The Relation Between Children's Perceived Group Climate and Therapeutic Alliance with Their Mentor in Residential Care: A Prospective Study

Strijbosch, E.; Stams, G.J.; Wissink, I.; van der Helm, P.; Roest, J.

DOI
10.1080/0886571X.2018.1455560

Publication date
2018

Document Version
Final published version

Published in
Residential Treatment for Children & Youth

RESIDENTIAL TREATMENT FOR CHILDREN & YOUTH
2018, VOL. 35, NO. 4, 297–316
https://doi.org/10.1080/0886571X.2018.1455560

Routledge
Taylor & Francis Group

The Relation Between Children's Perceived Group Climate and Therapeutic Alliance with Their Mentor in Residential Care: A Prospective Study

Eefje Strijbosch[a], Geert J. Stams[b], Inge Wissink[b], Peer van der Helm[c], and Jesse Roest[c]

[a]Juzt Youth Care, Breda, The Netherlands; [b]Department of Forensic Child and Youth Care Sciences, University of Amsterdam, Amsterdam, The Netherlands; [c]Youth Expert Centre, Leiden University of Applied Sciences, Leiden, The Netherlands

ABSTRACT

Despite the assumed importance of the residential environment for treatment outcomes, there is a gap in research examining the relation between therapeutic alliance and group climate. Therefore, this prospective study examined the association between positive and negative group climate and child–mentor therapeutic alliance in residential youth care in two mixed gender samples, with two measurement occasions at a six-month interval: N = 43 children (58% boys, 42% girls) in age category 4–8 (M = 6.11 years; SD = 1.19; Min = 4.09; Max = 8.79), and N = 72 children (72% boys, 28% girls) in age category 8–15 (M = 11.48 years; SD = 1.69; Min = 8.31; Max = 14.73). We found moderate six-month stability in children's ratings of group climate and alliance, although stability was weaker for the 4–8 year olds compared to the 8–15 year olds. In addition, positive group climate was rated higher by boys than girls in the group of 8–15 year olds. No effects were found between group climate and alliance ratings over the two measurement occasions. Implications for practice and future research are discussed.

KEYWORDS

Children; residential care; group climate; therapeutic alliance

How a child perceives the alliance with group workers in residential care depends on many factors. First of all, child factors play a role. Research has revealed, for example, that the strength of the alliance was related to the type of problems (Ayotte, Lanctôt, & Tourigny, 2015). In addition, alliance was found to be affected by attachment-related cognitive schemes of both youths and their caregivers in that more secure attachment relationships were associated with better alliances (Zegers, Schuengel, Van IJzendoorn, & Janssens, 2006). Also, characteristics of group workers, which meet children's basic psychological self-determination needs (relatedness, competence, and autonomy) (Ryan & Deci, 2017), may play a role (Manso, Rauktis, & Boyd, 2008). More specifically, being empathic, genuine, and respectful have been found to positively affect children's development, as well as being warm and supportive instead of

CONTACT Eefje Strijbosch e.strijbosch@juzt.nl Researcher at Juzt Youth Care, Erasmusweg 34, Breda 4834 AA, The Netherlands.

controlling (Barnhoorn et al., 2013; Bastiaanssen, Delsing, Kroes, Engels, & Veerman, 2014; Byers & Lutz, 2015; Harder, Knorth, & Kalverboer, 2013).

In addition to child and professional factors, the child's perceived therapeutic alliance cannot be seen separately from other common therapeutic factors. Contextual factors, often referred to as group climate factors, have recently gained increasing attention in scientific research (Byers & Lutz, 2015; Handwerk et al., 2008; Scholte & Van der Ploeg, 2003; Van der Helm, 2011; Whittaker, Del Valle, & Holmes, 2015). Day-to-day living conditions are thought to both directly and indirectly affect youth outcomes in residential care (James, 2010; Whittaker et al., 2015). Notably, Allison and Rossouw (2013) argued that creating safety, which also pertains to a safe and positive group climate, should be considered as an essential part of the therapeutic process. Group climate and alliance with the (primary) group worker(s) are both part of the youth's residential experience at the living group and at the individual level, respectively (Zimmerman & Cohler, 2008).

Despite the assumed importance of the residential environment for treatment outcomes, there is a gap in research examining the relation between therapeutic alliance and group climate, especially over time (Duppong Hurley, Lambert, Van Ryzin, Sullivan, & Stevens, 2013; Roest, Van der Helm, & Stams, 2016; Staudt, 2007; Zegers et al., 2006). Gaining more insight into (the directions of) these associations is important, because it may help to work with the specific challenges that are concerned with developing and maintaining good alliances with children in residential care, and thereby also to achieve better outcomes for these children.

The present study examines the association between the child's perceived group climate and the therapeutic alliance with his or her 'mentor', with two measurement occasions at a six-month interval. The mentor is defined here as the primary group worker with whom the child works on personal goals, and who stays in touch with the child's parents during treatment. In the following sections, the concepts that are researched in this study will be discussed further.

Therapeutic alliance in residential care for children

Creating and maintaining good therapeutic alliances between practitioners and youths during the course of treatment has been shown to be associated with positive outcomes, such as positive psychological changes, decreased externalizing behavior, and less recidivism (Bickman et al., 2012; Duppong Hurley, Van Ryzin, Lambert, & Stevens, 2015; Florsheim, Shotorbani, Guest-Warnick, Barratt, & Hwang, 2000; Shirk, Karver, & Brown, 2011).

There are several definitions of therapeutic alliance (Bordin, 1979; Elvins & Green, 2008; Horvath, 2005; Safran & Muran, 2006), but the definition proposed by Bordin (1979) is the most generally applicable. According to

Bordin, the therapeutic alliance consists of three essential elements: agreement on the *goals* of treatment, agreement on the *tasks*, and the development of a personal *bond* between client and therapist. The concept of therapeutic alliance needs further explanation and elaboration with regard to children in residential group care, as it is usually understood from an outpatient therapeutic context and mostly in adult populations. Therapeutic alliance between children and therapists differs from the alliance between adults and therapists due to the different contexts by which they find themselves in therapeutic environments, for example, with children there are also parents involved (Clark, 2013). As Byers and Lutz (2015) have pointed out, the difficulty in alliance formation increases as the intensity of treatment increases from outpatient to inpatient to residential care.

In the present study, the 'mentor' of the child is defined as the 'therapist' in Bordin's definition. Applying this definition of alliance to children in residential care, it is important to note that developing a personal *bond* with the child poses some specific challenges. A high percentage of children in residential care have experienced complex trauma, and this might have negatively affected their stress system (Arden & Linford, 2009), and their ability to trust and attach to adult caregivers (Baptista et al., 2013; Bradley, Caldwell, Fitzgerald, Morgan, & Rock, 1986). They may have been conditioned to keep adults at an emotional distance (Byers & Lutz, 2015).

