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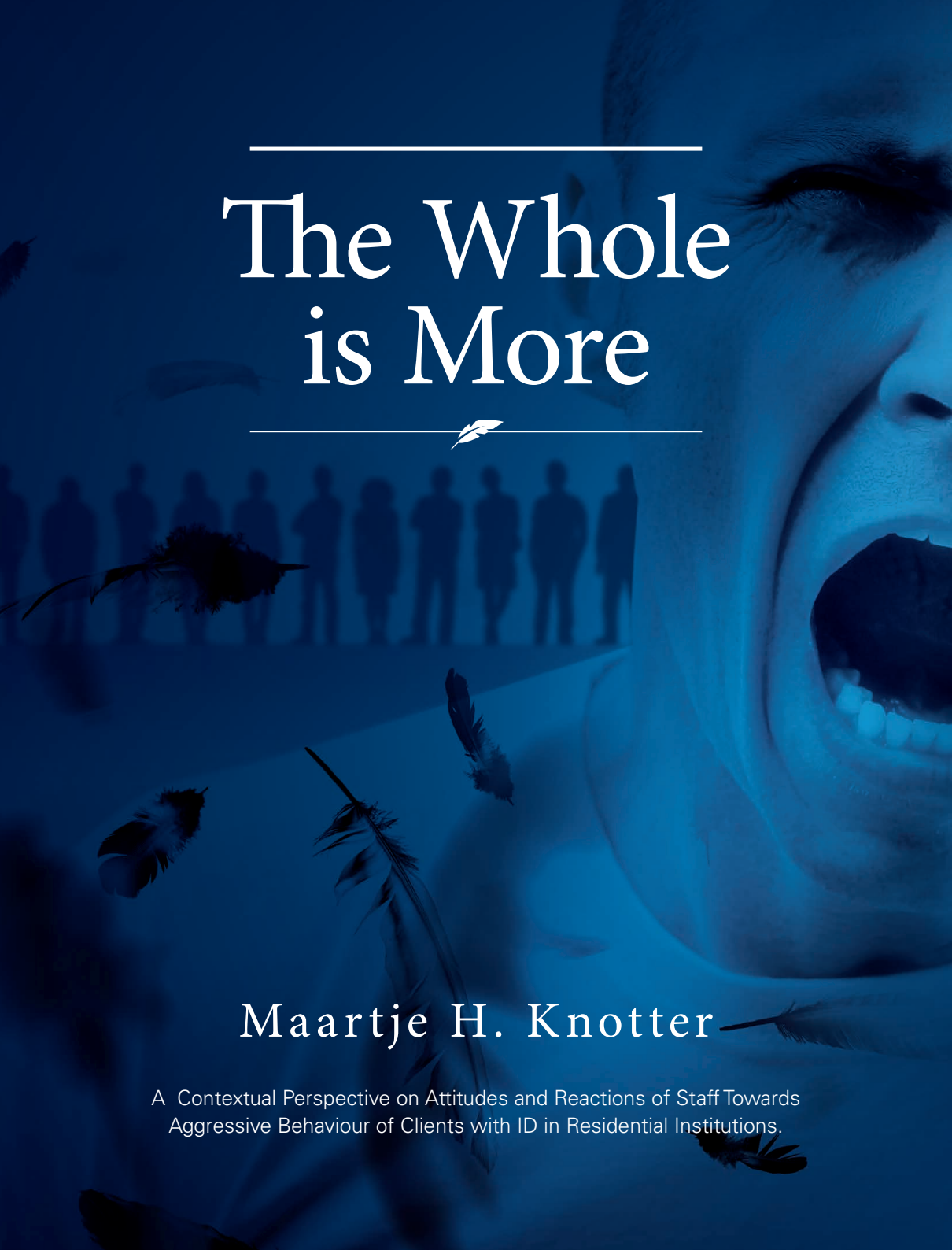
A contextual perspective on attitudes and reactions of staff towards aggressive behaviour of clients with ID in residential institutions

Knotter, M.H.



The Whole is More

Maartje H. Knotter

A Contextual Perspective on Attitudes and Reactions of Staff Towards Aggressive Behaviour of Clients with ID in Residential Institutions.

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The Whole is More

A Contextual Perspective on Attitudes and Reactions of Staff Towards Aggressive Behaviour of Clients with ID in Residential Institutions.

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Faculteit der Maatschappij- en Gedragswetenschappen

Tekening boven:
Mirte Jansen
Tekening rechterpagina:
Sofie Jansen

BOOS

ik gooi ik smijt ik stomp ik schop
er zit iets donkers in mijn kop
mijn bui is boos
hij doet niet wat ik wil
ik spuug ik krijs ik schreeuw ik gil

rode knetter dynamiet
takkenbijter kakkepiet
stekkert kukert slakkensop
de boze bui knalt uit mijn kop
hou op hou op hou op

ik tel tot tien en elf weer terug
ik adem in en uit ik zucht
ik zal zoete woorden fluisteren
de herrie in mijn hoofd moet weg
ik wil er niet naar luisteren

suikergoed en marsepein
roze koek en karamel
let maar niet op mij
spekkie lolly slagroomsoes
ik verzin mezelf weer blij

Hans en Monique Hagen
uit “Nooit denk ik aan niets”.

Amsterdam: Querido’s
kinderboeken Uitgeverij, 2015.

"The Whole is More than the Sum of its Parts."

Aristotle
Metaphysics

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I

GENERAL INTRODUCTION

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GENERAL INTRODUCTION

Direct care staff working with people with an intellectual disability (ID) and aggressive behavioural problems have a highly demanding function. For staff the confrontations with aggression may lead to feelings of victimization and threat (Teneij & Koot, 2008). This can affect their levels of stress and their emotions, attitudes and behaviour in a negative way, which subsequently can lead to burn-out or high rates of employee turn-over (Rose, Mills, Silva, & Thompson, 2013).

Persons with ID who show severe aggressive behaviour may, due to placement in a restrictive environment, experience less learning opportunities or are excluded from treatment programs that aim at enhancing their skills. They can be exposed to restrictive measures, and there is a risk of recurrent placement breakdown, especially when there is poor quality of care (Grey & Hastings, 2005; Heyveart, Maes, Van den Noortgate, & Kuppens, 2012; Phillips & Rose, 2010).

