Aggressive Incidents in Residential Youth Care

International Journal of
Offender Therapy and
Comparative Criminology
2018, Vol. 62(13) 3991–4007


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DOI: 10.1177/0306624X18758898
journals.sagepub.com/home/ijo


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Abstract

It is assumed that group climate can have an effect on aggressive behavior in adolescents living in residential facilities, but it is largely unknown whether there are climate differences between the various types of residential institutions, and whether group climate differently affects aggression incidents among adolescents placed in institutions that differ in levels of security (and openness). In current research, the differences in perception of group climate between open, semi-secure, and secure residential youth care facilities were examined as well as the association between group climate and aggression. In total, 159 adolescents (96 males, 63 females) completed the Prison Group Climate Instrument (PGCI), and (aggressive) incidents were recorded during a period of 3 months. Perception of group climate—including support from staff, group atmosphere among adolescents, possibilities for growth, and repression—did not differ between the various types of residential care, except for possibilities for growth. Adolescents in open and semi-secure institutions experienced more possibilities for growth than their peers in secure institutions. A more positive perception of group climate in open institutions proved to be related to less aggressive incidents at the living group. For semi-secure and secure institutions, no relation between group climate and aggression was found. Also, the longer adolescents stayed in residential youth care, the more aggressive incidents occurred.

Keywords

aggression, group climate, residential youth care, adolescents, incidents

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Introduction

Residential youth care differs considerably around the world (Courtney & Iwaniec, 2009). Most countries place at least some children in residential facilities (Ainsworth & Thoburn, 2014), which differ in size (e.g., small group homes or large institutions) and purpose (James, 2011; Thoburn, 2010; Thoburn & Ainsworth, 2015). Ainsworth and Thoburn (2014) showed that in English-speaking countries (Ireland, Australia, the United States, and England), the use of residential care is minimal, whereas in other countries, a high percentage of children stay in residential care (e.g., Italy, Czech Republic, and Israel). In continental Western Europe, staff is better trained, facilities are larger, and duration of stay is longer when compared with England and Australia (Ainsworth & Thoburn, 2014).

In many countries, residential youth care is used as a last resort and preferably as a short-term arrangement (e.g., in England, The Netherlands), although it is acknowledged that for a small group of children, long-term residential care or even permanent placement seems inevitable (Thoburn, 2016). In the Netherlands, about 2% of Dutch (mostly justice-involved) adolescents live in open, semi-secure, or secure residential facilities (Harder, Knorth, Zandberg, & Tils, 2006), which is about 10% of all adolescents receiving youth care in the Netherlands (Centraal Bureau voor de Statistiek [CBS], 2014; United Nations International Children's Emergency Fund, 2016). Government policy requires that ambulant care is considered first and, if not feasible, day treatment or foster care should be considered. If all these options are not viable or exhausted, residential care can be an option (Strijker & Knorth, 2007). In the Netherlands, living groups in residential youth care mostly consist of six to 12 children, and are often for boys or girls only, although some institutions have mixed gender groups (Boendermaker, Van Rooijen, & Berg, 2010).

In the Netherlands, adolescents are usually involuntarily placed in residential youth care facilities because they have committed, or are suspect of, a criminal act (criminal law) or due to court-ordered supervision (civil law) (Bartelink, 2013; Boendermaker & van Yperen, 2003). Adolescents are placed in these secure institutions not only for reasons of safety and punishment but also to receive treatment and care (Bruning, Liefaard, & Volf, 2004; Harder, Knorth, & Kalverboer, 2013). Adolescents with severe emotional and behavioral problems can be placed by a judge in a semi-secure residential youth care institution (Harder, 2011). These institutions offer mandatory treatment, starting with a (relative short) period of residential care, where adolescents gradually work towards returning to society in more open settings (Ten Brummelaar, Boendermaker, Harder, & Knorth, 2011). Treatment is characterized by gradual steps from more to less restrictive care, focusing on behavioral change, training and preparation for the future, and the transfer to a new living situation and aftercare (Van der Poel, Rutten, & Sondeijker, 2008).

