most adolescents continued to experience their mothers as an essential source of love and support despite all the difficulties in family life. In the study of Pasko & Chesney Lind (2016), the CSE victims experienced no support from their mothers. A possible explanation for this difference to our research group is that there was no mention of early sexual abuse within the family in the histories of these adolescents. Regarding the violence in the families, the mothers were as victimized as their children were. Although this finding is important for both genders, emotional support from mothers during adolescence is especially crucial for girls (Lissa et al., 2019; Van der Molen et al., 2012). Also, regarding reducing the risk of criminal recidivism the emotional support of mothers is reported in the literature on gender and criminality (Wong et al., 2010) to be a gender-related protective factor for girls. Furthermore, for recovery after sexual abuse, this support is essential next to other family members (Domhardt et al., 2015; Haffejee & Theron, 2017).

In our research group, it turned out from the interviews that many of these girls had committed serious crimes, which were not reported in the files. Concerning delinquent behaviour by the boys, the files did not differ much from what the boys told us. With the girls, this was different. Girls talked about having committed crimes including mediation into prostitution. Although there is literature on this phenomenon (Franchino-Olsen, 2019; Morselli & Savoie-Gargiso, 2014; Reed et al., 2019), this and the other crimes that the girls committed turned out to be unknown to the professionals, which logically implies that in the treatment of the SRYC there was no focus on reducing the risk of recidivism nor for the danger of revictimization in CSE caused by girls. It is possible that not noticing an existing high forensic risk and needs profile is partly determined by a gendered view of girls as mere victims (Chesney-Lind, 1997; Kruttschnitt, 2013).

The experience of daily life in the residential group

One of the in the introduction mentioned objections against the cohabitation of genders is that this possibly hinders the restorative sharing of feelings (Landers et al., 2020) of shame

(Kennedy & Prock, 2018) about abuse. Girls did mention that they also talked about feelings with male peers. However, much ambivalence was expressed about the peers, and youth also indicated that they could not put their confidence in others.

According to the young people, the results indicate there were merely advantages to the cohabitation of genders. We found no evidence that dealing with the select group of boys in the residential group hindered the girls' recovery due to fear and traumatic re-experiences as is reported by Albright (2020). The girls felt that they could learn because the boys in the residential group were not sexually intrusive, which was also reported by O'Neill (2008). These boys differed from other boys in the centre. It makes sense that that young people in residential care have access to building respectful relationships and sexuality education with a particular focus on how they are constructing love, sex, and intimacy (Gilligan, 2016; McKibbin, 2017). Boys from other residential groups within the facility may have had more in common with the girls' past abusive boyfriends. The youngsters did not report on transgressive surreptitious sexual behaviours. Certainly not with the boys from within the group, but also not with the boys from outside the group. For both sexes, gender-stereotyped behaviour to influence group dynamics seemed less necessary (Barter, 2008; Sonderman et al., 2020), positively influencing the atmosphere of the residential group. A positive atmosphere is a significant advantage because it is precisely in SRYC that supportive relations between peers are a factor that predicts a positive residential group climate for girls (Cantora et al., 2014; Lanctôt et al., 2016; Sonderman et al., 2020). The cohabitation in the residential group and experimenting with relationships outside the group promoted ‘growth’ opportunities in learning to deal with the opposite sex. Being allowed to practice and making mistakes is essential for girl victims of CSE in SRYC (Aussems et al., 2020). Our finding also touches on a significant element of residential group climate for girls. In this group of girls, learning how to deal with boys is related to the treatment goals. De Valk and colleagues (2017) found that girls experience the SRYC as less repressive and autonomy limiting when they feel they are working on their treatment goals.

Working relationships

All youth attached themselves to at least one but mostly a few social group leaders. Despite 'trust issues' all put confidence in their mentor, opportunities to practice dealing with boys were made possible by the quality of the working relationship with the professionals. This sort of support from professionals is in line with the specific relational needs of girls (Lanctôt, 2018; Miller et al., 2012; Quinn et al., 2021; Sonderman et al., 2020) and facilitates learning

necessary about normal sexuality (Gilligan, 2016; McKibbin, 2017) in SRYC. In addition, the support by the professionals was possibly facilitated by the positive working climate (Souverein et al., 2013) in the entire centre at that time; the adolescents in this study expressed to be known, seen, and supported by directors, therapists, the teachers at the school and by group leaders from other residential groups.

Strengths and limitations

The young people talked about sensitive issues such as drug use and criminal behaviour unknown to the professionals. These confessions proved the value of building rapport with the investigator. Three researchers with different angles analysed and discussed the primary data, what increased the validity of the analysis. The triangulation of data with files and interviews also increased the strength of the findings. A limitation is that we did not discuss the results with the adolescents or the professionals. Their reflection on the results could have been of added value. Another limitation of the study is that no data were gathered from other stakeholders. E.g., it would have been valuable to talk to the parents about their perspective on the cohabitation of genders. We note that there were no boy victims of sexual abuse or CSE involved. This group of boys is less well represented in science and practice. For the subject of this study, it would be relevant to see how when both sexes can support each other in their recovery process.

Conclusion

The study reveals that the (gender-) composition influences the safe living environment in SRYC, what is the precondition for treatment progress. The composition of the residential group in SRYC is a factor that can promote or hinder recovery (Sonderman et al., 2020). Boys and girls in this study learned relevant things from each other which matches the results from Copley & Johnsons study (2016). The gender composition they felt was relaxing because it was less needed to show gender-stereotyped behaviour. The results suggest that these benefits are linked to the careful composition of this group. The risks and needs profiles of the boys were well attuned to support the need for the relational and physical safety of these girls; the boys had not demonstrated sexually transgressive behaviour in their past (McKibbin, 2017) and, the girls outnumbered the boys (Lanctôt et al., 2016). Also, the staff maintained supportive working relations with youth (Ayotte et al., 2017; Lanctot, 2016; McKibbin, 2017).

Residential group climate is always the result of the team of group social workers supported in their work by an entire system (Souverein et al., 2013; Strijbosch, 2019). In this case, the treatment vision to normalize living in the SRYC centre was noticeably implemented.

In the search for a recovery supporting composition of residential groups, this study showed - in compliance with gender-related research in related areas (Fine, 2018; Kruttschnitt, 2013) - that differences between individuals seem to be more important than general gender differences. Placement management with knowledge on sexual abuse and CSE-related risks and needs is crucial (Gilligan, 2016; McKibbin, 2017). Girls contribute to luring girls for human traffickers (Morselli & Savoie-Gargiso, 2014). Awareness of the gendered pathways that lead through trauma to girls' criminal behaviour and substance addiction is essential to develop safe gender-sensitive care in SRYC. In addition, these gendered pathways should be integrated into the overall policy of trauma-sensitive working in SRYC because these girls (nor the boys) are not '…risky or needy…' (Kerig, 2018) but are both.

Implications for practice

On mixing genders, we support McKibbin's (2017) findings that placement management by professionals who are well informed on the risks and needs concerning sexual abuse and CSE is important. Furthermore, in this study, the normalization of the living environment in the residential group in SRYC by carefully mixing genders did indeed enrich the learning environment and improve the atmosphere (Sonderman et al., 2020). Therefore, the careful mixing of genders deserves a place in composing residential groups.