This dissertation focuses on the dynamic interaction (Hastings, 2005; Hastings et al., 2013; Willems, Embregts, Bosman, & Hendriks, 2014) between staff and their clients with ID who show aggressive behaviour. The goal of the project was 1) to obtain insight in staff variables and team variables that may affect the attitude and behaviour of staff in relation to their clients with ID who show aggressive behaviour, and 2) to obtain more insight in the way staff can be supported to be effective in handling potentially threatening situations, and to develop meaningful relationships with their clients with ID.

PREVALENCE OF AGGRESSION IN PEOPLE WITH ID

The prevalence rates of aggression in people with borderline, mild, moderate or severe forms of ID found in research vary due to different definitions of aggression, different means of measuring incidents of aggression, and different settings and sample characteristics. To illustrate, in a study of Crocker, Mercier, Lachapelle, Brunet, Morin and Roy (2006), 51.8% of the 3165 residents (adults) with ID from three rehabilitation agencies in Canada displayed forms of aggressive behaviour. However, only 4.9 % of them presented aggressive behaviour leading to injuries of the alleged victim. Lowe, Allen, Jones, Brophy, Moore and James (2007) conducted a study in Wales, including 901 clients (children and adults) with ID in several types of residences, such as family homes, staffed homes and hospital wards. They found that 54% of the clients showed aggressive behaviour. The prevalence of 'serious challenging behaviour' (i.e., at least once a day, leading to physical intervention by staff and major injury or damage) was found to be 10%.

Drieschner, Marrozos and Regenboog (2013) found that for 69.6% of the 291 clients referred to two Dutch residential treatment centres for adults with mild to borderline ID and severe problem behaviour, aggression or violence was the reason for their admission. Tenneij and Koot (2008) examined the data of 134 clients with mild to more severe forms of ID living in four inpatient treatment facilities in the Netherlands for adults with ID, and found that 77% of these clients were referred for treatment because of aggressive behaviour problems. In the study of Tenneij and Koot, the Staff Observation Aggression Scale-Revised (SOAS-R; Nijman et al, 1999) was completed by staff for each incident that occurred in 20 weeks. Most incidents of aggression reported by staff were outwardly directed, and were incidents of verbal aggression. In line with previous research findings, Tenneij and Koot concluded that only a small percentage (4%) of the outwardly directed aggression had severe consequences, and they concluded that only a small group of patients was responsible for many incidents.

In sum, the rate of aggressive incidents showed by clients with ID in professional care may be high, but it is important to acknowledge that a relatively small percentage of these clients are actually engaged in severe forms of aggression (Benson & Brooks, 2008).

DEFINITIONS OF AGGRESSION

Despite the large number of studies dealing with aggression, there is still no common view on the concept of aggression (Ramirez & Andreu, 2006). According to a review of Ramirez and Andreu (2006): "aggression consists of several phenomena which may be similar in appearance but have separate genetic and neural control mechanisms, show diverse phenomenological manifestations, have different functions and antecedents, and are instigated by different external circumstances (p.278)."

Braine (1994) used a definition of aggressive behaviour based on four components; (a) intentional acts, with (b) the potential for harm, (c) committed by an individual in an aroused physical state, and (d) perceived as aversive by the victim.

Other researchers made a distinction between two forms of aggression: hostile and instrumental aggression. This distinction is based on two different theoretical frameworks. According to Ramirez and Andreu (2006), hostile (reactive and affective) aggression in persons without ID is related to anger, hostility and impulsiveness. The concept has its roots in frustration-aggression theory, where aggressive behaviour is described as a response to perceived threat. Instrumental (proactive) aggression is rooted in social learning theory (Bandura, 1978) according to which aggressive behaviour is perceived as a way to influence or coerce others in order to obtain a goal.

Ramirez and Andreu (2006) explain that it is possible that a person shows both types of aggression. Polman, Orobio de Castro, Koops, Van Boxtel and Merk (2007) conducted a meta-analysis on reactive (hostility) and proactive (instrumental) aggression in children and adolescents (without ID), and they found that the distinction between both types of aggression was based on the function of the aggressive behaviour. They concluded that children could

show both types of aggression. Children who start showing reactive aggressive behaviour problems at an early age can learn that showing aggressive behaviour may help them to achieve a goal (for instance, avoiding a demanding situation), and their success in achieving that goal may stimulate them to show more instrumental aggression (Polman et al., 2007). It can be concluded that there are many reasons for behaving aggressively (both personal and situational factors), and that it is important to analyse the possible antecedents that may evoke aggressive behaviour in persons with ID.

AGGRESSIVE BEHAVIOUR IN PERSONS WITH ID

According to Rojahn, Zaja, Turygin, Moore and Van Ingen (2012), aggressive behaviour in persons with ID is often related to external, often social, reinforcement. For example, a person with ID could show aggressive behaviour to get attention or to escape from demands or social situations. This is in line with findings of a study by Embregts, Didden, Huitink and Schreuder (2009), who found that social and task related events (disagreements and/or difficult instructions) were more likely to evoke aggressive behaviour in persons with mild to borderline ID than, such as biological causes (for instance, epilepsy). Incidences of aggression may be affected by stress, caused by social neglect or abuse or by lack of secure attachment (Schuengel, Schipper, Sterkenburg, & Kef, 2013). Stress raises arousal, which in turn may lead to a distorted interpretation of a situation (e.g., hostile attributions), and evoke an aggressive response in clients with ID (Drieschner et al., 2013).

In research, many other reasons for showing aggressive behaviour by people with ID are mentioned. Limited intellectual and social-adaptive capacities of persons with ID, for instance, can lead to a higher risk of developing aggressive behaviour (Wallander, Dekker, & Koot, 2013). Van Nieuwenhuizen, Vriens, Scheepmaker, Smit, and Porton, (2011) showed that children with mild to borderline ID (MBID) experienced more problems interpreting social situations due to their intellectual capacities. In their study, children with MBID compared to children without MBID tended to interpret social situations as being more negative and hostile, developed less assertive solutions, and showed more aggressive or submissive reactions. Being a male, having a more severe or profound degree of ID and a classification of autism were considered to be additional risk markers for the development of aggressive behaviour in people with ID (McClintock, Hall, & Oliver, 2003). Persons with ID are also at heightened risk due to traumatic life events, lack of social networks, unemployment, having sensory or health problems and genetic syndromes, which may all contribute to a higher incidence of aggressive behaviour (Hastings et al., 2013).

Aggressive behaviour is often an important reason for referral to residential services for persons with ID. In those services, interactions with staff and other residents may play an important role in maintaining or enhancing incidents of aggressive behaviour (Taylor, 2002), when no special attention is given to prevent aggression.