In open institutions, placements can be involuntary as well as voluntary. Adolescents in open institutions are allowed a relatively great amount of freedom. They can leave the institution if they wish, attend school in the community, and have social contacts outside the institution. Some open institutions provide a short-term (e.g., a few months)

treatment period, which aims at quickly returning adolescents to their homes, whereas other open institutions have a focus on working towards independent living (James, 2011). Two meta-analyses showed that residential youth care can be effective for both younger children and adolescents as long as therapeutic conditions are met (De Swart et al., 2012; Strijbosch et al., 2015).

Research from Connor, Doerfler, Toscano, Volungis, and Steingard (2004) showed that 92% of adolescents receiving residential treatment had more than one psychiatric diagnosis, and a vast majority thereof had at least one prior hospitalization (Baker, Kurland, Curtis, Alexander, & Papa-Lentini, 2007). Also, the majority of adolescents in residential treatment settings have a history of trauma (Briggs et al., 2012; Jaycox, Ebener, Damesek, & Becker, 2004). Research in the Netherlands showed similar findings (Nijhof, Van Dam, Veerman, Engels, & Scholte, 2010; Vreugdenhil, Doreleijers, Vermeiren, Wouters, & Van den Brink, 2004); a predominant share of adolescents in residential youth care is diagnosed with at least one psychiatric disorder. Many adolescents placed in open or semi-secure residential youth care must be protected against themselves (e.g., running away, aggression, or suicidal behavior) or against their environment (e.g., abusive parents, lover boys) (Nijhof et al., 2010). Children in residential youth care often have complex emotional and behavioral problems, which may be accompanied by family-related issues. Also, the adolescents often have a mild intellectual disability, and sometimes a history of neglect, trauma, or substance abuse (Boendermaker, Eijgenraam, & Geurts, 2004; Harder et al., 2006), in particular when adolescents are placed in a residential setting due to delinquency (Asscher, Van der Put, & Stams, 2015).

More attention needs to be paid to the skills of staff in residential institutions to develop and maintain positive relationships with adolescents and create a positive residential group climate (Bastiaanssen et al., 2012; Harder, 2011; Van Dam, Nijhof, Scholte, & Veerman, 2010; Van der Helm, 2011). Group climate in residential youth care 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, 2017).

Group climate can vary from closed and repressive to open and therapeutic. An open group climate is characterized by a structured and safe environment, with adequate support from pedagogical staff (Knorth, Harder, Huyghen, Kalverboer, & Zandberg, 2010), opportunities to learn and develop (growth), clear rules and limits, and a secure atmosphere among adolescents (Van der Helm, Stams, & Van der Laan, 2011). A repressive group climate, on the contrary, is characterized by a lack of structure, unduly strict control, loss of autonomy, absence of mutual respect, boredom, feelings of despair, aggression, and lack of perspective (De Valk, Kuiper, Van der Helm, Maas, & Stams, 2016).

An open and therapeutic group climate has been shown to be associated with greater motivation for treatment (Van Binsbergen, 2003; Van der Helm, 2011; Van der Helm, Wissink, De Jongh, & Stams, 2013), more active coping (Van der Helm, Beunk, Stams, & Van der Laan, 2014), positive personality development (Van der Helm, Stams, Van Genabeek, & Van der Laan, 2012), and empathy (Van der Helm, Stams, Van der Stel, Van Langen, & Van der Laan, 2012). Finally, Schubert, Mulvey, Loughran, and Losoya (2012) found positive perceptions of group climate and efficacious aftercare to reduce recidivism in juvenile delinquents. The current study examines whether an open and therapeutic group climate is associated with less aggressive incidents within (different types of) residential institutions.

Aggression and Group Climate

Aggression is defined as any form of behavior that is intended to harm someone physically or psychologically (Anderson & Bushman, 2002; Baron & Richardson, 2004; Berkowitz, 1993). A complex interaction of personal, interpersonal, and circumstantial variables has been shown to influence aggressive behavior (Fluttert, 2011; Hiday, 1997; Kettles, 2004; Nijman et al., 1999; Swanson et al., 1997). Adolescents in residential youth care have limited ability to react adequately in problematic social situations, and often use aggression as a problem-solving strategy (Arsenio, Adams, & Gold, 2009; Crick & Dodge, 2008; Eltink, Van der Helm, Wissink, & Stams, 2015; Nas, Orobio de Castro, & Koops, 2005; Van der Helm, Matthys, et al., 2013). In addition, several studies on the influence of exposure to deviant peer culture (Dishion, McCord, & Poulin, 1999) showed how grouping adolescents can increase existing problems through deviancy training, when adolescents are exposed to peers' modeling and reinforcement of deviant behavior (Dishion, Spracklen, Andrews, & Patterson, 1996).