Next, as the child lives in the institution 24/7, *goals* and *tasks* are different from, or at least broader, than those in psychotherapy settings (Duppong Hurley et al., 2013; Paraleti & Berti, 2010). The general upbringing of the child, which is partly taken over from parents by the group workers, determines a great deal of the care provided (the other 23 hours) (Trieschman, Whittaker, & Brendtro, 1931), besides the individual therapeutic goals and (corresponding) tasks. For example, a child may need help regulating his or her stress, thereby diminishing aggressive outbursts (social–emotional development), but also with regard to moral socialization and autonomy growth (personal development) (Biesta, 2015; Vansteenkiste & Soenens, 2015).

Research has shown that youths expect group workers to be skilled professionals, yet also to attain a personal, more parental or caregiving role (Duppong Hurley et al., 2013). Notably, measurement instruments that assess therapeutic alliance in psychotherapy or residential care with children aged 4–15 are mostly one-dimensional because children may find it difficult to distinguish among the goal, task, and bond dimensions (Anderson et al., 2012; Bickman et al., 2012; DiGuiseppe, Linscott, & Jilton, 1996; Faw, Hogue, Johnson, Diamond, & Liddle, 2005; Roest, Van der Helm, Strijbosch, Van Brandenburg, & Stams, 2014), although some studies have found two or three dimensions (e.g., Figueiredo, Dias, Lima, & Lamela, 2016; Ormhaug, Jensen, Wentzel-Larsen, & Shirk, 2014).

Whereas rather high temporal stability of child-rated alliance was found in outpatient therapy settings (Accurso & Garland, 2015), in residential care there is a greater variety of situational factors that can have an impact on alliance every day and hour (Souverein, Van der Helm, & Stams, 2013). For example, changes in the group and/or team composition can influence the extent to which youths can develop a personal bond and working relationship with group workers. Besides, in the first phase of treatment, and especially when care is non-voluntary, goal conflicts between parents, youths and care workers are likely to occur, influencing the perceived alliance (Byers & Lutz, 2015). Research in residential programs showed that the quality of the alliance as perceived by youths in this first phase of treatment was not associated with treatment progress; what mattered most was the development of the alliance over time (Duppong Hurley et al., 2015; Florsheim et al., 2000).

Thus, applying Bordin's definition of therapeutic alliance to residential care for children, it is important to recognize that the group worker's role is different from the therapist's role, which has implications for the operationalization of the three dimensions *bond, goals* and *tasks*. Besides, the complexity of (often non-voluntary) residential care implies that it is important to look at the development of the alliance in relation to context factors.

Group climate in residential care for children

Some decades ago group climate was referred to as 'intangible' (World Health Organization, 1953, p. 17). In recent years, group climate research has received more attention, leading to more insights into the various aspects of the construct and how to measure it, and into the way group climate influences children's behavior and thereby the outcomes of residential care.

Residential group climate has recently been 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, in press). Most research on how group climate is related to outcomes was performed in forensic settings and secure residential care. For example, the perception of an open or positive group climate has been found to be associated with less aggression (Ros, Van der Helm, Wissink, Stams, & Schaftenaar, 2013; Van Den Tillaart, Eltink, Stams, Van der Helm, & Wissink, 2018), better coping (Van der Helm, Beunk, Stams, & Van der Laan, 2014), less aversive reactions to social problem situations (Eltink, Van der Helm, Wissink, & Stams, 2015), greater client motivation and treatment engagement (Long et al., 2011), higher client satisfaction (Bressington, Stewart, Beer, & MacInnes, 2011), and also less self-reported antisocial activity once back in the community (Schubert, Mulvey, Loughran, & Losoya, 2012).

Instruments to measure the perception of group climate have been developed for different age groups. First for adolescents and adults (Crewe, Liebling, & Hulley, 2011; MacInnes, Beer, Keeble, Rees, & Reid, 2010; MacKenzie, Wilson, Armstrong, & Gover, 2001; Van der Helm, Stams, & Van der Laan, 2011), and more recently also for children (Strijbosch, Van der Helm, Stams, & Wissink, 2017; Strijbosch et al., 2014a). Notably, this opens opportunities for more research on how group climate develops over time with different age groups, and how it is associated with other common treatment factors.

Associations between group climate and alliance

One of the scarce studies, in which group climate and alliance aspects (more specific: group climate, cohesion, alliance, and empathy) have been measured at the same time, was performed by Johnson, Burlingame, Olsen, Davies, and Gleave (2005) in a group psychotherapy context. They found high correlations between the concepts, and suggested that more research should be conducted on the associations between individual and group therapy relationship constructs.

Research in forensic residential settings showed significant positive associations between social climate and alliance, and both social climate and alliance turned out to be positively related to client satisfaction (Bressington et al., 2011; Long et al., 2011). In addition, Roest et al. (2014) found a positive relation between the child's perception of a positive group climate and child-rated alliance with their primary group worker in open (semi)residential care for children between 4 and 15 years of age. However, they found no relation between child rated alliance and negative group climate. No research at all was found so far on the associations between group climate and alliance over time for children in residential care.

The present study

The present study examines the association between the child's perceived group climate and the therapeutic alliance with his or her mentor in residential care, with two measurement occasions at a six-month interval. New insights on this association may yield practical advice for care professionals who work with children a in residential care. Based on the theoretical and empirical research literature summarized earlier, group climate and alliance are expected to influence each other, because both are part of the residential experience, and it is hypothesized that when children feel more safe and comfortable in their (group) context, this creates better circumstances for positive therapeutic relationships and developmental change.

If there are associations as expected, this may imply that improving residential group climate can also lead to an improvement of the therapeutic

alliance, and ultimately to better outcomes for the children. This is important to examine for all age groups in residential care. The present study will focus on primary school-aged children and early adolescents, for this seems to be the most vulnerable and, so far, least researched age group.

Method

Participants

The data collection of the present study was part of the 'You matter!' study (Strijbosch et al., 2014b), focusing on implementing a Plan-Do-Check-Act cycle in residential youth care in order to work on a positive group climate. Two youth care organizations in the Netherlands collected data every six months between 2012 and 2015 on how children (age 4–15 years) residing in the residential treatment groups perceived the group climate and the therapeutic alliance with their mentor. Data collection was routinely embedded in the planning and control cycle, which lead to a near to maximal response rate.

Included in the present study were all children who stayed long enough to participate in two or more subsequent measurement occasions (t1 and t2, with six months in between), and who stayed in the same group and did not switch mentors. The study sample consisted of $N = 43$ children (58% boys, 42% girls) aged 4–8 years ($M = 6.11$ years; $SD = 1.19$; $Min = 4.09$; $Max = 8.79$), and $N = 72$ children (72% boys, 28% girls) aged 8–15 years ($M = 11.48$ years; $SD = 1.69$; $Min = 8.31$; $Max = 14.73$), representing 20 mixed gender residential groups. On average, there were eight to nine children in each group, and they were provided with a treatment program based on both group and individual goals and needs.