DIRECT CARE STAFF REACTIONS ON AGGRESSION

The Dutch Ministry of Social Affairs and Employment (Ministerie van Sociale Zaken en Werkgelegenheid, 2016) reported that, covering the period 2013 till 2015, 60% of the 1.1 million staff members working in care and welfare experienced acts of aggression in their work. About 36% of them had experienced threatening, biting or kicking by clients leading to work-related injuries. Of 158.000 staff members working with people with ID, included in this study, 70% had experienced aggressive incidents.

Experiences with aggression may lead to emotional responses by staff, such as irritation, anger and fear (Taylor, 2002). More precisely, experiences of aggression can evoke reactions that may vary from increasing the number of (non)verbal signals towards a client with ID showing aggressive behaviour, to being overcautious in contact with that person or ignoring him of her, to a total loss of self-confidence of staff. Tenneij and Koot (2008) found that, especially

when staff had experienced outwardly directed aggressive incidents, they often felt like being a victim, and they developed feelings of being threatened. In their study, these feelings occurred relatively often, inducing secluding reactions towards these clients.

The feeling of being threatened during daily work may also cause high levels of stress by direct care staff. In line with that, Rose et al. (2013) found a positive relationship between aggression and emotional exhaustion of staff (which is an important predictor for burn-out). Lambregts, Kuppens and Maes (2009) found in their study of staff feelings, beliefs and reactions towards aggressive behaviour of clients with ID, that aggression was related to the emotions fear and anxiety in staff. Willems, Embregts, Stams and Moonen (2010) and Willems, Embregts, Bosman and Hendriks (2014) showed, by investigating the psychometric properties of the Staff-Client Interactive Behaviour Inventory (SCIBI), that the intrapersonal characteristics of staff influenced their interpersonal style of working. For instance, self-reflection and proactive thinking in staff were found to be related to staff support-seeking behaviour and assertive control, while staff who had been confronted with more challenging behaviour from their clients with ID reported less friendly, showing more assertive control and less support-seeking behaviours (Willems et al., 2010).

Although available research findings have already contributed to a better insight in the dynamic staff-clients interactions involving clients with ID who behave in a challenging (e.g., aggressive) way, there are still unknown factors that possibly may influence staff behaviour towards their aggressive clients with ID. Willems et al. (2014), for instance, found that all independent variables used in their study (i.e., challenging behaviour of clients and several staff and organizational factors) explained 22% of the variance in assertive control, 18% of the variance in hostile staff behaviour and 18% of the variance in friendly staff behaviour, which indicates that respectively 78% and 82% of the variance of staff's interpersonal style of working remained unexplained by the factors that were included in their study. This implies that more research is needed to find out more about other influencing factors that possibly may explain staff reactions towards aggressive behaviour problems of clients with ID.

INTERACTIONS FROM A SOCIAL ECOLOGICAL PERSPECTIVE

As previously mentioned, aggressive behaviour of clients with ID may evoke fearful feelings and a more hostile and controlling style of interpersonal behaviour in staff (Willems et al., 2010). Feelings of fear or hostility by staff may lead to a more controlling style of behaviour in interaction with their clients and this, consecutively, may affect clients' emotions or anger, and may evoke even more aggressive behaviour in clients (Fish & Culshaw, 2005). Those challenging behaviours may in turn affect the interpersonal style of staff (Willems et al., 2014). As such, a vicious circle may lead to increasing negative behaviour and negative emotions in staff and clients.

The setting in which this dynamic interaction between staff and clients occurs is, according to Farrell, Shafei and Salmon (2010), important for both staff behaviour and client behaviour. Factors that are considered to be important are: specific physical surroundings (noise, chaotic settings, certain lightning and colour schemes), organizational policies and organizational procedures (low levels of staff, lack of special training, lack of resources, perceived unsafety, and an inadequate organizational approach to challenging behaviour), and informal working practices (team culture and working climate).

In this dissertation, attention is paid to aspects of the larger setting (client, team and organizational characteristics), adopting a social ecological perspective, that might explain staff' attitudes and their reactions towards aggressive behaviour of clients with ID.

SUPPORTING STAFF

According to Farrell et al. (2010) it is important that staff understand the dynamics of the underlying processes that may lead to aggressive behaviour of their clients with ID. These researchers have developed a training model that focuses on the values, emotional reactions and skills of staff members, on staff beliefs and thoughts about their clients with ID and on the setting (physical environment and workplace culture).

Van Oorsouw (2013) acknowledged staff training to be an essential element in organizational interventions, but she also pointed at the difficulties in training staff. According to Van Oorsouw (2013), training is more than "just train and tick the box in your (employers) education plan (p.195)". Staff training should be part of a clear policy in organizations. Campbell (2010) is not that optimistic about the value of staff training. He pointed at the theory-practice gap: knowing about effective approaches to reduce challenging behaviour is not enough to actually change staff behaviour. According to Campbell (2010), several factors contribute to this gap: lack of an organizational structure that supports the knowledge that is passed within training programs, inadequate training, lack of basic knowledge in staff, absence of adequate performance management for implementation of behavioural interventions, informal induction into the 'canteen culture' (for instance, an informal working culture) and, finally, a conflict between short-term reactive strategies and long-term proactive strategies.

The question to be answered is whether staff training can indeed be effective in changing staff behaviour to deal more effectively and safely with aggressive incidents, and what type of organizational support is needed to support this?

PRESENT DISSERTATION

This dissertation focuses on the attitudes and behaviour of staff of clients with ID who show aggressive behaviour. The main research question is how staff members respond towards aggression and how their behaviour can possibly be altered, leading to more appropriate responses to incidents of aggression. In chapter 2, a study about staff members' attitudes and reactions towards aggressive behaviour of clients with ID is presented. In chapter 3, more insight is provided in the factors that explain direct care staff members' attitudes towards aggression of clients with ID. In chapter 4, the results of a multi-level meta-analysis with regard to the effectiveness of staff training programs dealing with aggressive behaviour incidents is presented. In chapter 5, several staff, team and organizational factors influencing the interactions between staff members and clients with ID who behave in an aggressive way are explored. In chapter 6, the general discussion is presented summarising and combining the main findings of the studies presented as is a reflecting on their theoretical and practical relevance. Based on these findings, recommendations for further research and implications for clinical practice are presented.