Van der Helm, Stams, et al. (2012) did not find a relation between a repressive group climate and self-reported aggression with the Buss-Durkee Hostility Inventory-Dutch (BDHI-D) in a Dutch secure (juvenile correctional) institution, but did find that an open group climate was associated with less self-reported aggression, which was mediated by changes in personality development. Heynen, Van der Helm, Cima, Stams, and Korebrits (2016) found no association between group climate and self-reported proactive aggression in a German secure juvenile correctional facility, but did find a relation between a repressive group climate and self-reported reactive aggression. Eltink et al. (2017) found a repressive group climate to be associated with later direct aggression among Dutch justice-involved adolescents, while type of institution (i.e., level of security) did not predict differences in aggression. Furthermore, research from Ros, Van der Helm, Wissink, Stams, and Schaftenaar (2013) in a forensic treatment center for adult patients in the Netherlands showed that a more supportive group climate and providing opportunities for growth were associated with a decrease in aggressive incidents at the living group. De Decker and others (2017) found a significant inverse relation between, on one hand, support and possibilities for growth, and on the other hand, the number and severity of aggressive incidents in a secure

institution for youth care in Belgium. It seems that residential group climate has an effect on aggression in secure institutions, but not much research has been conducted in open institutions.

Current research focuses on the perception of group climate in various types of residential youth care. It is expected that adolescents residing in semi-secure and secure institutions perceive group climate to be less positive compared with adolescents in open institutions due to the deprivational character of secure institutions. It is also hypothesized that the perception of group climate is related to the frequency of aggressive incidents within the different types of residential youth care. It is expected that adolescents who perceive the group climate as more positive (i.e., high support from staff, many opportunities for growth, a safe and friendly atmosphere among the adolescents, and minimum or no repression) are less involved in aggression-related incidents. To gain more insight in the specific nature of aggressive incidents, these incidents are also compared with "other incidents," which can be defined as norm-transgressive behaviors that violate social conventions or nonmoral rules (i.e., absence after leave, refusal to follow instructions, or smoking in one's room) rather than norm-transgressive behaviors that may violate moral standards, such as aggressive behavior.

Method

Participants

The data were collected from adolescents aged between 8 and 18, residing in the Amsterdam region in open living groups or semi-secure institutions and from adolescents aged between 14 and 22, residing in secure institutions. Twenty-seven living groups, consisting of a maximum of 10 adolescents per group, were asked to participate. The response rate was 74% among adolescents residing in living groups. These living groups varied from solely male groups or female groups, to mixed groups. The sample consisted of 159 adolescents who resided in residential youth care. From the open living groups, 72 adolescents participated (25 males and 47 females), aged 15.3 years on average (SD = 1.7). Adolescents in open living groups stayed on average 23.76 weeks (SD = 27.4), from a minimum of 1 week to a maximum of 2 years 5 months. From the semi-secure institution, 43 adolescents participated (27 males and 16 females), aged 15.3 years on average (SD = 1.1). They stayed on average 28.21 weeks (SD = 31.1), from a minimum of 2 weeks to a maximum of three years. Finally, 44 male adolescents participated from the secure institution, aged 17.6 years on average (SD = 1.8). Adolescents in the secure institution stayed on average 27.7 weeks (SD = 31.2), from a minimum of 1 week to a maximum of 2 years 4 months. Of the 159 participating adolescents, 27 were born outside of the Netherlands, mainly in Morocco, Surinam, or the Dutch Antilles. From 13 adolescents, the country of birth was unknown.

Procedure

All living group workers were approached for participation by means of an introduction of this research in team meetings. The goal was to stimulate team members to motivate adolescents to participate and to advocate the significance of this study. The group workers conducted the surveys in the living groups. In most cases, the surveys were all administered at the same moment for all adolescents in the living group, who independently answered the questions. The surveys were coded to ensure anonymity of the participants.