For the development of these girls, it is probably wise to treat the traumata following their victimization by violence, abuse, and CSE (Lanctôt et al., 2020), rather than exposing them to the iatrogenic effects of imprisonment for crimes committed (Krabbendam, 2016; Pasko & Chesney-Lind, 2016; Trejbalová et al., 2020). However, ignoring delinquent behaviour by not addressing the perpetrator aspects (Van der Kolk, 2014) and gendered pathways from traumas to criminality (Kerig, 2018) and prostitution (Morselli & Savoie-Gargiso, 2014) is potentially harmful. For it possibly increases the intertwined risks of revictimization and re-offending (Andrews & Bonta, 2010The crimes that youth spoke about in this study were often related to drugs. Since substance abuse is intertwined with coping with sexual abuse (in CSE), there is urgency in incorporating addiction treatment in all treatment of girls in SRYC to prevent revictimization of CSE victims (Reid & Piquero, 2014).

Self-silencing (Maji & Dixit, 2019) is sexual abuse-related behaviour that threatens recovery. This study found no evidence to support the assumption that mixing genders in the living group per se promotes self-silencing. Because there are so many sexual abuse victims in SRYC, it is recommended to pay attention to behaviour in daily life in residential groups in SRYC that reinforce feelings of guilt and shame about sexual abuse in every residential group and centre, regardless of gender. Because good care in SRYC requires a three-stage rocket of care (Souverein et al., 2013; Strijbosch, 2019), this aspect also needs attention in daily life, in methods used in the residential group, and individual treatments. Because myths about rape are maintained by men and by women (Suarez & Gadalla, 2010) and even professionals (Gaarder et al., 2004), the attention for this subject in the daily upbringing of adolescents in SRYC is a necessary precondition for effective programs and therapies in SRYC. Also, because besmirching women for presumed sexual activity is common, it has a base in the social-cultural climate in SRYC.

Finally, in our research into the normalization of the living environment, we found two potentially empowering topics to further expand research into gender-responsive (Hubbard & Matthews, 2008; Kerig & Schindler, 2013) programming in SRYC. First, in this study, young people talked appreciatively about helping each other, secondly about the support of their mothers. Supporting others and receiving social support are vital for trauma recovery (Van der Kolk, 2014: Rothchild, 2010)) specifically for sexually abused girls (Dormhart et al., 2015; Haffajee & Theron, 2017). Therefore, attention to these empowering topics is essential.

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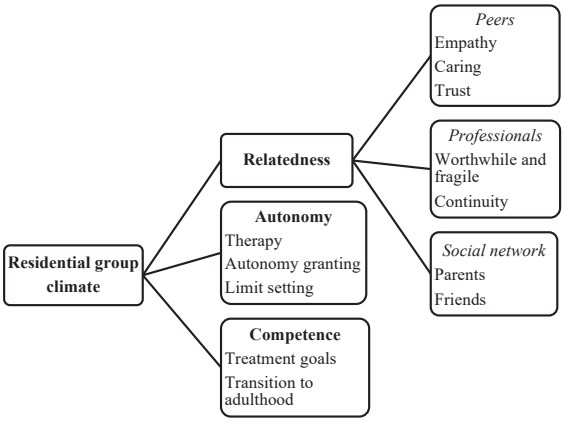


Figure 6.1 *Code tree*



Chapter 7

General discussion

This dissertation addresses the question of what girls who stay in (secure) residential youth care need to grow up. The relation between the basic pedagogical climate in the residential groups and the treatment results is the central focus. Adolescence is a vulnerable period in human development, and girls are even more vulnerable than boys because of a higher risk of sexual abuse and rape. Compared to other potentially traumatic experiences, sexual abuse and rape more often result in post-traumatic stress disorder (PTSD) (Dworkin et al, 2017). Common consequences are a hyperactive stress system (Porges & Dana, 2018), reliving the events, developing negative emotionality, depression, distrust, fear, and low self-esteem. Also, eating disorders, self-harm, substance abuse, truancy, lack of self-control, emotion regulation problems, aggression, risk-taking (Van der Kolk, 2015) and, related to this, revictimization for example through commercial sexual exploitation (Scoglio et al, 2021). Often these strong reactions of girls are the reason for placement in (secure) residential facilities, of which long-term benefits are unclear. We do know that (secure) residential treatment itself have negative side effects, and especially secure residential youth care is the subject of debate and social criticism in the Netherlands (Stichting Het Vergeten Kind, 2022; Wessels & Van Eersel 2021). A repressive climate in residential youth care could lead to reduced cognitive self-regulation, further damage, and failure to recover and/or re-traumatization and revictimization (De Valk, 2016). Long-term residential care reduces educational outcomes, promotes social isolation, and impedes future societal participation. It is becoming increasingly clear that (secure) residential treatment (of girls) is not only a last resort, but also a 'wicked problem' in itself (Rittel & Webber, 1973). Unambiguous solutions in the sense of definitive and objective answers to ensure the safety and treatment of the girls and thereby prevent undesirable negative side effects (iatrogenic risks) of a (secure) placement are not available. The reduction of such socio-ecological wicked problems is hindered by polarization and by unforeseen transformation that moves the system from crisis to crisis. The research described in this dissertation was done after a major systemic change in Dutch youth care in 2015. A new system change is probably in the making.

Therefore, this dissertation focuses on providing tools for deliberate transformation of (secure) residential care for girls by creating a positive environment (open residential group climate) for treatment. There is a positive and open climate when the guidance helps young people and listens to them, teaches them things that are meaningful for the future, when the rules are fair and when there is a pleasant, safe atmosphere. By gaining a better understanding

of possible gender-related needs of girls in relation to the living climate, the aim of this dissertation was to contribute to knowledge to improve the residential treatment of girls.

The central research question was:

What do girls in residential youth care need regarding the residential group climate to stimulate their development and to promote the achievement of treatment goals?

Summary of the different chapters

The first quantitative study *(Chapter 2)* examined differences in perceived residential group climate between boys and girls in a sample of 344 young people in various forms of residential youth care in the Netherlands. We compared boys and girls in juvenile prisons and secure residential youth care centres with boys and girls in open residential centres. Participants completed the 'Prison Group Climate Instrument'. This is a self-report questionnaire about the residential group climate. Multilevel regression models indicated that girls in open residential groups experienced the climate as the most positive of all groups, and girls in juvenile prisons and secure groups experienced the climate as the most negative. The explanation for these findings is sought in the importance that particularly girls attach to social contacts. When young people are locked up, most of the social interactions are restricted to the residential group (peers and staff). Therefore, we argue, it is precisely in these secured settings that the quality of these social relations needs to be promoted.

The second quantitative study *(Chapter 3)* builds on the conclusions of the first study and describes the development and validation of a self-report questionnaire that captures the quality of social interaction between young people in community groups: the Peer Interactions Residential Youth care (PIRY). Monitoring the quality of relationships between young people in residential groups contributes to a positive living environment. In this chapter, the development, construct validity and reliability of the Peer Interactions in Residential Youth Care (PIRY) questionnaire are examined in a sample of 345 adolescents (age M = 15.45, SD = 1.59, of whom 44.9% were boys) in residential youth care in the Netherlands. A confirmatory factor analysis of items on peer interactions was conducted. The two factors: 'mutual support and acceptance' and 'relational aggression' appeared to fit well with the data. The PIRY can be used in practice and in research to assess and monitor both positive and negative peer interactions in residential youth care at the level of the residential group.