Procedure

The children were asked to fill out a questionnaire about the group climate and the alliance with their mentor. In order to inform parents about the data collection, they were sent or given an information letter about the goal of the study, and they were explained that participating was voluntary and anonymous. Children without written or verbal consent of the parents or guardians to participate in the research project were excluded from the study (less than 3%).

While children answered the questions there was a research assistant nearby in all cases, who was not involved in the treatment of the child. Children were encouraged to give honest answers so that the team could learn from the outcomes. The research assistant explained that the questionnaire was anonymous, so group workers would not be able to see individual answers, but only scores at the group level. Children between 8 and 15 years of age filled out the questionnaires themselves, while the research assistant was available to explain words or questions that were found difficult. For children between 4 and 8 years of age, the

questions were read out loud by a research assistant, and the children were asked to put the questions, printed on little cards, in one of the answer-boxes. A scale score was computed when more than two third of the scale items were available. The client registration program was consulted to find out whether children had changed groups or mentors between the two measurement occasions.

After measurements, the researcher provided every team with the group climate and alliance scores at the group level. Also, for every team there was the possibility to ask for assistance in interpreting the results and discussing these within the team and/or the group of children.

Instruments

Group Climate Instrument For Children (GCIC)

The GCIC 4–8 and 8–15 questionnaires were used to measure children's perceptions of group climate (Strijbosch et al., 2017, 2014a). The items were formulated as propositions for the older children, and as questions for the younger children in order to enhance comprehensibility. The GCIC measures two dimensions of group climate. The first dimension (positive or 'open' group climate) refers to the support of group workers and possibilities for autonomy/growth (e.g., in the 4–8 version, '*Is it nice to play here?*'; and in the 8–15 version, '*I feel that I am working on my goals here.*'). The second dimension (negative or 'closed' group climate) refers to negative group atmosphere and interactions (e.g., in the 4–8 version, '*Do some children beat you here?*'; and in the 8–15 version, '*The chaos in this group drives me crazy.*'). The GCIC 4–8 and 8–15 consist of respectively 12 items on a 3-point Likert-type scale and 14 items on a 5-point Likert-type scale. Reliabilities in terms of Cronbach's alpha of the GCIC 8–15 were .91 for the positive (open) climate scale and .71 for the negative (closed) climate scale in the validation study by Strijbosch et al. (2014a). In the present study, both Cronbach's alpha and Guttman's Lambda were .91 for the positive climate scale. For the negative climate scale, Cronbach's alpha was and .68 and Guttman's Lambda was .69. For the GCIC 4–8, Cronbach's alpha was .72 for the positive climate scale and .71 for the negative climate scale in the validation study (Strijbosch et al., 2017). In the present study, Cronbach's alpha for the original positive climate scale was lower, .51; and Guttman's lambda was .57. After removing one item ('*Do the other children want to play with you?*'), Cronbach's alpha was .58 and Guttman's Lambda was .63. The alpha of the negative climate scale in the present study was acceptable and similar to the alpha in the validation study: Cronbach's alpha was .67 and Guttman's Lambda was .70.

Children's Alliance Questionnaire (CAQ)

This instrument was used to measure therapeutic alliance. The CAQ (Roest et al., 2014) consists of 10 items for the age group 4–8 years (e.g., '*Does your mentor help you?*'; rated on a 3-points scale) and 9 items for the age group 8–15

(e.g., '*My mentor helps me to achieve my goals.*'; rated on a 5-points scale). The items were formulated as propositions for the older children, and as questions for the younger children in order to enhance comprehensibility. The CAQ measures alliance based on Bordin's definition as a single construct. Roest et al. (2014) reported acceptable internal consistency reliability coefficients of the CAQ for both age groups, with Cronbach's alpha's of .72 (age 4–8) and .75 (age 8–15). In the present study, the Cronbach's alpha's were somewhat higher, .74 and .91. Guttman's Lambda was .77 for the CAQ 4–8 and .92 for the CAQ 8–15 in the present study.

Statistical analyses

All analyses were performed for the two age groups (4–8 and 8–15) separately, because 4–15 years is a broad age range covering distinct developmental stages. Also, this age division was made because we used age-specific questionnaires that were administered to the 4–8 and 8–15 year old children, assessing similar constructs. First, paired *t*-tests were performed on the 'positive climate', 'negative climate', and 'alliance' scores for the two age groups in order to examine whether children's perceptions of these aspects changed significantly over a period of six months. Next, correlations between the several scale scores (at t1 and t2) were computed.

As children were nested in groups, we first conducted multilevel analyses (Hox, 2002) to verify the presence of significant or substantial intra-class correlations, but the intra-class correlations were extremely small and not significant. We therefore conducted a series of standard hierarchical multiple regression analyses to examine the cross-lagged associations between perceived group climate and alliance over a six-month period, controlling for stability over time. The independent variables were subjected to a test of multicollinearity, but Variance Inflation Factor (VIF) scores all fell in the acceptable range, indicating no evidence for multicollinearity.

Three independent hierarchical regression analyses were performed, with therapeutic alliance, positive group climate, and negative group climate at t2 as the dependent variables. In step one, the background (control) variables gender and age were entered. In step two, the t1 assessment of the dependent variable was added to control for stability over time. In step three, we added t2 assessments of the predictor variable(s) to control for current circumstances (e.g., positive and negative climate at t2 were added when 't2 alliance' was the dependent variable). In step four, t1 assessments of the predictor variable(s) were added (in the current example, 't1 positive climate' and 't1 negative climate' to predict alliance at t2) to examine whether these predictor variables significantly predicted the dependent variable. For a similar approach testing relations over time by means of multiple regression analyses, see Stams, Juffer, and Van IJzendoorn (2002).

Results

Paired t-tests

Neither of the three dimensions ('positive climate', 'negative climate', and 'therapeutic alliance') showed significant changes in mean scores over a period of six months, which applied to both age groups (see Table 1).

Correlations

For both groups (4–8 and 8–15 year olds), positive climate and alliance were significantly correlated (positively) with each other at t1. Also positive and negative climate showed a significant (negative) correlation. For 8–15 year olds, the same pattern of correlations appeared at t2, whereas for 4–8 year olds at t2 only positive climate and alliance were significantly correlated (positively) at t2. Inspecting the correlations between the three dimensions over the two measurement occasions for the 4–8 year olds, a significant correlation was found between alliance at t1 and positive climate at t2. For the other age group of 8–15 year olds, significant correlations were also found between positive climate at t1, and negative climate as well as alliance at t2. An overview of the correlations is presented in Tables 2 and 3.