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II

STAFF'S ATTITUDES AND REACTIONS TOWARDS AGGRESSIVE BEHAVIOUR OF CLIENTS WITH INTELLECTUAL DISABILITIES: A MULTI-LEVEL STUDY

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II STAFF'S ATTITUDES AND REACTIONS TOWARDS AGGRESSIVE BEHAVIOUR OF CLIENTS WITH INTELLECTUAL DISABILITIES: A MULTI-LEVEL STUDY

ABSTRACT

Data were collected from 121 staff members (20 direct support staff teams) on background characteristics of the individual staff members and their teams (gender, age, years of work experience, position and education), the frequency and form of aggression of clients with an intellectual disability (verbal or physical), staff members' attitudes towards aggression, and the types of behavioural interventions they executed (providing personal space and behavioural boundary-setting, restricting freedom and the use of coercive measures). Additionally, client group characteristics (age of clients, type of care and client's level of intellectual disability) were assessed. Multilevel analyses (individual and contextual level) were performed to examine the relations between all studied variables and the behavioural interventions. The results showed that for providing personal space and behavioural boundary-setting as well as for restricting freedom, the proportion of variance explained by the context (staff team and client group characteristics) was three times larger than the proportion of variance explained by individual staff member characteristics. For using coercive measures, the context even accounted for 66% of the variance, whereas only 8% was explained by individual staff member characteristics. A negative attitude towards aggression of the direct support team as a whole proved to be an especially strong predictor of using coercive measures. To diminish the use of coercive measures, interventions should therefore be directed towards influencing the attitude of direct support teams instead of individual staff members.

KEYWORDS
Attitude towards aggression, direct support staff, behavioural intervention, clients with intellectual disabilities

INTRODUCTION

Several studies show that the level of aggression among people with intellectual disabilities (ID) is high (Cooper et al., 2009; Emerson et al., 2000; Emerson et al., 2001; Taylor, Novaco, Gillmer, & Thorne, 2002; ten Wolde & Koorenhof, 2006). Besides self-injurious and destructive behaviour, aggression is one of the main reasons for people with ID to be referred to institutional settings. Aggression of clients was found to cause both physical and psychological harm to staff, and may therefore be a reason for staff absenteeism from work or a reason to apply for another job (ten Wolde & Koorenhof, 2006). Jenkins, Rose and Lovell (1997) also found that aggressive behaviour of clients was inversely associated with staff psychological well-being. Furthermore, Bromley and Emerson (1995) established that difficulty in understanding aggressive behaviour of clients, unpredictability of client behaviour, and lack of knowledge about how aggressive behaviour can be treated or adequately controlled were all related to higher levels of stress among staff. These findings necessitate further research on staff reactions to aggressive behaviours of institutionalized clients with ID.

Studies of interactions between staff and clients with ID have emphasized the significant role that staff can play in the development and maintenance of aggression (Bromley & Emerson, 1995; Carr, Taylor, & Robinson, 1991; Hastings, 1997; Hastings & Remington, 1994; Wilson, Reed, & Bartak, 1995). Staff workers who are repeatedly confronted with aggression and who want to prevent harm done to other clients or to colleagues may perceive they have no alternative other than seclusion or physical intervention. The use of coercive measures, such as seclusion and physical intervention, may have positive short term effects, such as creating a safe environment. However, coercive measures can be counterproductive in the long term, especially when no efforts are made to provide a functional analysis and treatment of the aggressive behaviour (Carr et al., 1991; Hastings & Remington, 1994; Lang, Sigafoos, Lancioni, Didden, & Rispoli, 2010; Wilson et al., 1995).

Studies conducted by Fish and Culshaw (2005) and Hawkins, Allen and Jenkins (2005) found that clients with ID reported more frustration and aggression, and also feelings of fear, pain and distress after physical intervention. This could, in return, affect their subsequent behaviour and obstruct long-term treatment effectiveness. Even staff reported negative experiences (for example feelings of stress, fear, frustration, irritation, anger, sadness, helplessness, shock, disgust, worry, guilt and self-doubt) before, during and after the use of physical interventions by clients with ID (Fish & Culshaw, 2005; Hawkins et al., 2005; Ravoux, Baker, & Brown, 2012). Examining the correlates of coercive measures, but also of other types of interventions in response to clients' aggressive behaviour is therefore important, not only to reduce the rate of aggression, but also to obtain better treatment outcomes and to strengthen the quality of positive contact between care workers and clients with ID.

Staff responses to and their beliefs about aggressive behaviour have been subject of research for many years. For instance, Hastings and Remington (1994) described two main categories of factors that determine staff behaviour in response to aggressive behaviour: (1) the contingencies associated directly with the challenging or aggressive behaviour itself (type of challenging behaviour and the emotional impact of the behaviour on staff), and (2) indirect contingencies that take the form of internal 'rules' representing staff's own beliefs about the causes of the clients' behaviour and how best to respond. According to Weiner (1980, 1993), especially the attributions (i.e. the beliefs concerning the causes) of aggressive behaviour influence the emotional reactions of sympathy or anger of staff. These emotions are thought to promote or reduce the likelihood of staff offering help.

Although it is widely acknowledged that staff are influenced by their beliefs about the causes of aggressive behaviour of clients with ID (that is, staff's attributions) (Hastings, 1997; Hastings & Brown, 2002; Wanless & Jahoda,

2002), the role of staff's intentions has not yet been subjected to research. This is an important aspect, as in the theory of planned behaviour (Ajzen, 1991) an individual's intention to act in a certain way is assumed to motivate behaviour. According to Ajzen (1991), the intentions to perform behaviours of different kinds can be predicted with high accuracy from attitudes, subjective norms and perceived behavioural control. The attitudes, in turn, are considered to be a function of the beliefs held about the specific behaviour, as well as a function of the evaluation of likely outcomes (Ajzen, 1991). Following this, Jansen (2005) argued that attitudes towards aggression, subjective norms and perceived control, together determine staff's behavioural responses to clients who show aggressive behaviour (Jansen, 2005). Empirical evidence to support this idea derives from a study by Bowers, Alexander, Simpson, Ryan, and Carr-Walker (2007), showing that staff who interpreted aggressive behaviour of their patients as unacceptable were more inclined to use coercive measures than staff who interpreted aggressive behaviour of their clients as more or less normal.