The third study *(Chapter 4)* used mixed qualitative and quantitative methods. It investigated whether the quality of relationships between girls in a secure residential group in the Netherlands could be actively promoted by a group counselling program (‘Happy together') designed for this target group. The primary aim of this study was to elucidate how the residential living environment affects treatment outcomes. The girls in this single-gender residential group were admitted there because of (suspicions of) commercial sexual exploitation (CSE). The study combined participant observation with a case-based time-series design. For 18 weeks, changes in the residential group climate, the interpersonal relations among the girls, and the achievement of treatment goals were measured. The residential climate in this group was negative from the start and was characterized by repression. A great deal of relational aggression between the girls was measured and observed. The treatment outcomes measured were trauma symptoms, attention problems and internalising and externalising behavioural problems. Two of the nine girls included in the study improved significantly. Four girls showed a demonstrable deterioration. The other three presented a mixed image. It was concluded that a group counselling program aimed at improving the interpersonal relations between the girls could not be a cure for a generally harmful, repressive residential group climate.

The fourth study *(Chapter 5)* describes a quantitative study in a secure residential group for boys and girls (n=11) where girls (maximum of 6 at a time) who were victims of CSE were treated together with a few (maximum 3) boys. The boys in this group were selected on the basis that they themselves had not engaged in any sexually transgressive conduct. The mixing of the sexes was intended to normalize daily life in the residential group. The study again used a case-based time-series design to investigate whether the residential group climate was safe and whether treatment outcomes could be achieved for these adolescents in this mixed-gender group. This secure group was found to have an open residential group climate and most adolescents made demonstrable progress towards their treatment goals (effect). This group also included two girls who appeared to recruit other girls for prostitution. The conclusion was that treatment effects can be achieved in a safe residential group climate, also in a mixed gender group for girls who are victims of CSE. Another important finding was that threats to safety are not limited to the sex of the young people.

The fifth study *(Chapter 6)* is the qualitative counterpart of the fourth study with the aim of finding explanations for the findings. The adolescents were interviewed several times and their case files analysed. The results showed that the risk of revictimization was not so much

related to a young person's sex as to their individual risk and needs profiles. Offender behaviour by girls must also be noticed and addressed. Not only to reduce the risk of revictimization but also to promote safety for fellow residents. It is argued that in an already positive climate characterized by high levels of support for young people, the meticulous and deliberate mixing of genders as a form of normalization can be helpful in improving the quality of life for girls. An unexpected finding was that the young people interviewed often described their mothers as an ongoing source of love and support in their lives.

Reflections

The gender-specific need for social support in the residential group

We found that girls in secure groups experienced the living environment more negatively than boys in general and then girls in open groups. The social aspects of the environment appeared to offer the best explanation for this. The need for social support from group leaders and peers in the residential group (*Chapter 2*) appeared to be high. The 'Group Climate Instrument' (GCI) (Van der Helm; 2011) was used for the survey of residential group climate. This questionnaire could not yet be used to measure the quality of contacts between adolescents, while this proved to be an essential dimension of residential group climate (*Chapter 2*), especially for incarcerated girls. Therefore, the 'Peer Interactions in Residential Youth care' (PIRY) questionnaire was designed and validated (*Chapter 3*) as a gender-neutral instrument to better measure this aspect of the residential living climate for all adolescents in residential groups. In addition, the widely used GCI has been revised (GCI-r) and expanded with some items from the PIRY, allowing for a better operationalization of the quality of interactions with peers in a generic brief screening of the living environment (see: manual GCI-r, 2021).

We studied the peer interactions in a secure residential group for girl victims of CSE, since social interactions in the residential group appeared to be so important for experiencing a positive climate -especially for girls in secure residential care. We concluded that peer relations are part of the general residential group climate. Repression in the studied residential group was high and the organizational context for the group social workers provided insufficient support. These findings are in line with the literature on living conditions. Organizations need to support a positive climate that is continuously evaluated, based on a combination of residents, staff, and contextual perspectives. The importance of this cannot be underestimated. Unfortunately, we saw that several girls did not recover and even deteriorated on the measured dimensions of treatment.

Normalizing

One topic of the studies in this dissertation was to normalize the educational climate in a secure residential group for girls who are victims of CSE by treating them together with a few boys. We concluded that mixing the sexes can indeed contribute positively to the overall treatment outcomes. The risk of revictimization is always present in these groups but is not limited to dangerous boys. In this case, it were girls who recruited other girls for prostitution purposes. We found that during the 18 weeks of data collection, the residential group climate was positive, and the youths were recovering and making progress in their treatment.

Conditions in the secure youth care centre studied (*Chapter 5*) were relatively optimal during the study. The youths said they were happy with the support and approachability of the group social workers and management of the centre. In this context, the adolescents had the opportunity to learn from each other and they could work together on their recovery. When conditions are less than optimal, for example due to a lack of experienced staff, the climate can quickly deteriorate.

Regarding the mixing of the sexes in a secure residential group for girls who are victims of CSE, it is important that considerable attention is paid to the selection of the boys (no past sexual offending behaviour) and the numbers (twice as many girls as boys). The aim of this was to explicitly prevent sexually transgressive behaviour from taking place in the residential group. Given the extent to which girls in residential youth care have a history of sexual abuse, such caution in mixing the sexes might be appropriate in all residential youth care.

Sexual abuse determines girls' treatment needs

The main difference in background between boys and girls in residential youth care is that girls have more often been victims of sexual abuse than boys. A history of sexual abuse is a common denominator in many research findings on girls in (secure) residential youth care. The two case studies presented in this dissertation (*Chapters 4, 5, and 6*) focused on girls who were victims of CSE. In addition to the similarities between the girls' experiences of sexual abuse, we also observed significant differences between the girls' past histories leading up to their admission between the residential groups studied. The needs of girls who were exposed to (sexually) abusive behaviour at an early age, sometimes within the family context, differ in needs from those of girls who were first abused during adolescence. Although almost all girls participating in the study were severely traumatised and the abuse experiences explained a substantial part of their problems, the individual differences in their patterns of risk and

protective factors and the resulting needs for treatment were also noteworthy. What was common was that for all the girls, the trauma of sexual abuse had a major impact on their daily functioning in the residential group.

Victimization and offending are intertwined

Substance abuse was often mentioned in the interviews by the girls in this study. Treating substance abuse after admission to residential youth care is effective in preventing criminal recidivism. Awareness of the gender-specific pathways through trauma and substance use to potentially undetected criminal behaviour is essential for developing safe gender-sensitive care in residential youth care. We would like to stress that there must be a balance between making programs *gender neutral*, both in secure youth care and in residential youth care in general, and making programs *gender specific*, so that they are instead *gender responsive*. Gender responsiveness of residential youth care can be increased by recognizing that the heterogeneous background, experiences, and characteristics of the girls lead to different needs in their treatment.