Table 1. Means and Standard Deviations for Positive Climate, Negative Climate and Child–Mentor Therapeutic Alliance for Two Age Groups (4–8 and 8–15), and Paired *t*-Tests to Compare the t1 and t2 Scores.

	t1		t2				
	M	*SD*	*M*	*SD*	*t*	*Df*	Sig.
Age 4–8							
Positive climate	2.64	0.35	2.52	0.33	1.96	42	.057
Negative climate	1.87	0.59	1.85	0.53	.17	42	.866
Alliance	2.71	0.28	2.73	0.27	−.33	42	.741
Age 8–15							
Positive climate	3.72	0.88	3.70	0.86	.20	71	.841
Negative climate	3.16	0.75	3.23	0.80	.78	71	.437
Alliance	4.23	0.85	4.18	0.92	.52	71	.605

Table 2. Correlations Between Positive Climate, Negative Climate and Child–Mentor Therapeutic Alliance at t1 and t2 for the 4–8 Year Old Children ($N = 43$).

	(2)	(3)	(4)	(5)	(6)
Positive climate t1 (1)	−.32*	.44**	.32**	−.09	.28
Negative climate t1 (2)	1.00	−.08	−.16	.28	−.01
Alliance t1 (3)		1.00	.34*	.18	.30
Positive climate t2 (4)			1.00	.02	.48**
Negative climate t2 (5)				1.00	.11
Alliance t2 (6)					1.00

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

Table 3. Correlations Between Positive Climate, Negative Climate and Child–Mentor Therapeutic Alliance at t1 and t2 for the 8–15 Year Old Children (N = 72).

	(2)	(3)	(4)	(5)	(6)
Positive climate t1 (1)	−.49**	.51**	.50**	−.24*	.34**
Negative climate t1 (2)	1.00	−.16	−.20	.48**	−.14
Alliance t1 (3)		1.00	.32**	−.11	.51**
Positive climate t2 (4)			1.00	−.37**	.57**
Negative climate t2 (5)				1.00	−.19
Alliance t2 (6)					1.00

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

Hierarchical regression analysis 1: predicting therapeutic alliance

Age group 4–8

In the first regression analyses, the dependent variable was therapeutic alliance at t2. The first step in the examination of the 4–8 age group showed a trend-significant effect of age, indicating a higher alliance score as age increased (R^2 *change* = .128, *F change* (2, 40) = 2.940, p = .064). The next step, where alliance at t1 was added to the model in order to control for stability in alliance over time, yielded a trend-significant effect as well: (R^2 *change* = .066, *F change* (1, 39) = 3.193, p = .082). In step 3, the positive and negative climate ratings at t2 were added, which resulted in a substantial and significant increase of the explained variance (R^2 *change* = .176, *F change* (2, 37) = 4.819, $p < .05$), which can mainly be ascribed to the relation between positive climate and alliance when measured at the same time. After step 4, the model was still significant (*adjusted* R^2 = .243, $F(2, 35) = 2.925$, $p < .05$), but t1 ratings of positive and negative climate did not add to the predictive value of the model, meaning that no effect was found of group climate on alliance over time.

Age group 8–15

The first step in this regression analysis was not significant, indicating that gender and age did not have an effect on alliance ratings at t2. Step 2, controlling for stability in alliance, was significant (R^2 *change* = .236, *F change* (1, 65) = 21.776, $p < .001$). Results of step 3 showed that also positive and negative climate, when measured at the same time, substantially and significantly increased the explained variance in therapeutic alliance (R^2 *change* = .164, *F change* (2, 63) = 9.554, $p < .001$). This effect can mainly be ascribed to the relation between positive climate and alliance. Step 4, testing the possible effects of group climate on alliance over time did not lead to a substantial increase in the explained variance, even though the model itself remained significant (*adjusted* R^2 = .408, $F(2, 61) = 7.697$, $p < .001$).

The results of these analyses for both age groups are presented in Table 4.

Table 4. Summary of Hierarchical Regression Analyses Predicting Children's Perceived Therapeutic Alliance with Their Mentor at t2, Separately for Age Groups 4–8 and 8–15.

	B(SE)		*β*		ΔR^2		Adj. R^2	
Variables	4–8	8–15	4–8	8–15	4–8	8–15	4–8	8–15
Step 1					.128[a]	.061	.085	.033
Gender	0.280 (0.300)	−0.425 (0.270)	.140	−.192				
Age	0.906 (0.384)	−0.221 (0.220)	.354*	−.122				
Step 2					.066[a]	.236***	.132	.264
Alliance t1	0.283 (0.158)	0.485 (0.104)	.261[a]	.489***				
Step 3					.167*	.164***	.274	.418
Positive climate t2	0.417 (0.140)	0.442 (0.110)	.417**	.442***				
Negative climate t2	0.137 (0.136)	−0.008 (0.102)	.137	−.008				
Step 4					.008	.009	.243	.408
Positive climate t1	0.093 (0.162)	−0.132 (0.135)	.093	−.133				
Negative climate t1	0.077 (0.153)	−0.035 (0.124)	.077	−.035				

*$p < .05$; **$p < .01$; ***$p < .001$; [a]$p < .10$.

Hierarchical regression analysis 2: predicting positive climate

Age group 4–8

In the second analysis, positive climate at t2 was the dependent variable. In the 4–8 age group, gender and age were entered into the model in the first step, which did not yield a significant effect. Step 2, controlling for stability in the positive climate ratings over time, did lead to a significant increase of the explained variance (R^2 *change* = .097, *F change* (1, 39) = 4.227, $p < .05$). And so did step 3, where negative climate and alliance at t2 were added (R^2 *change* = .177, *F change* (2, 37) = 4.566, $p < .05$). This effect can mainly be ascribed to the association between positive climate and alliance. Step 4, testing the effects of negative climate or alliance on positive climate over time did not substantially and significantly improve the model. The model remained significant (*adjusted* R^2 = .181, $F(2, 35) = 2.323$, $p < .05$).

Age group 8–15

In the older age group, entering gender and age into the model showed a significant effect in step 1 (R^2 *change* = .094, *F change* (2, 66) = 3.436, $p < .05$). This effect can mainly be ascribed to gender, and indicates that boys showed higher ratings on positive climate than girls. The next step, where positive climate at t1 was added, resulted in a substantial increase of the explained variance (R^2 *change* = .200, *F change* (1, 65) = 18.461, $p < .001$), indicating stability over time. Also the next step, adding current (t2) scores on negative climate and alliance, was significant (R^2 *change* = .207, *F change* (2, 63) = 13.093, $p < .001$). This result can be ascribed both to a negative relation between ratings of negative climate and positive climate aspects, and higher scores on alliance being related to positive climate, when measured at the same time. The final model, after step 4, was still significant (*adjusted* R^2 = .480, $F(2, 61) = 9.975$, $p < .001$), but the t1 ratings of negative climate and alliance did not increase the predictive value of the model.

The results of these analyses are shown in Table 5.

Table 5. Summary of Hierarchical Regression Analyses Predicting Children's Perceived Positive Climate at t2, Separately for Age Groups 4–8 and 8–15.