A number of researchers have explored factors affecting staff causal beliefs about aggressive behaviour and their responses to this type of behaviour (like characteristics of staff, clients and institution). Regarding clients with ID, Hastings, Remington, and Hopper (1995) found a relationship between staff's working experience and their knowledge of the causes of aggression. That is, a higher level of working experience was related to more knowledge of the causes of aggression by staff. Emerson et al. (2000) found a relationship between personal characteristics of the client with ID (e.g., age, weight and a diagnosis of autism), resources (e.g., type of accommodation and staffing levels), the organization of these resources (e.g., planning of support for residents) and the use of several treatment strategies by staff. Also, Willems, Embregts, Stams, and Moonen (2010) found a relationship between client (age) and staff characteristics (i.e., working experience, age, educational level and gender) and intrapersonal staff behaviour. Ravoux et al. (2012) examined staff responses to adults with ID and challenging behaviours, and found that the presence of public, other clients and other staff members influenced the decision on whether to use physical restraint. The results of this study also showed that male staff tended to take the lead over female staff when clients with ID displayed aggressive behaviour.

Because the characteristics of staff (working experience, age, educational level and gender at both the individual and team level) and characteristics of the clients (i.e., age and level of ID) may affect staff behaviour, we will investigate these variables in the present study as possible factors in the explanation of staff behaviour in response to aggressive behaviour (besides their attitudes towards aggression).

The aim of the present study is to examine the relationship between staff's positive and negative attitudes towards aggression and their interventions in response to aggressive behaviour of clients with ID, taking into account several individual staff characteristics, client characteristics, and team variables. We elaborate on the work of Broers and De Lange (1996) who described different types of intervention that can be used by staff when they encounter aggression of their clients. Broers, and De Lange (1996) made a distinction between an intervention type that emphasizes personal space or boundary-setting and an intervention type that emphasizes control, such as restricting the freedom of clients or the use of coercive measures, such as restraint or separation.

We expect that a positive attitude towards aggression (i.e. aggression perceived as a way of communication of a client with ID) is positively associated with the use of types of intervention that emphasize personal space and boundary-setting, and is negatively associated with the use of types of intervention that emphasize control, such as restricting freedom and use of coercive measures. Furthermore, we expect that a negative attitude towards aggression (i.e., aggression of clients with ID perceived as offensive, destructive and intrusive) is positively associated with the use of restriction of freedom and the use of coercive measures and negatively associated with the use of provision of personal space and boundary-setting (see Broers & De Lange, 1996).

Multilevel regression analyses (Goldstein, 1991, 1995) will be used in order to examine how characteristics of individual staff members and the

context, including the staff team and the clients living in a group home, are related to the use of the different types of intervention by staff in response to aggressive behaviour of clients with ID. The following individual staff variables will be examined: gender, age, years of working experience, job position in terms of coordination and management tasks, educational level, perception of the extent to which clients show physical and verbal aggression and, most importantly, the individual staff member's attitude towards aggression. The team variables that will be examined are the average team age, the proportion of males in a team, the proportion of staff with coordination and management tasks, the team's average years of working experience, educational level, the average level of physical and verbal aggression that the team perceives, and the team's attitude towards aggression. Finally, the following client group variables will be examined: the age of the clients (juveniles or adults), the type of care (regular care or care focused on challenging behaviour), and the level of intellectual disability (mild/moderate, severe/profound).

METHOD

Respondents

The study sample comprised N = 121 direct support staff members (working in 20 different teams), employed in a facility that provides care for clients with intellectual disabilities in the Netherlands. A total of N = 111 respondents were female (92%) and 10 respondents were male (8%). The mean age of the direct support staff members was 34.5 years (SD = 9.2) and the mean years of their experience in working with people with ID was 10.5 years (SD = 7.5). A total of 78% of direct support staff members had participated in a 3 years vocational training course (or less), while 22% of the direct support staff members had participated in a 4 years vocational training course (or more). Forty-four percent of the direct support staff had a coordination or management task.

Eleven teams (55%) provided intensive care to people with ID and a high tendency for challenging behaviour (including aggression) and 9 teams (45%) provided intensive care to people with ID with a low or medium tendency for challenging behaviour. Six teams (30%) provided care to people with mild or moderate intellectual disability (35< IQ < 70) and 14 teams (70%) provided care to people with severe forms of intellectual disability (20/25 < IQ < 35). The age of the clients varied between 3 and 95 years. Five teams (25%) provided care to children living in group homes for juveniles (mean age 17 years) and 15 teams (75%) provided care to adults in group homes for adults (mean age 41 years).

MEASURES

Independent variables individual staff and team level.

Background variables.

The background variables were gender, age, years of working experience, job position and educational level. Job position had the following response options: (1) apprentice, (2) assistant group home worker, (3) group home worker, (4) senior group home worker, (5) team manager. Educational level was scored as follows: (1) primary education, (2) secondary education, (3) lower vocational training, (4) higher vocational training, (5) university. These variables were included in the analyses both at the individual staff member and team level.

Staff's perception of the extent of physical and verbal aggression in the group.

The perceived frequency of physical and verbal aggression was assessed with two items assessing the perceived physical and verbal aggression while working with the clients. Examples of physical aggression are hitting, kicking, biting and spitting. Two examples of verbal aggression are yelling and scolding. The response options were (1) never, (2) once a month, (3) once a week, and (4) daily.

Attitude towards aggression.

Attitudes towards aggression were assessed with the Attitude Towards Aggression Scale (ATAS; Jansen, 2005). The ATAS contains 18 items rated on a 5-point Likert type scale: (1) strongly disagree, (2) disagree, (3) uncertain, (4) agree, and (5) strongly agree. An example of an item is: 'aggression is an example of a non-cooperative attitude'. Jansen, Middel, and Dassen (2005) validated the ATAS for psychiatric care, and they found five factors with sufficient reliability: the extent to which aggression is perceived as offensive (7 items); as a form of communication (3 items); as destructive (3 items); as a form of self-defence (2 items); and as intrusive (3 items). In the present study (see Table 1), a principal component analysis (with varimax rotation) yielded two components: positive attitudes towards aggression (for example: 'Aggression is to protect oneself'), with a Cronbach's alpha of .60, and negative attitudes towards aggression (for example: 'Aggression cannot be tolerated'), with a Cronbach's alpha of .82. We therefore decided to use these two components in the present study.