In one of the secure residential groups studied (*Chapter 5*), the forensic profile of the girls was found to be higher than known to the professionals. The risk of revictimization is related to delinquency, because the girls' criminal involvement in commercial sexual exploitation and drug trafficking means that they deal with dangerous people. It is possible that the failure to notice an actual high forensic risk and need profile is partly determined by thinking of girls as mere victims. We recognized in the residential groups the gendered pathways to crime and perceived different coping styles for dealing with trauma that led girls into crime. Such coping should be recognized as such and should be given a place in the education and treatment in residential youth care (see also *Chapter 2* and *Chapter 1*, general introduction). Abuse and trauma change the 'cognitive processing' and sexual abuse leads to shame and reduced self-esteem, which sometimes translates into aggression. The 'transactional effects' of delinquency create bonds with deviant groups, which in turn increase the risk of acquiring new (sexual) traumas. These forms of trauma coping made a subgroup of girls who participated in the research described in *Chapters 5 and 6* dangerous to others (grooming) and themselves (revictimization). The fact that the delinquent behaviour of the girls was not fully known to the practitioners may be a blind spot in the perception of professionals in residential youth care for girls.

Methodological considerations

The single case-based time series design proved to be a valuable method for studying the treatment results (effectiveness) in a department in SRYC. To study the effect of residential youth care, experimental designs with randomization as a condition are not well suited, especially since creating control groups is not feasible yet desirable. Meta analyses and reviews are mainly based on correlational studies and provide insight into the broad outlines of the effect of, for example, living climate on outcomes of RYC (Leipoldt et al, 2019) or a comparison with other types of youth care (Gutterswijk et al, 2020; Strijbosch et al, 2015). The n=1 time series design used in this dissertation is placed on the highest step of the presented effect ladder by Van Yperen and colleagues (2017) in their standard work on effectiveness in the Dutch youth sector. The advantage is that such research provides an opportunity to conduct studies of effectiveness at the detail level (department/client) from theory (such as the aforementioned meta-analyses and reviews).

This method used also seems suitable for monitoring and adjusting the effect of changes in the approach at the individual level (action research) by using interim results as feedback to the professionals to adjust their rearing and treatment to individual needs and as feedback on important group dynamic processes to enhance relational safety.

Delsing & Van Yperen (2017) recommend follow-up measurements as well. In retrospective, post-residency measurements would have made the studies even more powerful.

The combination of quantitative and qualitative research methods was used sequentially and combined. The combination of methods provided a rich picture of the secure youth care units studied contributing to the content validity of the findings. Nevertheless, expanding the data sources to include the perceptions of other stakeholders such as the parents of the youth and professionals could have further refined this image.

Generalizability and transferability

The two extensive case studies described in this dissertation (*Chapters 4, 5 and 6*) focus specifically on secure residential youth care for victims of CSE. Therefore, we cannot be completely sure that the results hold also for other forms of (residential) youth care. However, the findings on the relationship between a positive residential group climate and the quality of secure residential youth care in the Netherlands and are in line with all international studies on

this topic and are therefore, in our opinion generalizable to target groups in Dutch residential youthcare.

Different countries have different youth care systems which therefore are not one-to-one comparable but given that our Dutch results are in the same direction as international studies, we may conclude that the need for a positive group climate in residential care applies to every system and culture.

In generalizing the positive findings on normalising the environment by mixing genders the context of a positive residential group climate should be considered. Regarding the generalisation of these findings, it is important to emphasize that the mixed residential group studied was special because it treated CSE victims. Because of this special target group, a lot of attention was paid to the selection of the boys (no past sexual transgressive behaviours) and the quantities (twice as many girls as boys). The purpose of this was to explicitly prevent sexually transgressive behaviour from taking place in the residential group. Given the extent to which girls in residential youth care have a history of sexual violence such caution in mixing the genders may well be appropriate in all residential settings.

In generalizing the results, it is important to notice that the residential group climate -and therefore the treatment results of the adolescents- in the two case studies presented was also influenced by the social and political context in the Netherlands. Dutch youth care is governed and financed by governmental authorities and therefore subject to political control. During the years this research was conducted, there was a major change in the legal basis for the organization of youth care. After 2015, the management of youth care was decentralized to the level of municipalities. For youth care providers, this was a very drastic change that created much uncertainty, also financially. This uncertainty was translated into problems with staff availability and unrest in the treatment at the centres where we collected our data, which probably affected the quality of the care provided. In fact, one of the centres was forced to close because of these changes. Therefore, it is advised to repeat the study in the Netherlands and other countries with attention to context factors at the micro, meso and macro levels.

Implications for practice

Creating a recovery-enhancing social environment in residential youth care needs enough and well-equipped professionals

Youths who are placed in residential youth care benefit from a warm, social relations-enhancing pedagogical environment. The results in this dissertation show that such a recovery-enhancing social environment is also feasible in a secure residential group. Creating and maintaining such an environment turned out to be 'work in progress' in this research as well. The problems and behaviour of the adolescents who participated in these studies are quite challenging for the teams of group social workers and other staff members. Dealing with the self-harm and suicidality of some of the girls in the residential groups places a heavy strain on the resilience of the teams of professionals (see also: Zon-MW project 'A silent fight' ['Een stil gevecht'], 2021). The results of the study in *Chapter 4* show that team members need the social support of each other and of the organization's management to do their work well. A positive residential group climate and working climate are both necessary prerequisites. The evaluation of recently developed small-scale alternatives for secure residential youth care shows that, there too, the quality of care depends on well-functioning stable teams with sufficient experienced staff (Leipoldt et al., 2022). There are not enough experienced youth care workers available in the Netherlands. In addition, young newly graduated professionals need guidance. Social work programs could organize supervision after graduation as a standard post bachelor care.

An open residential group climate is crucial

A body of research now indicates that a positive residential group climate is an indispensable prerequisite for recovery. This finding was corroborated in the research described in this dissertation. The positive and negative treatment outcomes found here were related to adolescents' feelings of support from group social workers, attention to the needs for autonomy - even in the secure environment - a positive atmosphere, and supportive interactions with other adolescents. As described above, the residential group climate -and with it the treatment outcomes of the adolescents-in the two case studies presented was also influenced by the social and political context in the Netherlands. This change and its organizational consequences influenced the crucial residential group climate negatively, because stressed staff may have a harder time calming the stress reactions of the youth in the group. A positive group climate needs a stable organizational context.

More trauma informed care

The discussed trauma related coping behaviour of adolescents influences the living environment. In a residential group where traumatised adolescents live together, escalating emotions such as (relational) aggression or self-harm and suicidality are part of the daily routine. This behaviour is potentially (re)traumatizing for youth and staff and the group leaders must endure and regulate all this emotional intensity. That requires a lot of knowledge and skills also about gender bound patterns of trauma reactions and recovery from trauma in daily life. In addition, the gender-specific pathways to victimization and recidivism must be integrated into the overall organizational policy of Trauma Informed Care (TIC) because it seems to contribute effectively to the recovery process. Integrating TIC into organizations and in the daily pedagogical environment and into therapies used in both residential care - and aftercare is of utmost importance because these girls (nor the boys) are not '...dangerous or needy...' but both at the same time. For residential groups with girls, referring to aggressive relational behaviour of girls as trauma related coping behaviour (rather than a stigmatizing term such as 'mean girls' behaviour') could help reduce repressive reactions and countertransference from group social workers making it easier to give girls the support in emotion regulation required. In social work curricula as also in the training of scientifically educated behavioural scientist's trauma sensitivity in the everyday environment should be a standard and comprehensive part of education because also treatment of trauma is effective only in a trauma-sensitive pedagogical context.