	B(SE)		*β*		ΔR^2		Adj. R^2	
Variables	4–8	8–15	4–8	8–15	4–8	8–15	4–8	8–15
Step 1					.007	.094*	−.042	.067
Gender	0.096 (0.320)	−0.689 (0.265)	.048	−.311*				
Age	0.206 (0.409)	0.043 (0.216)	.080	.024				
Step 2					.097*	.200***	.036	.262
Positive climate t1	0.320 (0.156)	0.455 (0.106)	.320*	.457***				
Step 3					.177*	.207***	.185	.462
Negative climate t2	−0.034 (0.144)	−0.229 (0.094)	−.034	−.229*				
Alliance t2	0.469 (0.156)	0.398 (0.098)	.469**	.398***				
Step 4					.035	.032	.181	.480
Negative climate t1	−0.126 (0.159)	0.203 (0.114)	−.126	.201				
Alliance t1	0.197 (0.178)	−0.126 (0.111)	.182	−.127				

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

Hierarchical regression analysis 3: predicting negative climate

Age group 4–8

In the third analysis, negative climate at t2 was the dependent variable. In the first age group, no effect was found of gender or age on negative climate (step 1). Step 2, which controlled for stability in negative climate ratings over time, yielded a trend-significant effect (R^2 *change* = .026, *F change* (2, 40) = .535, $p = .071$). Anyhow, the next two steps did not lead to a substantial and significant increase of the explained variance in negative climate, resulting in a non-significant final model (*adjusted* R^2 = .007, $F(2, 35) = 1.044$, $p = .419$).

Age group 8–15

Step 1 in the analysis, where gender and age were entered into the model, did not lead to a significant effect. The next step, looking at stability in the negative climate scores, significantly improved the model (R^2 *change* = .232, *F change* (1, 65) = 20.152, $p < .001$). So did step 3, in which current (t2) scores on positive climate and alliance were added to the model (R^2 *change* = .099, *F change* (2, 63) = 4.780, $p < .05$). This result can mainly be attributed to the (negative) relation between positive and negative climate. The final model, after step 4, was still significant (*adjusted* R^2 = .297, $F(2, 61) = 5.112$, $p < .001$), but no indication was found for positive climate or alliance predicting negative climate six months later.

The results of these analyses are presented in Table 6.

Discussion

The present prospective study examined the association between children's perceived group climate and therapeutic alliance with their mentor in residential care, with two measurement occasions at a six-month interval. Research in the

Table 6. Summary of Hierarchical Regression Analyses Predicting Children's Perceived Negative Climate at t2, Separately for Age Groups 4–8 and 8–15.

	B(SE)		*β*		ΔR^2		Adj. R^2	
Variables	4–8	8–15	4–8	8–15	4–8	8–15	4–8	8–15
Step 1					.026	.020	−.023	−.009
Gender	−0.122 (0.317)	0.023 (0.276)	−.061	.010				
Age	−0.409 (0.405)	−0.260 (0.224)	−.160	−.144				
Step 2					.079[a]	.232***	.036	.218
Negative climate t1	0.294 (0.158)	0.489 (0.109)	.293[a]	.458***				
Step 3					.029	.099*	.018	.299
Positive climate t2	−0.008 (0.179)	−0.339 (0.129)	−.008	−.339*				
Alliance t2	0.187 (0.188)	0.008 (0.125)	.187	.008				
Step 4					.038	.019	.007	.297
Positive climate t1	−0.106 (0.186)	0.184 (0.147)	−.106	.185				
Alliance t1	0.246 (0.195)	−0.010 (0.131)	.227	−.010				

*$p < .05$; **$p < .01$; ***$p < .001$; [a]$p < .10$.

past decades has shown that therapeutic alliance and group climate are related concepts, and that they are both of importance for treatment outcomes in residential care in general (Bressington et al., 2011; Johnson et al., 2005; Long et al., 2011). Nonetheless, to our best knowledge, there is currently no research available examining their association in two or more subsequent measurement occasions, especially within residential care for children between 4 and 15 years old.

It can be derived from the study of Souverein et al. (2013) that a great variety of situational factors may affect the stability of both therapeutic alliance and group climate. The present study showed moderate stability over a period of six months for therapeutic alliance and positive and negative group climate, although stability was weaker in the group of 4–8 year olds compared to the 8–15 year old children. This result is not in agreement with results from studies conducted by Duppong Hurley et al. (2015) and Florsheim et al. (2000), who found less stability in older youth. Differences in stability among children of different age groups may be explained by changes in the stability of social cognitions with age, including the internal working model of attachment, affecting the perception of both therapeutic alliance and group climate (Amaniti, Van IJzendoorn, Speranza, & Tambelli, 2000; Fenning, Baker, & Juvonen, 2011; Gest, 2006; Obradovic, Van Dulmen, Yates, Carlson, & Egeland, 2006). More research is needed to examine factors that can affect stability of the therapeutic alliance and group climate across age.

As expected, we found a negative association between positive and negative climate, and a positive relation between positive climate and alliance when measured at the same time, for both age groups. This is in line with findings of Bressington et al. (2011) and Long et al. (2011) in the field of residential forensic care. We did not find a relation between negative climate and alliance, which is consistent with the study of Roest et al. (2014), who examined the relation between child-rated group climate and alliance in (semi)residential care.

This may be an indication that when children in residential care experience negative interactions in their living group, it does not necessarily affect their trust in and reliance on their mentors.

Contrary to our expectations, after controlling for stability and the current circumstances, we did not find significant effects over the two measurement occasions between group climate and therapeutic alliance. In other words, how children felt about group climate at the first measurement did not predict the way they felt about the alliance with their mentor six months later, and neither did the alliance predict group climate six months later. Possibly, how children perceive group climate is determined by different factors than how they view the alliance with their mentor. Thus, even though group climate and alliance experiences are concurrently associated, the scores on these aspects do not seem to influence each other over time.

Interestingly, we found that boys scored higher on positive group climate than girls in the group of 8–15 year olds. A possible explanation could be that girls enter puberty at a younger age than boys, which may make them more insecure about themselves and their place in the group, and influence their perception of positive climate aspects (Siegel, Yancey, Aneshensel, & Schuler, 1999).

Strengths and limitations of the study

The first limitation of this study was that only the alliance with the child's mentor (primary group worker) was measured, while the child can form alliances with all group workers. Second, there may have been variations with regard to the extent to which, or the way in which teams implemented actions/interventions related to group climate in between the measurement occasions, which can have an effect on group climate or alliance scores in different ways. This information was not taken into account in the present study. Also, there may have been some changes in group or team composition in the six months between the measurements; nonetheless, only children who stayed in the same group and with the same mentor were included in this study, which increases contextual stability over time.