TABLE 1 **Factors and Reliability ATAS**

		Reliability (Cronbach's α = .58)
Factor 1: Positive/Communicative		
Item	**Aggression…**	**Factor loading**
18	is the protection of one's own territory and privacy	.68
6	offers new possibilities in nursing care	.62
17	helps the nurse to see the patient from another point of view	.60
10	is to protect oneself	.56
2	is the start of a more positive nurse patient relationship	.44

TABLE 1 **Factors and Reliability ATAS**

		Reliability (Cronbach's α = .82)
Factor 2: Negative/Hostile		
Item	**Aggression…**	**Factor loading**
14	is destructive behaviour and therefore unwanted	.74
13	is threatening to damage others or objects	.69
5	cannot be tolerated	.69
12	is violent behaviour to others or self	.68
11	is always negative and unacceptable in any form	.62
9	is when a patient has feelings that will result in physical harm to self or others	.59
16	poisons the atmosphere on the ward and obstructs treatment	.57
8	is unnecessary and unacceptable behaviour	.56
4	is an impulse to disturb and interfere in order to dominate or harm others	.54
15	is expressed deliberately, with the exception of aggressive behaviour of someone who is psychotic	.51
3	is unpleasant and repulsive behaviour	.46
1	is an example of a non-cooperative attitude	.46

Independent variables client group level variables.

The client background variables that were assessed were age, type of care and perceived level of intellectual disability of the clients living in the group homes. The characteristics of the client groups were based on anonymous information about the clients who lived in the group homes of which the direct support staff members participated in this study. Based upon the age the clients, their level of ID and the type of care provided by the direct support staff, different types of group homes were distinguished: group homes consisting of mainly children versus mainly adults; group homes consisting of clients with mainly a mild/moderate level of ID versus clients with mainly a severe and/or profound level of ID and, finally, group homes for clients with a high tendency for challenging behaviour -including aggression- versus group homes for clients with a low or medium tendency for challenging behaviour.

Dependent variables use of different types of behavioural intervention.

The behavioural intervention questionnaire contains 21 items about activities that direct support staff members used in order to manage the aggressive behaviour of their clients with ID (see Table 2). An example of an item is: 'How frequently do you apply a time-out?' The answers were rated on a 5-point Likert

type scale: (1) never, (2) sometimes, (3) regularly, (4) often, (5) very often. A Principal Components analysis, with varimax rotation, yielded three factors (see table 2): providing personal space and behavioural boundary-setting (13 items, Cronbach's alpha = .93), restricting freedom (4 items, Cronbach's alpha = .72) and applying coercive measures (4 items, Cronbach's alpha = .66).

TABLE 2 **Factors and Reliability of the Activities Managing Aggressive Behaviour**

Reliability (Cronbach's α = .93)

Factor 1: Providing Personal Space and Behavioural Boundary-setting

Item	Aggression…	Factor loading
4	Support	.79
3	Comfort	.77
21	Reinforcement of positive behaviour	.77
23	Providing alternatives	.75
1	Giving information and explanation	.74
20	Clean up clutter	.73
18	Redirecting behaviour by making a joke	.72
17	Confront	.67
11	Offering an activity during aggression-eliciting situations	.67
8	Distract	.66
13	Advise to calm down	.65
10	Warn	.63
6	Talk about signals of stress with client	.62

Reliability (Cronbach's α = .72)

Factor 2: Restricting Freedom

Item	Aggression…	Factor loading
7	Time-Out	.82
5	Sending/ bringing to another place (hall)	.76
2	Isolating	.71
26	Giving a structured daily program without client input	.51

Reliability (Cronbach's α = .66)

Factor 3: Coercive Measures

Item	Aggression…	Factor loading
9	Fixation	.79
30	Using a holding technique	.69
29	Separation	.68
19	Locked the door of the house or bedroom	.67

STATISTICAL ANALYSES

In order to account for the nested structure of the data, associations between the background characteristics of the individual staff members and the teams of direct support staff members (i.e., gender, age, working experience, job position and educational level, the perceived level of aggression and attitudes towards aggression) and client characteristics (i.e., age of the clients, type of care provided, level of intellectual disability) on one hand and the use of the different types of behavioural intervention by direct support staff members (i.e., providing personal space and behavioural boundary-setting; restricting freedom; coercive measures) on the other hand, were tested in three consecutive multilevel regression analyses (Goldstein, 1995).

The data were analysed with MLwiN (Rasbasch et al., 2001). All predictors of the use of the different types of behavioural interventions of the direct support staff were divided into explanatory variables at the individual level (for example gender of a staff member) and at the contextual level (such as the proportion of males within a team). For the continuous predictors (including age, working experience, perceived frequency of aggression and the attitude towards aggression), first, the mean of the staff team was calculated (team level) and, subsequently, for each individual team member the deviation from the team average was determined (group mean centring; individual staff member level). A comparable approach was used in a study by Willems et al. (2010).

RESULTS

Multilevel regression analyses yielded three explanatory models with significantly improved model fit compared to the null model (i.e., the intercept only model that does not contain any predictors) for all types of behavioural interventions: providing personal space and behavioural boundary-setting, $\chi 2\ (21) = 74.59$, $p < .001$, restricting freedom, $\chi 2\ (21) = 57.34$, $p < .001$, and the use of coercive measures, $\chi 2\ (21) = 80.65$, $p < .001$.

Because no significant interaction effects were found that could improve model fit of the explanatory models, we present the three explanatory models without interaction terms. The variance components, the standardized regression coefficients (beta's) and chi-squared statistics for model fit of each model are presented in Tables 3, 4 and 5.

Providing Personal Space and Behavioural Boundary-Setting

Table 3 shows that 45% of the variance in providing personal space and behavioural boundary-setting was explained by predictors at the team level or context and 16% by predictors at the individual level. The significant predictors at the individual level were the number of years of working experience (b = .18) and the perceived level of verbal aggression in the group home (b = .23). The significant beta coefficients indicate that more experienced individual staff members and staff members perceiving more verbal aggression provided more personal space and behavioural boundary-setting in response to aggressive behaviour of clients with an intellectual disability.

Mean age of the team members (b = -.26) and perception of both more physical (b = .22) and verbal (b = .29) aggression by the team were significant explanatory factors at the contextual level. The significant beta coefficients indicate that a higher mean age of the team was associated with providing less personal space and behavioural boundary-setting. On the other hand, the team's perception of physical and verbal aggression in the group home was positively associated with providing personal space and behavioural boundary-setting. Finally staff working in group homes for adults provided less personal space and behavioural boundary setting (b = -.24) than staff working in other types of group homes.