Measuring Instruments

Adolescents were questioned about their perception of the group climate by means of the Prison Group Climate Instrument (PGCI). Age, gender, length of stay, and ethnical background data were also collected.

PGCI. The PGCI is a self-report questionnaire containing 36 items, developed to measure the perception of group climate in a residential setting (Van der Helm et al., 2011). Adolescents give their opinion on group climate, using a 5-point Likert-type scale varying from 1 (*totally not applicable*) to 5 (*totally applicable*). The questionnaire consists of four dimensions: support (12 items), growth (eight items), repression (nine items), and atmosphere (seven items). Paying attention to adolescents, taking complaints seriously, respect, and trust are important characteristics of the support dimension. Growth assesses learning perceptions and hope for the future. Repression assesses perceptions of strictness and control and unfair rules. Finally, atmosphere assesses the way adolescents treat and trust each other, and the perception of safety. Examples of items are "The group workers treat me with respect" (support), "I work on my future here" (growth), "The group workers always get it their way" (repression), and "We trust one another in the group" (atmosphere). Reliability analysis of the PGCI, measured by means of Cronbach's alpha, showed that all dimensions of the questionnaire were reliable. For support, $\alpha = .90$; growth, $\alpha = .87$; repression, $\alpha = .71$; and atmosphere, $\alpha = .83$. The total reliability of the questionnaire was $\alpha = .93$.

Aggression incidents. Aggression incidents from the adolescents were examined by means of incident reports for a period of 3 months. The number of reported incidents in official systems does not include all incidents which occur within groups (Ros et al., 2013). Therefore, incidents from individual daily reports were also assessed. In total, 1,273 incidents were collected, in which one or more of the 159 participants was or were involved. In the 12 participating open living groups, in total, 646 incidents occurred, averaging to 8.97 per adolescent ($SD = 8.0$), against in total 431 incidents in the seven semi-secure living groups, averaging to 10.01 per adolescent ($SD = 7.7$). In eight living groups of the secure institution, in total, 196 incidents occurred, averaging to 4.45 per adolescent ($SD = 5.7$). The number of incidents per adolescent varied from 0 to 39.

The incidents are assigned to one of the following categories: (1) physical aggression focused on employees; (2) verbal aggression focused on employees (also cursing and expressing threats); (3) physical aggression focused on peers; (4) verbal aggression focused on peers; (5) physical aggression focused on supplies; (6) arson (including smoking on room); (7) nonjustified absence (including escape, absence after temporary leave); (8) positive urine checks (including illegal use of substances); (9) contrabands; (10) suicide, suicide attempt, or automutilation; and (11) violation of rules (including refusing instructions). Within this categorization, a differentiation is made between "aggression" and "other incidents," where Categories 1 to 5 are considered as aggressive and Categories 6 to 11 are considered other incidents. Aggressive incidents contain verbal or physical violence aimed towards persons and/or objects. Other incidents encompass automutilation, returning late from leave, smoking in one's room, escape, or refusing instructions.

Regarding incidents, 20 participants' incidents were independently evaluated by means of intraclass correlation coefficients (ICCs). A high degree of reliability was found between the two raters. The ICC of the total number of scored incidents was .905, 95% confidence interval (CI) = [.834, .956], $F(19, 513) = 10.551$, $p < .001$. The ICC of the total number of aggressive incidents was .928, 95% CI = [.819, .972], $F(19, 19) = 13.982$, $p < .001$. For the total number of scored "other incidents," the average ICC was .934, 95% CI = [.834, .973], $F(19, 19) = 15.236$, $p < .001$.

Statistical Analysis

A series of one-way ANOVAs was conducted using SPSS, to examine the difference in perception of group climate among adolescents residing in open, semi-secure, and secure institutions, with Student–Newman–Keuls (SNK) corrected tests for post hoc differences. Subsequently, a multivariate logistical regression analysis was used to examine the relation between the perception of group climate and aggressive incidents, controlling for duration of stay, age, gender, and type of institution.