Implications for practice and future research

The present study provides answers and implications for practice, and also leads to new questions, which are to be addressed in future research. The first practical implication follows from the moderate stability that was found in child-rated group climate and alliance (to a larger extent for 8–15 year olds than for 4–8 year olds). One could hypothesize that in order to preserve stability (when favorable) or create positive change, it is worth investing in periodically measuring and discussing group climate with staff and children. Learning from treatment feedback has already shown promising effects in individual therapy (Knaup,

Koesters, Schoefer, Becker, & Puschner, 2009), and in group treatment for violent adolescents too (Stams & Van der Helm, in press). While monitoring these aspects, a better insight should be acquired as to *why* the perception of group climate and alliance remains stable or not, and how these concepts are interrelated over time. This may be attained by increasing the frequency of the measurements and keeping track of meaningful changes (moderators) in the context, such as new children entering the group, personnel changes, changes in group rules or the physical environment. Notably, in the present study we did not find significant effects of child-rated group climate on alliance (or the other way around) over six months' time, which may imply that each of these aspects should receive separate attention in the daily group and one-to-one interactions with the children.

The second practical implication follows from the differences that were found for the two age groups, 4–8 and 8–15 year old children. Stability was lower for the younger children. There may be important other factors, not taken into account in the present study, that explain group climate and alliance as rated over time in this very young age group. A mixed-methods approach, with qualitative as well as quantitative research, can be recommended in order to discover more about underlying mechanisms.

Third, the finding that boys scored higher on positive group climate than girls calls for more attention, and more research on the dynamics in mixed-gender treatment groups. And last, while the present study focused on the vulnerable group of children during primary school age and early adolescence (age 4–15), it is also important to study the associations between group climate and alliance over time for late adolescents and young adults. It would be most insightful when the dynamics in group climate and alliance experiences of youths in different age groups could be compared.

Conclusion

The present study offers a first insight into the association between group climate and child-mentor therapeutic alliance in residential care for children between 4 and 15 years of age. It shows moderate stability in positive climate, negative climate and therapeutic alliance over six months' time, although stability was weaker in the ratings of the 4–8 year old children. Additionally, this study shows a higher rating of positive group climate by boys compared to girls in the group of 8–15 year old children. No indication was found that child-perceived group climate and alliance influenced each other over six months' time. Measurements at shorter time intervals and a mix of qualitative and quantitative research could provide a more accurate view on changes in perceived group climate and alliance, and the relation between these processes over time. This pioneering study offers a starting point to address several new and more specific research questions and hypotheses about group climate and

alliance, thereby contributing to particular treatment models for a very vulnerable group of children in residential care.

References

Accurso, E. C., & Garland, A. F. (2015). Child, caregiver, and therapist perspectives on therapeutic alliance in usual care child psychotherapy. *Psychological Assessment*, *27*(1), 347–352. doi:10.1037/pas0000031

Allison, K. L., & Rossouw, P. J. (2013). The therapeutic alliance: Exploring the concept of "safety" from a neuropsychotherapeutic perspective. *International Journal of Neuropsychotherapy*, *1*, 21–29. doi:10.12744/ijnpt.2013.0021-0029

Amaniti, M., Van IJzendoorn, M. H., Speranza, A. M., & Tambelli, R. (2000). Internal working models of attachment during late childhood and early adolescence: An exploration of stability and change. *Attachment & Human Development*, *3*, 328–346. doi:10.1080/14616730010001587

Anderson, R. E. E., Spence, S. H., Donovan, C. L., March, S., Prosser, S., & Kenardy, J. (2012). Working alliance in online cognitive behavior therapy for anxiety disorders in youth: Comparison with clinic delivery and its role in predicting outcome. *Journal of Medical Internet Research*, *14*(3), 86–101. doi:10.2196/jmir.1848

Arden, J. B., & Linford, L. (2009). *Brain based therapy with children and adolescents*. New York, NY: Wiley.

Ayotte, M. H., Lanctôt, N., & Tourigny, M. (2015). Pre-treatment profiles of adolescent girls as predictors of the strength of their working alliances with practitioners in residential care settings. *Children and Youth Services Review*, *53*, 61–69. doi:10.1016/j.childyouth2015.03.010

Baptista, J., Belsky, J., Martins, C., Silva, J., Marques, S., Mesquita, A., & Soares, I. (2013). Social withdrawal behavior in institutionalized toddlers: Individual, early family and institutional determinants. *Infant Mental Health Journal*, *34*, 562–573. doi:10.1002/imhj.21416

Barnhoorn, J., Broeren, S., Distelbrink, M., De Greef, M., Van Grieken, A., Jansen, W., & Raat, H. (2013). *Cliënt-, professional- en alliantiefactoren: Hun relatie met het effect van zorg voor jeugd: Verkenning van kennis en kennishiaten voor het ZonMw-programma Effectief werken in de jeugdsector. [Client, professional and alliance factors: Associations with youth care outcomes: Exploration of knowledge and knowledge gaps for the ZonMw programme Effective youth care]*. The Hague, The Netherlands: ZonMw.

Bastiaanssen, I. L. W., Delsing, M. J. M. H., Kroes, G., Engels, R. C. M. E., & Veerman, J. W. (2014). Group care worker interventions and child problem behavior in residential youth care: Course and bidirectional associations. *Children and Youth Services Review*, *39*, 48–56. doi:10.1016/j.childyouth.2014.01.012

Bickman, L., De Andrade, A. R. V., Athay, M. M., Chen, J. I., De Nadai, A. S., Jordan-Arthur, B. L., & Karver, M. S. (2012). The relationship between change in therapeutic alliance ratings and improvement in youth symptom severity: Whose ratings matter the most? *Administration and Policy in Mental Health and Mental Health Services Research*, *39*(1–2), 78–89. doi:10.1007/s10488-011-0398-0

Biesta, G. J. J. (2015). What is education for? On good education, teacher judgement, and educational professionalism. *European Journal of Education*, *50*(1), 75–87. doi:10.1111/ejed.12109

Bordin, E. S. (1979). The generalizability of the psychoanalytic concept of the working alliance. *Psychotherapy: Theory, Research and Practice*, *16*, 252–260. doi:10.1037/h0085885

Bradley, R. H., Caldwell, B. M., Fitzgerald, J. A., Morgan, A. G., & Rock, S. L. (1986). Behavioral competence of maltreated children in child care. *Child Psychiatry and Human Development*, *16*, 171–193. doi:10.1007/BF00706174

Bressington, D., Stewart, B., Beer, D., & MacInnes, D. (2011). Levels of service user satisfaction in secure settings - A survey of the association between perceived social climate, perceived therapeutic relationship and satisfaction with forensic services. *International Journal of Nursing Studies*, *48*, 1349–1356. doi:10.1016/j.ijnurstu.2011.05.011

Byers, A. N., & Lutz, D. J. (2015). Therapeutic alliance with youth in residential care: Challenges and recommendations. *Residential Treatment for Children & Youth*, *32*(1), 1–18. doi:10.1080/0886571X.2015.1004285