Integrating maternal support in trauma informed care

Unexpectedly, we found evidence of a source of strength for a subgroup of adolescents: most of the mothers of the adolescents in the gender-mixed living group studied (*Chapters 5 and 6*) continued to play an important positive role in their children's lives. Most adolescents continued to experience their mothers as an essential source of love and support, despite any also occurring difficulties in family life. A possible explanation for this finding is that there was no early sexual abuse within the family in the histories of these adolescents. However, there was a lot of domestic violence in all families. The mothers, like the children, were victims of this. Although this finding is important for both sexes, emotional support from mothers during adolescence is crucial for girls, especially when sexual abuse was present.

In improving residential care for girl victims of (commercial) sexual abuse, it is worth looking for ways to integrate the youth's support network more firmly in general and, more specifically, maternal support into treatment pathways. Since these mothers are often

traumatised themselves, this is also an opportunity to offer psychoeducation related to trauma in the program of (residential) youth care centres, so that mothers are given tools to regulate their own emotions and to co-regulate the emotions of their daughters. In addition to incorporating psychoeducation, psychotherapeutic trauma treatment for these mothers could potentially be part of the residential youth care treatment program for these girls. Based on the research findings, the development of methods to broadly integrate trauma sensitivity into the daily work in the residential treatment groups and pathways of youth care for these girls is recommended.

Customization in residential care can't be done on a bargain

Any effective treatment must be in line with the 'Risks Needs Responsivity' principles. The intensity of treatment must correspond to the risk of recidivism and/or revictimization, treatment must be tailored to the individual's criminogenic and/or developmentally risky needs, and the treatment must match the individual's motivation and abilities. The life stories of the girls (and boys) who participated in our study were filled with many risks to healthy development. This means that for the target group who are in residential care, intensive treatment is needed to achieve results. The combination of a system change with budget cuts to which youth care was exposed at the time of this study showed a noticeable decline in the quality of care provided (*Chapter 4*). In addition to the proposed investments in training and post-baccalaureate guidance of young professionals, financiers must realize that intensive care is necessary and expensive in any form.

Be aware of iatrogenic effects

Without a positive climate, methods may be evidence-based, but will be useless or ineffective. A positive pedagogical climate that supports the basic psychological needs for connectedness, competence and autonomy of children and youth is always and everywhere where youth grow up a prerequisite for growth and well-being. A recent Dutch report describes how terrible and traumatizing the stay in secure residential youth care was for 27 interviewed youth: 'It does not help, and it harms, therefore this form of youth care in the Netherlands should be closed' was the conclusion of this report (Stichting het Vergeten Kind/Foundation the Forgotten Child, 2022). The long-term use of segregation units (in cases of self-harm or suicidality) is also recognized as harmful and can lead to iatrogenic traumatization and depression. Long-term stay in secured care is associated with educational disadvantages and poorer participation in society. In a repressive residential group climate, girls in many cases resist their treatment. Girls also react with depression and self-harm.

Be aware of iatrogenic effects of changing policies

The current sentiment in the Netherlands is to offer as little residential care as possible, replacing it where possible with foster care or family homes or small-scale residential living facilities. The phrase 'growing up as at home as possible' ['Zo thuis mogelijk opgroeien'] is the contemporary term that articulates this aspiration. This seems a praiseworthy endeavour, also because in the Netherlands -compared to other countries- relatively many young people stay in secure facilities. However, the severity of the problems of the youngsters studied does not decrease. The crimes against the girls through commercial sexual exploitation are no less heinous either. Preventing these girls from evading or being evicted is a legal and legitimate task. The personnel shortages are also not likely to change. Reorganizations place a heavy burden (*Chapters 4, 5, and 6*) on the organizations with inherent danger to the quality of care. Based on these findings, it seems unlikely that the iatrogenic effects of secure youth care are merely related to the confinement. Reducing social-ecological wicked problems are hindered 'by polarization and by unforeseen transformation that moves a system from crisis to crisis' (Sediri et al., 2020). The place where developmentally at-risk youth grow up should be a means to promote development and recovery and not an aim. Therefore, the constant monitoring and adjustment of the quality of the living environment and the effectiveness of delivered care remains, in our opinion, necessary. In particular during a transformation.

Directions for future research

Positive pedagogical climate

Evidence based working and a positive residential group climate are essential preconditions for the effectiveness of treatment in residential youth care. In our opinion, the results of the research in this dissertation also show that in the evaluation of residential youth care and in the more general search for 'what works for whom' the pedagogical climate should always have a place.

Effectiveness of counselling method

The search for evidence of what works for whom in residential youth care, in our view, benefits from research focus on evaluation and adjustment with chain focused action research of outcomes that uses, for example, time series designs of outcomes of individuals rather than on formulating proven effective interventions because the broad context of the pedagogical environment appears to be in that way determinant of outcome of any intervention. The counselling method from *Chapter 4* is one such intervention that may well have value in maintaining a positive living environment rather than creating one. The program focuses on

fostering peer relationships in a residential group. Fostering positive relationships is potentially valuable for the recovery of (traumatised) girls (and boys) and thus merits more research.

Explore empowering motherhood

Within a positive climate, it is interesting to explore what mothers can do to promote their children's recovery in residential groups. Because these mothers themselves have also been traumatised by, among other things, the domestic violence to which the adolescents in this study were also exposed, it seems valuable to explore what the role of psychoeducation about their own trauma and co-regulation of their children's emotional reactions might mean for the quality of the relationship between the admitted girls (and boys) and their mothers.

Improving quality in a learning youth care

A time series design with multiple measurements of treatment outcomes of individuals proved to be a valuable method. Action research using 'case-based time series' measurements combined with qualitative data offers the opportunity to study and monitor the impact of innovations, embedded in the awareness of a positive residential group climate. More research integrating these different perspectives is needed to generate a learning youth care.

Ultimately, a stay in residential youth care is a short episode in a person's life. The risks to a long-term positive development of the young people who stayed there are many. The social criticism of placement in (secure) residential youth care is extensive, and the costs of placement are high. These costs can only be justified if the young people manage to generate quality of life after their stay. Longitudinal research (see for instance Krabbendam, 2015) shows extensive problems, although there is also evidence of recovery in the lives of (girls) after their stay in secure residential care (Dirkse et al, 2018; Sondeijker et al 2020). Therefore, time series and action research during and after residential care is needed to gain more insight and to break the chain of intergenerational transmission of problems. Because given the severity of the problems, it seems obvious that there will also be vulnerable moments in later stages of life where support from professionals is desired. Such research could possibly contribute as a cost-effective means of secondary prevention.

Conclusions

This dissertation aimed to shed light on girls' gender-specific needs regarding the residential living environment to improve their development and treatment outcomes. Residential

treatment (including SRYC) aims to teach admitted youth how to interact with others, (re)start schooling, develop prosocial attitudes, reduce internalising and externalising problem behaviour, delinquency, substance use, and prevent revictimization (Addink & Van der Veldt, 2022; Van der Helm et al., 2018; Vermaes & Nijhof, 2014). Where for SRYC it is on top of that a legal obligation (Jeugdwet art. 6.3.1) to prevent the youth from withdrawing from care or from being withheld from such youth care by others. In what way is the residential treatment effective, i.e., in what way are these goals reached? This dissertation concerns (part of) this question in addition to the goal of clarifying what the gender-specific needs of girls in (S)RYC are in terms of residential group climate to promote development and treatment outcomes.