Results

Perception of Group Climate Within Various Types of Residential Youth Care

To test the differences in the perception of group climate between various types of residential youth care, a series of one-way ANOVAs were performed. Table 1 presents the average scores of the perception of overall group climate and the separate dimensions of group climate in three different types of residential youth care. Overall group climate perception did not significantly differ between the different types of residential youth care (open, semi-secure, or secure). Post hoc analysis showed that adolescents residing in open institutions and semi-secure institutions perceived significantly more opportunities for growth than adolescents residing in secure institutions, $F(2, 146) = 5.17$, $p = .01$. Concerning the dimensions support, repression, and atmosphere, no significant differences were found.

Table 1. One-way ANOVA for Differences in Perception of Group Climate Between Types of Residential Youth Care.

	Open	Open	Semi-secure	Semi-secure	Secure	Secure		
Dimension	*n*	*M* (*SD*)	*n*	*M* (*SD*)	*n*	*M* (*SD*)	*F*	*df*
Support	63	3.69 (0.80)	40	3.48 (0.89)	39	3.51 (0.83)	0.954	2.139
Growth	67	3.43[a] (0.98)	41	3.51[a] (0.97)	41	2.88[b] (0.99)	5.17**	2.146
Repression	65	3.12 (0.73)	39	3.43 (0.74)	40	3.33 (0.63)	2.66	2.141
Atmosphere	68	3.46 (0.88)	41	3.14 (0.85)	41	3.52 (0.90)	2.38	2.147
Group climate	56	3.42 (0.65)	38	3.17 (0.73)	37	3.18 (0.67)	2.11	2.128

Note. Different superscripts (a, b) show significant post hoc differences on $p < .05$, corrected for likelihood (SNK). SNK = Student–Newman–Keuls.
**$p < .01$.

Table 2. Logistic Regression Analysis: Perception of Group Climate and Aggression Incidents ($N = 159$).

					95% CI	95% CI
Predictors	*B*	*SE*	Wald	Odds ratio	Lower limit	Upper limit
Number of weeks in residential youth care	0.238	0.069	11.86***	1.27	1.11	1.45
Age	−0.238	0.137	3.00	0.79	0.60	1.03
Gender	−0.976	0.503	3.77	0.377	0.141	1.01
Open institution	−0.976	0.520	3.53	0.377	0.136	1.04
Secure institution	0.392	0.639	0.38	1.48	0.423	5.18
Group climate	−0.085	0.515	0.027	0.919	0.335	2,52
Group climate in open institution	−1.01	0.496	4.19*	0.363	0.137	0.958
Group climate in secure institution	−0.173	0.496	0.121	0.841	0.318	2.23

Note. $\chi^2(8) = 36.02$, $p < .001$. CI = confidence interval.
*$p < .05$. **$p < .01$. *** $p < .001$

The Association Between Group Climate and Aggression Incidents

First, the relation between the perception of group climate and aggression was examined, using a multivariate logistic regression analysis. The logistic regression equation was not significant for "other incidents"—χ^2 ($N = 159$, $df = 8$) = 14.667, *ns*—but significant for aggressive incidents—$\chi^2(N = 159, df = 8) = 36.018$, $p < .001$. Table 2 shows that with every additional week an adolescent resided in residential youth care, the likelihood of an aggressive incident increased by 27% (odds ratio = 1.27). The occurrence of aggressive incidents in open institutions substantially decreased when

the perception of group climate was more positive (odds ratio = 0.36). A total of 29% of the differences in aggressive incidents was associated with the length of stay, age, gender, type of institution, and perception of group climate. All logistic regression analyses were repeated for the four group climate dimensions, but these analyses did not yield significant regression equations.

Discussion

The present study examined differences in the perception of group climate among adolescents in various types of residential youth care, and relations between group climate and (aggressive) incidents in residential youth care. The perception of total group climate did not differ between adolescents residing in the different types of residential youth care, but adolescents in open and semi-secure institutions perceived more opportunities for growth than adolescents in secure residential care. Second, results showed that only the perception of a more positive group climate in open institutions was associated with fewer aggressive incidents. Finally, the longer an adolescent resided within residential youth care, the greater the likelihood of aggressive incidents. No associations were found between group climate and other incidents.