Clark, C. M. (2013). Irreducibly human encounters: Therapeutic alliance and treatment outcome in child and adolescent psychotherapy. *Journal of Infant, Child, and Adolescent Psychotherapy*, *12*(3), 228–243. doi:10.1080/15289168.2013.822751

Crewe, B., Liebling, A., & Hulley, S. (2011). Staff culture, use of authority and prisoner quality of life in public and private sector prisons. *Australian & New Zealand Journal of Criminology*, *44*(1), 94–115. doi:10.1177/0004865810392681

DiGiuseppe, R., Linscott, J., & Jilton, R. (1996). Developing the therapeutic alliance in child-adolescent psychotherapy. *Applied and Preventive Psychology*, *5*, 85–100. doi:10.1016/S0962-1849(96)80002-3

Duppong Hurley, K., Lambert, M. C., Van Ryzin, M. J., Sullivan, J., & Stevens, A. L. (2013). Therapeutic alliance between youth and staff in residential group care: Psychometrics of the therapeutic alliance quality scale. *Children and Youth Services Review*, *35*(1), 56–64. doi:10.1016/j.childyouth.2012.10.009

Duppong Hurley, K., Van Ryzin, M. J., Lambert, M. C., & Stevens, A. L. (2015). Examining change in therapeutic alliance to predict youth mental health outcomes. *Journal of Emotional and Behavioral Disorders*, *23*(2), 90–100. doi:10.1177/1063426614541700

Eltink, E. M. A., Van der Helm, G. H. P., Wissink, I. B., & Stams, G. J. J. M. (2015). The relation between living group climate and reactions to social problem situations in detained adolescents: "I stabbed him because he looked mean at me". *International Journal of Forensic Mental Health*, *14*(2), 101–109. doi:10.1080/14999013.2015.1033110

Elvins, R., & Green, J. (2008). The conceptualization and measurement of therapeutic alliance: An empirical review. *Clinical Psychology Review*, *28*, 1167–1187. doi:10.1016/j.cpr.2008.04.002

Faw, L., Hogue, A., Johnson, S., Diamond, G. M., & Liddle, H. A. (2005). The Adolescent Therapeutic Alliance Scale (ATAS): Initial psychometrics and prediction of outcome in family-based substance abuse prevention counseling. *Psychotherapy Research*, *15*, 141–154. doi:10.1080/10503300512331326994

Fenning, R. M., Baker, B. L., & Juvonen, J. (2011). Emotion discourse, social cognition, and social skills in children with and without developmental delays. *Child Development*, *82*(2), 717–731. doi:10.1111/j.1467-8624.2010.01569.x

Figueiredo, B., Dias, P., Lima, V. S., & Lamela, D. (2016). Working Alliance Inventory for Children and Adolescents (WAI-CA): Development and psychometric properties. *European Journal of Psychological Assessment*. Advance online publication. doi:10.1027/1015-5759/a000364

Florsheim, P., Shotorbani, S., Guest-Warnick, G., Barratt, T., & Hwang, W. C. (2000). Role of the working alliance in the treatment of delinquent boys in community-based programs. *Journal of Clinical Child Psychology*, *29*(1), 94–107. doi:10.1207/S15374424jccp2901_10

Gest, S. D. (2006). Teacher reports of children's friendships and social groups: Agreement with peer reports and implications for studying peer similarity. *Social Development*, *15*, 248–259. doi:10.1111/sode.2006.15.issue-2

Handwerk, M. L., Huefner, J. C., Ringle, J. L., Howard, B. K., Soper, S. H., Almquist, J. K., & Chmelka, M. B.; Father Flanagan's Boys' Home. (2008). The role of therapeutic alliance in therapy outcomes for youth in residential care. *Residential Treatment for Children & Youth*, *25*(2), 145–165.

Harder, A. T., Knorth, E. J., & Kalverboer, M. E. (2013). A secure base? The adolescent-staff relationship in secure residential youth care. *Child and Family Social Work*, *18*, 305–317. doi:10.1111/j.1365-2206.2012.00846.x

Horvath, A. (2005). The therapeutic relationship: Research and theory. *Psychotherapy Research*, *15*(1–2), 3–7. doi:10.1080/10503300512331339143

Hox, J. (2002). *Multilevel analysis: Techniques and applications*. Mahway, NJ: Lawrence Erlbaum Associates.

James, S. (2010). What works in group care? – A structured review of treatment models for group homes and residential care. *Children and Youth Services Review*, *33*, 308–321. doi:10.1016/j.childyouth.2010.09.014

Johnson, J. E., Burlingame, G. M., Olsen, J. A., Davies, D. R., & Gleave, R. L. (2005). Group climate, cohesion, alliance, and empathy in group psychotherapy: Multilevel structural equation models. *Journal of Counseling Psychology*, *52*, 310–321. doi:10.1037/0022-0167.52.3.310

Knaup, C., Koesters, M., Schoefer, D., Becker, T., & Puschner, B. (2009). Effects of feedback of treatment outcome in specialist mental healthcare: Meta-analysis. *The British Journal of Psychiatry*, *195*, 15–22. doi:10.1192/bjp.bp.108.053967

Long, C. G., Anagnostakis, K., Fox, E., Silaule, P., Somers, J., West, R., & Webster, A. (2011). Social climate along the pathway of care in women's secure mental health service: Variation with level of security, patient motivation, therapeutic alliance and level of disturbance. *Criminal Behaviour and Mental Health*, *21*, 202–214. doi:10.1002/cbm.791

MacInnes, D., Beer, D., Keeble, P., Rees, D., & Reid, L. (2010). The development of a tool to measure service user satisfaction with in-patient forensic services: The forensic satisfaction scale. *Journal of Mental Health*, *19*, 272–281. doi:10.3109/09638231003728133

MacKenzie, D. L., Wilson, D. B., Armstrong, G. S., & Gover, A. R. (2001). The impact of boot camps and traditional institutions on juvenile residents: Perceptions, adjustment, and change. *Journal of Research in Crime and Delinquency*, *38*, 279–313. doi:10.1177/0022427801038003004

Manso, A., Rauktis, M. E., & Boyd, S. (2008). Youth expectations about therapeutic alliance in a residential setting. *Residential Treatment for Children & Youth*, *25*(1), 55–72. doi:10.1080/08865710802209826

Obradovic, J., Van Dulmen, M. H. M., Yates, T. M., Carlson, E. A., & Egeland, B. (2006). Developmental assessment of competence from early childhood to middle adolescence. *Journal of Adolescence*, *29*, 857–889. doi:10.1016/j.adolescence.2006.04.009

Ormhaug, S. M., Jensen, T. K., Wentzel-Larsen, T., & Shirk, S. R. (2014). The therapeutic alliance in treatment of traumatized youths: Relation to outcome in a randomized clinical trial. *Journal of Consulting and Clinical Psychology*, *82*(1), 52–64. doi:10.1037/a0033884