TABLE 3 **Multilevel Regression Analysis of Providing Personal Space and Behavioural Boundary-setting**

Parameters	Nullmodel	Explained… Beta	Model t
Individual Variables			
Gender (0 = women, 1 = male)		.01	.13
Age		-.05	.67
Years of working experience		.18	2.40*
Education		.03	.54
Position		.05	.81
Physical aggression (perception)		.07	1.11
Verbal aggression (perception)		.23	3.73***
Negative attitude		.05	.89
Positive attitude		-.10	1.72
Team Variables			
Gender (proportion male in team)		.16	1.46
Age		-.26	2.88**
Years of working experience		.17	1.53
Education		.03	.36
Position		.04	.43
Physical aggression		.22	2.23*
Verbal aggression		.29	3.93***
Negative attitude		.13	1.41
Positive attitude		-.03	.44
Variables of the Group Home			
Mean age (1 = Youth, 2 = Adult)		-.24	2.84**
Type of care (1 = regular, 2 = challenging behaviour)		-.09	.85
Intellectual disabilities (1 = mild/moderate 2 = severe/profound)		-.25	1.88
Variance			
Context level		.360	.000
Individual level		.445	.320
Explained Variance			
Context level		45 %	
Individual level		16 %	
Deviance	280.032	205.442	
X^2 (df = 21)		74.59***	

N = 121 staff, N = 20 teams, N = 220 clients
*p < .05, **p < .01, *** p < .001

Restricting Freedom

It can be derived from Table 4 that 40% of the variance in restricting freedom was explained by variables at the team level and 15% by variables at the individual level. At the individual level, only perceived verbal aggression proved to be significant (b = .27). Individual staff members perceiving more verbal aggression more often used interventions that restricted the freedom of clients.

Significant variables at the team level were the proportion of male staff in a team (b = -.53), the proportion of staff with coordination and management tasks (b = .76), the team's perception of physical (b = .29) and verbal aggression (b = .38), and the level of intellectual disability of the clients in the group home (b = .51). Teams with a higher proportion of male staff less frequently used interventions that restricted the freedom of clients. In contrast, teams including more staff with coordination and management tasks, teams that perceived more physical and verbal aggression, and teams serving clients with more severe levels of ID more often used an intervention type that restricted the client's freedom.

TABLE 4 **Multilevel Regression Analysis of Restricting Freedom**

Parameters	Nullmodel	Explained… Beta	Model t
Individual Variables			
Gender (0 = women, 1 = male)		.02	.24
Age		.04	.63
Years of working experience		.04	.44
Education		-.06	.99
Position		.12	1.64
Physical aggression (perception)		.03	.51
Verbal aggression (perception)		.27	4.16***
Negative attitude		.10	1.62
Positive attitude		.08	1.22
Team Variables			
Gender (proportion male in team)		-.53	3.53***
Age		-.14	1.11
Years of working experience		.25	1.69
Education		.16	1.38
Position		.76	5.26***
Physical aggression		.29	2.06*
Verbal aggression		.38	3.75***
Negative attitude		.23	1.76
Positive attitude		-.10	1.16
Variables of the Group Home			
Mean age group (1 = youth, 2 = adult)		.12	1.01
Type of care (1 = regular, 2 = challenging behaviour)		-.15	1.04
Intellectual Disabilities (1 = mild/moderate, 2 = severe/profound)		.51	2.72**
Variance			
Contextual level		.224	.029
Individual level		.319	.237
Explained Variance			
Contextual level		40 %	
Individual level		15 %	
Deviance	237.320	179.982	
X^2 (df = 21)		57.34***	

N = 121 staff, N = 20 teams, N = 220 clients
*p < .05, **p < .01, *** p < .001

Use of Coercive Measures

Table 5 shows that 66% of the variance in the use of coercive measures was explained by factors at the contextual level and 8% by factors at the individual level. At the individual level, age (b = -.16) and negative attitudes towards aggression (b = .15) were significant. Older aged staff members less often used coercive measures than younger staff members. A more negative attitude towards aggression was associated with more frequent use of coercive measures.

The following factors were significant at the team level: the proportion of male staff (b = .26), the working experience of the team (b = .63), the team's perception of physical (b = .64) and verbal (b = .18) aggression and negative attitudes towards aggression of the team (b = .72).

The following variables were significant at the client group level: mean age of the clients in the group home (b = .51), type of care provided by the team (b = -.37) and level of intellectual disability (b = .30). Teams with a higher proportion of male staff and more experienced teams more frequently used coercive measures. The perception of more physical and verbal aggression in the group home was associated with a more frequent use of coercive measures. Teams with more negative attitudes towards aggression more frequently used coercive measures. Staff working in group homes for adults more often used coercive measures than staff working in group homes for juveniles. Teams working with clients having more severe levels of intellectual disability used more coercive measures. Finally, staff teams providing care that was focused on the regulation of challenging behaviour less frequently used coercive measures than did staff providing regular care.

TABLE 5 **Multilevel Regression Analysis of Using Coercive Measures**

Parameters	Nullmodel	Explained… Beta	Model t
Individual Variables			
Gender (0 = woman, 1 = male)		-.03	.47
Age		-.16	2.50*
Working experience		.09	1.50
Education		-.04	1.26
Position		.06	1.04
Physical aggression (perception)		.07	1.33
Verbal aggression (perception)		-.01	.24
Negative attitude		.15	3.04**
Positive attitude		.02	.32
Team Variables			
Gender (proportion male in team)		.26	2.80**
Age		-.14	1.90
Working experience		.63	7.15***
Education		-.09	1.35
Position		.12	1.44
Physical aggression		.64	7.91***
Verbal aggression		.18	2.99**
Negative attitude		.72	9.56***
Positive attitude		.11	1.65
Variables of the Group Home			
Mean age (1 = youth, 2 = adult)		.51	7.51***
Type of care (1 = regular, 2 = challenging problems)		-.37	4.37***
Intellectual disabilities (1 = mild/moderate, 2 = severe/profound)		.30	2.74**
Variance			
Contextual level		.320	.000
Individual level		.166	.129
Explained Variance			
Contextual level		66 %	
Individual level		8 %	
Deviance	175.842	95.191	
X^2 (df = 21)		80.65***	

N = 121 staff, N = 20 teams, N = 220 clients
*p < .05, **p < .01, *** p < .001

DISCUSSION

In the present study, the relationship between direct support staff's attitudes towards aggressive behaviour of clients with ID and the use of different types of behavioural interventions were examined in a dynamic working context, accounting for both client and team characteristics. The results of the study support the expected relationship between negative attitudes towards aggression and subsequent staff behaviour. We found that negative attitudes towards aggression within a team were strongly associated with more frequent use of coercive measures. These negative attitudes towards aggression of the team proved to be a substantially more powerful explanatory factor for the use of coercive measures than the negative attitude of individual staff members.