No differences were found in the perception of support, repression, and group atmosphere between open, semi-secure, and secure institutions. This could be explained by a focus on individual treatment in all types of youth care, the delivery of well-structured programs, and a focus on building a positive peer culture (Gibbs, Potter, Barriga, & Liau, 1996; Gibbs, Potter, & Goldstein, 1995; Helmond, Overbeek, & Brugman, 2012; Knorth et al., 2010). All youth care facilities in this study were divisions of one organization (Spirit Youth Care) where staff is trained (i.e., in responsiveness) in creating a good learning and living environment for adolescents. All boys and girls are assigned a mentor, who supports the juvenile's development, speaks with him or her privately on a weekly basis, and keeps in contact with his or her caregivers. Moreover, many juveniles have not experienced much support and structure from their social environment before residential placement nor a safe place to develop satisfying relationships with peers. They might experience high support, a reassuring structure, and a positive peer culture when entering residential youth care (Souverein, Van der Helm, & Stams, 2013).

Adolescents in the open and semi-secure institutions experienced more opportunities for growth than their peers in the secure institution. Growth is closely connected with the concept of "learning" and improvement in domains such as education, work, and relationships (Langdon, 2007). In open and semi-secure institutions, adolescents spend more time outside the institution being part of society. Aspects of "normal life," such as attending school and having supervised and unsupervised leisure time, take place outside the residential setting and are less restricted compared with secure facilities. This may explain why adolescents in open and semi-secure institutions perceived more opportunities for growth than their peers in secure institution.

The hypothesis about the relation between perception of group climate and incidents was partly confirmed. Only in the open institutions, a more positive group climate was

related to fewer aggressive incidents. A possible explanation may be that adolescents in open institutions are often placed on a voluntary basis and therefore more motivated for treatment than adolescents in semi-secure or secure institutions. Also, they are less likely to have a conduct disorder (CD); adolescents who are placed involuntarily have a 3 times higher odds of receiving a CD diagnosis and 2 times higher odds of receiving a *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.; *DSM-IV*; American Psychiatric Association, 1994) diagnosis than adolescents placed voluntarily (Jozefiak et al., 2016). It is possible that due to these differences (e.g., in motivation and disorders), adolescents in (semi)secure institutions are less susceptible for positive environmental influences (Belsky, Bakermans-Kranenburg, & Van IJzendoorn, 2007), such as a positive and therapeutic group climate. Notably, a recent study of Van Ijzendoorn and Bakermans-Kranenburg (2015) showed that interventions targeting externalizing behaviors only had a positive effect on those who were genetically susceptible for positive environmental influences, whereas this was not the case for interventions targeting internalizing problems. In the end, it is the subtle interplay between genes and the environment, including the degree to which adolescents respond to reward and punishment and actively seek an environment that fits their genetic make-up or evoke harsh or supportive behavior from parents or other caregivers that prevails (Weeland, Overbeek, Orobio de Castro, & Matthys, 2015). According to Weeland et al. (2015), this calls for highly personalized (residential) interventions in terms of clinical focus, intention, and duration (Stams & Van der Helm, 2017).

Many adolescents in semi-secure and secure residential institutions have a history of multiple placements in nonresidential and other residential treatment settings, without evidence of any positive effects on their behavior (Wheatley, Waine, Spence, & Hollin, 2004). This might indicate a lack of susceptibility to positive environmental influences as well. Such lack of susceptibility may relate not only to genetic deficits as already outlined above and neurophysiological deficits (Cornet, De Kogel, Nijman, Raine, & Van der Laan, 2014) but also to an accumulation of risks limiting the possible effects of protective environmental factors (Vanderbilt-Adriance & Shaw, 2008). These risks have been described in research by Vermaes and Nijhof (2014) and Smeets (2014), showing that there are many differences between adolescents in semi-secure and open residential youth care. Adolescents in semi-secure youth care were more likely to demonstrate risky behavior, use drugs, and were more vulnerable for negative peer influences. Also, adolescents in semi-secure youth care had lower self-esteem and impaired emotion regulation and showed more antisocial and aggressive externalizing problems, whereas adolescents in open youth care showed more internalizing problems (Vermaes & Nijhof, 2014). In secure institutions, as compared with semi-secure institutions, aggressive behavior, autism, substance abuse, and personality disorders are more common (Smeets, 2014).