Here in outline the answers to the main research question:

We found that effective treatment of girls can be possible within a positive residential group climate, even in a secure residential group. But residential groups can easily derail in a climate characterized by too much repression. Repression in residential groups with severely traumatised girls can lead to poor mutual relationships between adolescents characterized by (relational) aggression. In such a climate, no treatment objective can be achieved.

With respect to the residential group climate for girls, it is important to ensure the perception of social support by group social workers and peers. This social support is helpful both to those who give support and to those who receive support. In the end, professionals should be trained not to rely on imaginary security only but also on dealing with risks in this ‘wicked problem’, society presents us. Perhaps Khalil Gibran's (1927) text can be a moral compass to prevent damage from the admission itself for organizations and staff members: ‘And what is it to work with love? It is weaving a cloth with threads from your heart, as if your beloved would wear that cloth. It is building a house with affection, as if your beloved lived in that house.'

Careful mixing of the sexes-as a means of normalizing the pedagogical climate in residential groups-can be safe even for (commercially) sexually abused girls. Girls can be hazardous to other girls because they recruit others for prostitution purposes and because the delinquency offenses they have committed are not always known. Monitoring the quality of the residential group climate and the effectiveness of treatment in residential facilities is possible with case-

based time series design. This allows professionals to determine that ‘heart shaped bruises’ are not sought after nor inflicted again but healed.

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Appendices

Summary

This dissertation focuses on girls placed in (secure) residential youth care. The girls in this form of youth care are adolescents with severe behavioural and/or psychiatric problems. The residential treatment focuses on learning to get along with others, going to school (again), developing a prosocial attitude, reducing internalising and externalising problem behaviour, delinquency, substance use, and preventing revictimization. The problems of these girls are even more complex than those of boys admitted to residential care. One difference in the history of these girls compared to boys is that they have been sexually abused more often and show post-traumatic stress disorder more often.

Residential youthcare a distressing form of care. When young people are forced to undergo this care in secure youthcare, there is even more responsibility to be effective. After all, it may be better not to do something, or even to do nothing, than to risk doing more harm than good. But the girls who end up in this form of care are often admitted there for protection from danger. Commercial sexual exploitation (CSE) is one such danger that potentially justifies incarceration. Yet little is known about the effectiveness of this form of care. In addition, studies are often about boys. There is, however, a lot of research indicating that residential care can only be effective if the residential group climate is need-supportive.

Therefore, the central research question in this dissertation is:

What do girls in residential youth care need in the pedagogical environment of the living group to stimulate their development and to promote the achievement of treatment goals?

Results

To answer this question, the first step was to seek answers to the question of whether differences between boys' and girls' perceptions of living environment could be measured and whether there were differences between the perception of residential group climate in secure compared to open forms of residential youth care between boys and girls (*chapter 2*). Research was conducted in 15 different residential centres in the Netherlands. In Youth prisons, secure residential youth care and open residential youth care, 344 young people completed residential group climate questionnaires.

In secure residential care, it is more difficult for young people to maintain pre-existing positive relationships with their family and peers. This means that most social interactions between adolescents, and between adolescents and staff take place in the residential group.

Previous research shows that responsive social relationships are even more important for girls in residential care than for boys. Consequently, in secure residential care, it is important to meet girls' specific needs regarding their social interactions and their need for social support.

Social relations between adolescents and group leaders were already measurable with questionnaires, but the concept of 'mutual relations between adolescents in living groups' was not yet measurable although relevant, especially to girls. Therefore, as the next step towards answering the main question of this dissertation, a (gender neutral) self-report questionnaire was developed and validated that zooms in on precisely this dimension of living climate; the Peer Interactions in Residential Youth Care (PIRY) (*chapter 3*).

The next study (*chapter 4*) was an investigation into whether the quality of peer relationships between girls in a residential group could be actively improved. The girls in this single gender residential group had been placed there because of (suspicions of) CSE. A specially designed group counselling programme was used as a means of promoting interrelationships.

The study combined participant observations with a case-based time series design. Over 18 weeks, changes in the residential group climate and quality of peer relationships among the girls were monitored by observations and measured with questionnaires (Group Climate Instrument and PIRY). Treatment goals were also measured. These involved reducing trauma symptoms measured with the CRIES-13 questionnaire, and reducing internalising, externalising and attention difficulties were measured with the Brief Problem Monitor (BPM-Y). Simulation Modelling Analysis (SMA) was used to test the changes in CRIES-13 and BPM-Y scores for significance for each individual girl.

The living environment in this group was negative at the onset; there was a lot of relational aggression between the girls. Over time, a few girls made significant progress, but others mostly deteriorated. Some improvement of the residential group climate was visible from the time a decision was made to have an educational assistant worker permanently present in the group. No direct impact on the quality of peer relationships was measured or seen by means of the group counselling programme.

It was concluded that a group counselling programme aimed at improving peer relationships cannot be a general remedy for an overall negative living environment. Additionally, it was noted, following previous findings, that achieving treatment outcomes in an environment with a negative living environment is difficult. Also, harm was measured. The time series model

used in this study proved suitable to monitor the effectiveness of treatment in this residential group.

Therefore, this method was used again in the next study (*chapter 5*) on a residential group in secure youth care that focused on the next element that potentially determines the quality of relationships between adolescents on a residential group: the gender composition of the group. This study took place in a secure residential group composed of girls and boys (n=11). The girls in this group were also victims of CSU. A condition for placement was that the boys had not displayed sexually transgressive behaviour in the past. And there had to be more girls than boys in the group (ratio 6:3). The study aimed to investigate whether this residential group was safe (measuring residential group climate) and whether treatment outcomes (decreasing problem behaviour and trauma symptoms) could be achieved with this group composition. Because it is generally boys who abuse these girls (risk of re-victimization), this was an enthralling choice with the intention of contributing to normalization of the living environment. In this mixed-gender group, the residential climate was found to be predominantly positive during the study period, with a dip in the residential climate scores accompanying a couple of incidents (suicide attempt of one girl and running away of another girl from the group). It was concluded that this group provided safety, that progress could also be seen in the treatment outcomes of some adolescents and that there were no adolescents who had any measurable harms during the study period. It was concluded that if surrounded with great care, and within the condition of a demonstrably positive living environment, that this gender composition of a residential living group -also in a secure setting- allows treatment results. To further investigate whether the positive living environment was a positive contribution to the needs of young people (and girls, main research question) in young people's perceptions, a qualitative study was conducted in parallel and reported in *Chapter 6*.

This study used observations, interviews, and file research. Two girls were found to have engaged in recruiting groupmates for CSE during the study. The interviews revealed that girls' criminal behaviour was often not disclosed in files. It was also found that the boys and girls learned a considerable amount from each other. On mixing genders, we support earlier evidence that placement management by professionals who are well informed on the risks and needs concerning sexual abuse and CSE is important. Furthermore, in this study, the normalization of the living environment in the residential group in SRYC by carefully mixing

genders did indeed enrich the learning environment and improve the atmosphere. Therefore, the careful mixing of genders deserves a place in composing residential groups.