Palareti, L., & Berti, C. (2010). Relational climate and effectiveness of residential care: Adolescent perspectives. *Journal of Prevention & Intervention in the Community*, *38*(1), 26–40. doi:10.1080/10852350903393426

Roest, J. J., Van der Helm, G. H. P., & Stams, G. J. J. M. (2016). The relation between therapeutic alliance and treatment motivation in residential youth care: A cross-lagged panel analysis. *Child and Adolescent Social Work Journal*, *33*, 455–468. doi:10.1007/s10560-016-0438-4

Roest, J. J., Van der Helm, G. H. P., Strijbosch, E. L. L., Van Brandenburg, M. E. T., & Stams, G. J. J. M. (2014). Measuring therapeutic alliance with children in residential treatment and

therapeutic day care: A validation study of the Children's alliance questionnaire. *Research on Social Work Practice*, *26*, 212–218. doi:10.1177/1049731514540478

Ros, N., Van der Helm, G. H. P., Wissink, I. B., Stams, G. J. J. M., & Schaftenaar, P. (2013). Institutional climate and aggression in a secure psychiatric setting. *Journal of Forensic Psychiatry and Psychology*, *24*, 713–727. doi:10.1080/14789949.2013.848460

Ryan, R. M., & Deci, E. L. (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness*. New York, NY: Guilford.

Safran, J. D., & Muran, J. C. (2006). Has the concept of the therapeutic alliance outlived its usefulness? *Psychotherapy: Theory, Research, Practice, Training.*, *43*, 286–291. doi:10.1037/0033-3204.43.3.286

Scholte, E. M., & Van der Ploeg, J. D. (2003). Effectiveness of residential treatment methods for youngsters with severe behavioural problems: Findings from a one year follow-up study. *International Journal of Child and Family Welfare*, *6*, 185–197.

Schubert, C. A., Mulvey, E. P., Loughran, T. A., & Losoya, S. H. (2012). Perceptions of institutional experience and community outcomes for serious adolescent offenders. *Criminal Justice and Behavior*, *39*(1), 71–93. doi:10.1177/0093854811426710

Shirk, S. R., Karver, M. S., & Brown, R. (2011). The alliance in child and adolescent psychotherapy. *Psychotherapy*, *48*(1), 17–24. doi:10.1037/a0022181

Siegel, J. M., Yancey, A. K., Aneshensel, C. S., & Schuler, R. (1999). Body image, perceived pubertal timing, and adolescent mental health. *Journal of Adolescent Health*, *25*(2), 155–165. doi:10.1016/S1054-139X(98)00160-8

Souverein, F. A., Van der Helm, G. H. P., & Stams, G. J. J. M. (2013). Nothing works in secure residential youth care? *Children and Youth Services Review*, *35*, 1941–1945. doi:10.1016/j.childyouth.2013.09.010

Stams, G. J. J. M., Juffer, F., & Van IJzendoorn, M. H. (2002). Maternal sensitivity, infant attachment, and temperament in early childhood predict adjustment in middle childhood: The case of adopted children and their biologically unrelated parents. *Developmental Psychology*, *38*, 806–821. doi:10.1037/0012-1649.38.5.806

Stams, G. J. J. M., & Van der Helm, G. H. P. (in press). What works in residential programs for aggressive and violent youth? Treating youth at risk for aggressive and violent behavior in (secure) residential care. In P. Sturmey (Ed.), *The wiley handbook of violence and aggression*. Oxford, UK: Wiley.

Staudt, M. (2007). Treatment engagement with caregivers of at-risk children: Gaps in research and conceptualization. *Journal of Child and Family Studies*, *16*, 183–196. doi:10.1007/s10826-006-9077-2

Strijbosch, E. L. L., Van Brandenburg, M. E. T., Heutink, L., Van der Helm, G. H. P., De Greef, M., & Pijnenburg, H. M. (2014b, September 2–5). *Children in residential care: How to improve working alliances?* Paper presented at the 13th International EUSARF Conference, 2014, Copenhagen, Denmark. doi:10.1177/1049731513510045

Strijbosch, E. L. L., Van der Helm, G. H. P., Stams, G. J. J. M., & Wissink, I. B. (2017). Young children (4-8 years) in group care: Development and validation of a group climate instrument. *Child Indicators Research*. doi:10/1007/s12187-017-9496-1

Strijbosch, E. L. L., Van der Helm, G. H. P., Van Brandenburg, M. E. T., Mecking, M., Wissink, I. B., & Stams, G. J. J. M. (2014a). Children in residential care: development and validation of a group climate instrument. *Research on Social Work Practice*, *24*, 462–469. doi:10.1177/1049731513510045

Trieschman, A. E., Whittaker, J. K., & Brendtro, L. K. (1931). *The other 23 hours: Child-care work with emotionally disturbed children in a therapeutic milieu*. Chicago, IL: Aldine Pub. Co.

Van den Tillaart, J. M. M., Eltink, E. M. A., Stams, G. J. J. M., Van der Helm, G. H. P., & Wissink, I. B. (2018). Aggressive incidents in residential youth care. *International Journal of Offender Therapy and Comparative Criminology*, February 2018, 1–17. doi:10.1177/0306624X18758898

Van der Helm, G. H. P. (2011). *First do no harm: Living group climate in secure juvenile correctional institutions*. Amsterdam, The Netherlands: Uitgeverij SPW.

Van der Helm, G. H. P., Beunk, L., Stams, G. J. J. M., & Van der Laan, P. H. (2014). The relationship between detention length, living group climate, coping, and treatment motivation among juvenile delinquents in a youth correctional facility. *The Prison Journal*, *94*, 260–275. doi:10.1177/0032885514524884

Van der Helm, G. H. P., Stams, G. J. J. M., & Van der Laan, P. H. (2011). Measuring group climate in prison. *The Prison Journal*, *91*, 158–176. doi:10.1177/0032885511403595

Vansteenkiste, M., & Soenens, B. (2015). *Vitamines voor Groei: Ontwikkeling Voeden Vanuit de Zelf-determinatie theorie. [Vitamines for growht: Fostering development by the self-determination theory]*. Den Haag, The Netherlands: Acco.

Whittaker, J. K., Del Valle, J. F., & Holmes, L. (Eds.). (2015). *Therapeutic residential care for children and youth: Developing evidence-based international practice*. London, UK/Philadelphia, PA: Jessica Kingsley Publishers.

World Health Organization. (1953). *Expert committee on mental health: 3rd report*. Geneva, Switzerland: World Health Organization.

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

Zimmerman, D. P., & Cohler, B. J. (2008). From disciplinary control to benign milieu in children's residential treatment. *Residential Treatment For Children & Youth*, *18*(2), 27–54. doi:10.1300/J007v18n02