The perception of group climate was found not to be associated with "other incidents," regardless of type of institution. This could be explained by the fact that "other incidents" can be considered as norm-transgressive behaviors that violate social conventions or nonmoral rules (Turiel, 2002). Children and adolescents judge moral transgressions as more wrong than such social-conventional norm-transgressions

(Harvey, Fletcher, & French, 2001). They consider issues of harm to others' welfare to be wrong, independent of rules and authority, and worthy of more severe punishment than any other type of transgression. It is plausible to suggest that group climate does not have an effect on the less serious social-conventional norm-transgressions, because these transgressions constitute a more general age-dependent aspect of identity development and are therefore less likely to be affected by the social environment.

Current research showed that the length of stay was related to the number of aggressive incidents. The first explanation for this finding would be that frustration among adolescents increases as their length of stay also increases, and therefore, they become more involved in aggressive incidents. Second, by observing aggressive behavior of peers, adolescents can copy tactics and strategies that increase the likelihood of imitation of aggressive behavior (Bandura, 1978). In the literature, there are some other findings that length of stay is associated with aggression, but it is unclear whether length of stay influences the level of aggression or whether the level of aggression influences the length of stay. For instance, Barlow, Grenyer, and Ilkiw-Lavalle (2000) found that in psychiatric institutions, aggressive patients had a longer length of stay than nonaggressive patients. Also, predictors of longer length of stay include previous contact with child and adolescence psychiatric services, substance abuse, and absconding during treatment (Andreasson et al., 2014). A long stay in prison is associated with diminished active coping, lower levels of treatment motivation, and loss of hope (Goffman, 1961; Irwin & Owen, 2005; Maruna, 2008; Toch, 2008; Toch & Kupers, 2007). Van der Helm et al. (2014) found a positive relation between length of stay and open group climate. In current research, no relation between length of stay and group climate was found.

To conclude, the results showed that the perception of group climate of adolescents in open institutions is related to aggressive incidents. These adolescents not only differ from adolescents placed in (semi)secure institutions but may also be more susceptible to positive environmental influences than adolescents in semi-secure and secure institutions. Adolescents in open institutions have more possibilities for growth and more freedom to participate in the community.

There are some important limitations to be mentioned. First, a sample of convenience was used, which limits the generalizability of the findings. In addition, all institutions in this study were divisions of one youth care organization in the Netherlands, Spirit Youth Care, and it is unclear whether the findings generalize to other institutions. Second, the PGCI is a self-report questionnaire, whereby adolescents could provide socially desirable answers. However, there seems to be no strong incentive for providing socially desirable answers regarding the perception of group climate. Moreover, perception based on experiences rather than more objective information can be expected to influence subsequent behavior and developmental outcomes (Steinberg, 2009). Nevertheless, the perception of group climate from group workers' view is not taken into account, resulting in a unilateral image about the perception of group climate. Finally, the number of consulted reported incidents in official systems could be an underestimation of the total number of incidents occurring at the groups (Ros et al., 2013).

Despite these limitations, this study was the first to investigate whether there are differences between the perception of group climate in various types of residential youth care and whether these differences were related to the occurrence of (aggressive) incidents. It was found that the perception of group climate in open institutions is related to aggressive incidents. Findings imply that there are possibilities for influencing the number of aggressive incidents by working towards a more positive group climate, at least in open institutions. Furthermore, this study provides empirical support for the relation between length of stay and aggressive incidents. However, more research is needed to establish the direction of this relation. Group climate may be an antecedent of aggressive incidents, but aggressive incidents may also be a precursor of group climate. Also, additional research is needed on susceptibility for positive environmental influences of adolescents in residential care, specifically in how to create a therapeutic alliance and in how to reduce stress to further decrease the prevalence of aggressive behavior in semi-secure and secure institutions (Van der Helm & Stams, 2012).

Yet, following the results, it is advised that ongoing training of group workers is facilitated, concentrating on providing support, future perspective to the adolescents, and creating a safe atmosphere where learning becomes possible. In creating a positive group climate in open institutions, the occurrence of aggressive incidents may decrease. In semi-secure and secure institutions, more attention should be given to create possibilities for growth. Residential care should contribute to the development of adolescents and a positive group climate, and less aggressive incidents may contribute to better treatment results.

Authors' Note

Van den Tillaart and Eltink are both considered first author of this article, because they equally contributed to this study.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

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