Discussion and conclusion

Adolescent girls with a lot of problems need a lot of help. The big difference between the boys and the girls in secure youth care is that the girls are much more likely to have experienced sexual abuse. The relational trauma that -also- results from that also requires relational recovery. Recovery does not come through interventions/therapies alone, but must take place in a loving, nurturing context in the residential group. Secure youth care can, with careful construction, sometimes, be the context that protects against re-traumatization from new abuse. This dissertation aimed to shed light on the gender-specific needs of girls regarding the residential living environment to improve their development and treatment outcomes. Here in outline the answers to the main research question:

- We found that effective treatment of girls can be possible within a positive living environment, even in a secure residential living group. But residential groups can easily be derailed in a climate characterized by too much repression.
- Repression in residential groups with severely traumatized girls can lead to poor interrelationships between adolescents characterized by (relational) aggression. No treatment goals can be achieved in such a climate.
- For girls, regarding the living climate, it is important to secure the perception of social support by group leaders and peers. This social support is useful for both those who give support and those who receive support.
- Careful mixing of the sexes-as a means of normalizing the educational climate in living groups-may be safe, even for (commercially) sexually abused girls.
- Girls can be dangerous to other girls because they recruit others for prostitution purposes and because the offenses committed by them are not always known.
- Monitoring the quality of the living environment and the effectiveness of treatment in residential facilities is necessary and possible with case-based time series design.

Samenvatting (Summary in Dutch)

Dit proefschrift richt zich op meisjes geplaatst in (gesloten) residentiële jeugdzorg. De meisjes in deze vorm van jeugdzorg zijn adolescenten met ernstige gedrags- en/of psychiatrische problemen. De residentiële behandeling richt zich op het leren omgaan met anderen, het (weer) naar school gaan, het ontwikkelen van een pro sociale houding, het verminderen van internaliserend- en externaliserend probleemgedrag, delinquentie, middelengebruik en het voorkomen van revictimisatie. De problemen van deze meisjes zijn nog complexer dan die van de jongens in residentiele zorg. Een verschil in de geschiedenis van deze meisjes ten opzichte van jongens is dat zij vaker dan jongens seksueel misbruikt zijn en ook vaker een posttraumatische stressstoornis vertonen.

Residentiele jeugdhulp is een ingrijpende vorm van zorg. Wanneer jongeren gedwongen worden deze zorg te ondergaan in gesloten jeugdzorg, is er des te meer verantwoordelijkheid om effectief te zijn. Het kan immers beter zijn iets niet te doen, of zelfs niets te doen, dan het risico te lopen meer kwaad dan goed te doen.

Meisjes die in deze vorm van zorg terechtkomen, zijn daar vaak opgenomen ter bescherming tegen ernstig gevaar. Commerciële seksuele uitbuiting (CSU) is zo'n gevaar dat opsluiting kan rechtvaardigen. Toch is er weinig bekend over de effectiviteit van deze vorm van zorg. De studies die er zijn gaan vaak over jongens. Er is wel veel onderzoek dat erop wijst dat residentiële zorg alleen effectief kan zijn als het residentiële groepsklimaat behoefte ondersteunend is.

Daarom luidt de centrale onderzoeksvraag van dit proefschrift:

Wat hebben meisjes in residentiële jeugdzorg nodig met betrekking tot het leefklimaat om hun ontwikkeling te stimuleren en het bereiken van behandeldoelen te bevorderen?

Resultaten

Om deze vraag te beantwoorden werd er eerst gezocht naar antwoord op de vraag of er verschillen tussen de beleving van jongens en meisjes in het leefklimaat te meten waren en ook of er verschillen waren tussen de beleving van leefklimaat in geslotenheid vergeleken met niet gesloten vormen van residentiële jeugdzorg tussen jongens en meisjes (*hoofdstuk 2*). Het onderzoek werd uitgevoerd in 15 verschillende residentiële centra in Nederland. In jeugdgevangenissen, gesloten residentiële jeugdzorg en open residentiële jeugdzorg vulden 344 jongeren leefklimaatvragenlijsten in. Resultaten toonden aan dat meisjes in open groepen

het leefklimaat het meest positief, en meisjes in jeugdgevangenissen het leefklimaat het meest negatief ervoeren.

In gesloten residentiële zorg is het voor jongeren moeilijker om al bestaande positieve relaties met hun familie en leeftijdsgenoten te onderhouden. Dit betekent dat de meeste sociale interacties tussen jongeren onderling en tussen jongeren en personeel plaatsvinden in de residentiële groep. Uit eerder onderzoek blijkt dat responsieve sociale relaties voor meisjes in residentiële zorg nog belangrijker zijn dan voor jongens. Bijgevolg is het in gesloten residentiële zorg belangrijk om tegemoet te komen aan de specifieke behoeften van meisjes met betrekking tot hun sociale interacties en hun behoefte aan sociale steun.

De sociale relaties tussen jongeren en groepsleiders waren al meetbaar met vragenlijsten, maar het concept ‘onderlinge relaties tussen jongeren in leefgroepen’ was nog niet meetbaar maar wel relevant, zeker voor meisjes.

Daarom is als volgende stap op weg naar een antwoord op de hoofdvraag van deze dissertation, een genderneutrale zelfrapportagevragenlijst ontwikkeld en gevalideerd die juist op deze dimensie van het leefklimaat inzoomt; de Peer Interactions in Residential Youth care (PIRY) (*hoofdstuk 3*).

De volgende studie (*hoofdstuk 4*) was een onderzoek naar de vraag of de kwaliteit van de onderlinge relaties tussen meisjes in een residentiële groep actief kan worden verbeterd. De meisjes in deze single gender woongroep waren daar geplaatst vanwege (vermoedens van) commerciële seksuele uitbuiting (CSU). Als middel om de onderlinge relaties te bevorderen werd een speciaal ontworpen groepsbegeleidingsprogramma gebruikt.

De studie combineerde participerende observaties met een case-based time series design. Gedurende 18 weken werden veranderingen in het leefklimaat en de kwaliteit van onderlinge relaties tussen de meisjes gevolgd door observaties en gemeten met vragenlijsten (Group Climate Instrument en PIRY). Ook werden behandeldoelen gemeten. Hier ging het om verminderen van trauma symptomen die gemeten werden met de CRIES-13 vragenlijst en het verminderen van internaliserende-, externaliserende en aandachtsproblemen, gemeten met de Brief Problem Monitor (BPM-Y). Met Simulation Modelling Analysis (SMA) werden de veranderingen in CRIES-13 en BPM-Y scores per individueel meisje op significantie getoetst.

Het leefklimaat in deze groep was bij aanvang negatief, er was veel relationele agressie tussen de meisjes. Gedurende de tijd boekten sommige meisjes aanzienlijke vooruitgang, maar andere verslechterden vooral. Enige verbetering van het leefklimaat was zichtbaar vanaf het moment dat er de keuze werd gemaakt om permanent een pedagogisch medewerker werker op de leefgroep aanwezig te laten zijn. Er werd geen directe invloed op de kwaliteit van de onderlinge relaties door het groepsbegeleidingsprogramma gemeten of gezien.

Geconcludeerd werd dat een groepsbegeleidingsprogramma gericht op het verbeteren van onderlinge relaties geen algemene remedie kan zijn voor een algeheel negatief leefklimaat. Daarnaast werd opgemerkt, in navolging van eerdere bevindingen, dat het bereiken van behandelresultaten in een omgeving met een negatief leefklimaat moeilijk is. Trauma symptomen en probleemgedrag gingen bij sommigen meetbaar omhoog. Het in deze studie gebruikte time series model bleek geschikt om de effectiviteit van de behandeling in deze woongroep te volgen.

Daarom werd deze methode opnieuw gebruikt in de volgende studie (*hoofdstuk 5*) over een residentiële groep in gesloten jeugdzorg met een ander kenmerkend element dat mogelijk bepalend is voor de kwaliteit van de relaties tussen adolescenten op een residentiële groep: de gendersamenstelling van de groep. De studie vond plaats in een gesloten residentiële groep met meisjes en jongens (n=11). De meisjes in deze groep waren ook slachtoffers van CSU. Als voorwaarde voor plaatsing gold dat de jongens niet in het verleden seksueel grensoverschrijdend gedrag hadden vertoond. En er moesten meer meisjes dan jongens in de groep zijn (verhouding 6:3). De studie had tot doel te onderzoeken of deze residentiële groep veilig was (meten van residentieel groepsklimaat) en of behandelresultaten (vermindering van probleemgedrag en traumasymptomen) konden worden bereikt met deze groepssamenstelling. Omdat het over het algemeen jongens zijn die deze meisjes misbruiken (risico op revictimisatie) was dit een spannende keuze met de bedoeling bij te dragen aan normalisatie van de leefomgeving. In deze gemengde-gender leefgroep bleek het leefklimaat gedurende de studieperiode overwegend positief te zijn, met een dip in de leefklimaat scores bij enkele incidenten (suïcidepoging van een meisje en weglopen van een ander meisje uit de groep). Er werd geconcludeerd dat deze groep veiligheid bood, dat er ook in de behandelresultaten van een aantal adolescenten vooruitgang was te zien en dat er geen jongeren waren die meetbaar schade op hadden gelopen tijdens de studieperiode. Geconcludeerd werd dat mits omgeven met grote zorgvuldigheid, en binnen de voorwaarde van een aantoonbaar positief leefklimaat, deze met gender compositie van een residentiele leefgroep – ook in geslotenheid –

behandelresultaat mogelijk blijkt. Om verder te onderzoeken of de positieve leefomgeving in de beleving van de jongeren (en meisjes, belangrijkste onderzoeksvraag) daadwerkelijk een positieve bijdrage levert aan de behoeften van de jongeren, is parallel hieraan een kwalitatief onderzoek uitgevoerd, waarover in *hoofdstuk 6* wordt gerapporteerd.

In dit onderzoek werd gebruik gemaakt van observaties, interviews en dossieronderzoek. Uit de interviews bleek dat de criminele gedragingen van meisjes vaak niet bekend waren in dossiers. Twee meisjes bleken zich tijdens het onderzoek te hebben beziggehouden met het werven van groepsgenoten voor CSU. Ook bleek dat de jongens en meisjes veel van elkaar leerden. Wat het mengen van genders betreft, ondersteunen deze resultaten eerdere aanwijzingen dat de groepssamenstelling gemonitord moet worden door professionals die goed op de hoogte zijn van de risico's en behoeften over seksueel misbruik en CSU belangrijk is. Voorts toont deze studie dat de normalisering van de leefomgeving door een zorgvuldige menging van de genders inderdaad de leeromgeving verrijkt en de sfeer verbeterd.

Discussie en conclusie

Adolescente meisjes met veel problemen hebben veel hulp nodig. Het grote verschil tussen de jongens en de meisjes in de beveiligde jeugdzorg is dat de meisjes veel vaker seksueel misbruik hebben meegemaakt. Het relationele trauma dat daar – ook – uit voortvloeit, vraagt ook om relationeel herstel. Herstel komt niet alleen door interventies/therapieën, maar moet plaatsvinden in een liefdevolle, verzorgende context in de residentiële groep. Gesloten jeugdzorg kan, met een zorgvuldige opbouw, soms, de context zijn die beschermt tegen her traumatisering door nieuw misbruik. Dit proefschrift beoogde licht te werpen op de genderspecifieke behoeften van meisjes met betrekking tot het residentiële leefklimaat om hun ontwikkeling en behandelresultaten te verbeteren. Hier in hoofdlijn de antwoorden op de hoofdvraag.

- We ontdekten dat effectieve behandeling van meisjes mogelijk kan zijn binnen een positief leefklimaat, zelfs in een gesloten residentiële leefgroep. Maar leefgroepen kunnen gemakkelijk ontsporen in een klimaat dat gekenmerkt wordt door te veel repressie.
- Repressie kan in leefgroepen met ernstig getraumatiseerde meisjes leiden tot slechte onderlinge relaties tussen jongeren die gekenmerkt worden door (relationele-) agressie. In een dergelijk klimaat kan geen behandeldoel worden bereikt.

- Voor meisjes is het wat betreft het leefklimaat belangrijk om de perceptie van sociale steun door groepsleiders en leeftijdsgenoten te borgen. Deze sociale steun is zowel nuttig voor degenen die steun geven als voor de ontvangers van steun.
- Zorgvuldig mengen van de seksen – als middel om het pedagogisch klimaat in leefgroepen te normaliseren – kan veilig zijn, zelfs voor (commercieel) seksueel misbruikte meisjes.
- Meisjes kunnen gevaarlijk zijn voor andere meisjes omdat ze anderen ronselen voor prostitutie doeleinden en omdat de door hen gepleegde delicten niet altijd bekend zijn.
- Monitoring van de kwaliteit van het leefklimaat en de effectiviteit van de behandeling in residentiële voorzieningen is noodzakelijk én mogelijk met case-based time series design.

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About the author

Juliette Sonderman was born in Amsterdam in 1961. She studied Social Work at what was then called a social academy in the same city. In her first job in youth care, she was tasked with doing 'something' for girls in a youth centre. There, most of the girls turned out to have been sexually abused and also experienced domestic violence. At the time, there was little knowledge about this in the Netherlands. She went on to study psychology at the University of Amsterdam after a few years. Graduated on psychophysiological sex research on female sexual arousal and sexual orientation. Meanwhile and afterwards, she always worked in youth care in positions such as family guardian and behaviour expert and management. Among others, as an educational director in a juvenile correctional facility. Currently, she works as a lecturer and researcher at the Faculty of Social Work at Leiden University of Applied Sciences and at Enver Jeugdzorg as a catalyst for integral quality of youth care.

Juliette Sonderman is geboren in Amsterdam in 1961. Zij studeerde Maatschappelijk Werk aan wat toen een sociale academie heette in dezelfde stad. In haar eerste baan in de jeugdzorg had ze de opdracht ‘iets’ voor meisjes te doen in een jongerencentrum. Daar bleken de meeste meisjes seksueel misbruikt te zijn en ook ervaring te hebben met huiselijk geweld. Daar was toen nog weinig kennis over in Nederland. Ze ging na een aantal jaren psychologie studeren aan de Universiteit van Amsterdam. Studeerde af op psychofysiologisch seks onderzoek naar vrouwelijke seksuele opwinding en seksuele geaardheid. Ondertussen en daarna werkte zij altijd in de jeugdzorg in functies in de jeugdzorg zoals gezinsvoogd en gedragsdeskundige en management. Onder meer als pedagogisch directeur in een justitiële jeugdinrichting. Op dit moment werkt ze als docent en onderzoeker aan de faculteit Social Work aan de Hogeschool Leiden en bij Enver Jeugdzorg als kartrekker integrale kwaliteit van de jeugdzorg.

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