It appears that 'the team' has an important role in the determination of the type of intervention that is used in response to aggressive behaviour of clients with ID. For providing personal space and behavioural boundary-setting as well as for restricting freedom, the amount of variance explained by the team-level variables (characteristics of the team or residential setting) was three times larger than the amount of variance explained by individual staff members' characteristics (i.e., years of work experience, kind of vocational training, proportion of staff with coordination and management tasks, gender and age). For using coercive measures, the team-level variables even accounted for a large percentage of 66% of the variance (versus only 8% in case of individual staff characteristics).

According to Wanless and Jahoda (2002), there is a dynamic interaction between staff and clients with ID. Hastings and Remington (1994) found that staff behaviour and client's challenging behaviours influence each other reciprocally. Individual characteristics of the staff members and clients, as well as the working context (type of organisation, managing style), were found to have an impact on staff behaviour (Embregts, Didden, Huitink, & Schreuder, 2009; Emerson et al., 2000; Hastings et al., 1995; Ravoux et al., 2012; Watts, Reed, & Hastings, 1997; Willems et al., 2010). The results of the current study suggest that the context of the team in which interactions between staff and clients with ID are embedded is strongly related to the type of intervention used in response to aggressive behaviour of clients with ID. It is an important finding that the impact of team-level factors is three times larger than the impact of individual-level factors, because interventions usually aim to improve individual staff members' contact with clients with ID and their aggressive behaviour instead of targeting the context of the staff team in which these interactions take place. Farrell, Shafei, and Salmon (2010) developed a model for training staff-client interactions, and suggested that challenging behaviour should be considered as a product of several intertwined factors: the actors involved and the situation in which the behaviour occurs, including its physical environment, working practices and (team) culture. The team level variables that were found to be important in the current study can be regarded as belonging to this type of contextual variables.

According to Allen (1999), interventions that are implemented without taking the working context (like the team-level variables) into account cannot be effective. This working context can be described as a social network in which professionals influence each other by their attitude, subjective norms, values and behaviours. This is in line with our finding that the team or the direct working context is a relatively powerful explanatory factor for the type of behavioural intervention that is used in response to aggressive behaviour of clients with ID.

Thus, negative attitudes towards aggression within the team appear to be a more powerful explanatory factor of the use of coercive measures than the attitude of individual staff members. It is not unlikely that the shared norms and values and the culture within a team are responsible for the strong associations that were found between the team level variables and the types of behavioural intervention used. Ajzen (1991) described 'the subjective norm' as the perception of general social pressures from important others to perform or not to perform a given behaviour. In line with this description, Hastings, and Remington (1994) argued that the informal staff culture is the most influential external source of rules: "A group of staff working regularly together typically develops ways of dealing with incidents of such behaviour, so that all are clear about their roles" (p. 287). Noone, Jones, and Hastings (2003) investigated

the influence of the informal staff culture on the perceptions of subsequent incidents of challenging behaviour in a group of apprentices, and found that the prevailing group perception of the challenging behaviour of clients with ID is likely to influence opinions provided by individual group members. According to Doosje, Ellemers, and Spears (1995) individuals in natural social contexts do not always have a free hand in what and how they perceive their environment. Rather, natural groups are often constrained by the consensual 'social reality' of the status hierarchy. The studies mentioned above support the idea that the informal staff culture is quite determining for staff members' behaviour, as is also indicated by the results of the current study.

In the present study, a positive attitude towards aggression proved to be unrelated to the intervention behaviour of staff members. A possible explanation can be found in the study by Baumeister, Bratslavsky, Finkenauer, and Vohs (2001). These authors described that in many different situations, bad events, moods, negative emotions, unfriendly or conflicting interactions, and negative, conflicting behaviours have stronger and more lasting consequences for feelings and behaviour than comparable good events and interactions. The current study's finding that negative attitudes towards aggression (i.e., aggression that is experienced by staff as hurtful or intrusive) is stronger related to staff behavioural interventions than positive attitudes (i.e., aggression that is experienced as positive behaviour, for instance, as a form of communication) adds to the findings of Baumeister and colleagues (2001).

Characteristics of individual staff members that were found to be related to their behavioural interventions were working experience and age. Young staff members, with less working experience, more frequently restricted the freedom of their clients with ID or more often used coercive measures than their older and more experienced colleagues. These findings are in line with results from several studies in which was found that younger staff members with less working experience had more difficulty in understanding the underlying causes of aggression of their clients with ID (Emerson et al., 2000; Fish & Culshaw, 2005; Grey, McClean, & Barnes-Holmes, 2002; Hastings et al., 1995, 1997; Hastings & Brown, 2002; McKenzie, Sharp, Paxton, & Murray, 2002).

At the team level, gender, age, working experience and the proportion of staff with coordination and management tasks proved to be significant factors in the explanation of behavioural interventions. Teams with more male staff members used more coercive measures than teams with less male staff members. The impact of working experience at the team level is striking. Highly experienced teams more frequently restricted the freedom of their clients than less experienced teams. At the individual level, however, more experienced staff members provided more personal space and behavioural boundary-setting than less experienced staff members. Teams with more work experience may be more inclined to stick to norms that no longer fit the continuously changing care context. This is in line with the observation that teams composed largely of older staff members provided less personal space and behavioural boundary-setting than did teams composed largely of younger staff members. However, younger staff members tended to more frequently use coercive measures, even though one could expect them to stick less to 'old' measures. Notably, teams composed largely of younger staff members did not use coercive measures more often than teams composed largely of older staff members. Therefore, the mixture of age within a team (instead of the teams that consisted of mainly older or younger team members) seems to be a factor in the determination of the team members' behavioural responses to aggressive behaviour of clients with ID. More research is needed, however, to replicate these findings and to find out more about these effects of the age of team members.

The proportion of staff with coordination and management tasks within a team was also found to be associated with intervention behaviour. Teams with a relatively high proportion of members in a management or coordination position more frequently restricted the freedom of their clients. These staff members are responsible for coordinating the care of their clients with ID and they are among the first to be held responsible in case something goes wrong. The burden of their responsibility may lead to a more conservative attitude and subsequently to the exercise of more control in order to prevent aggressive behaviour of the clients they are responsible for. Emerson et al. (2000) also found that a greater number of

senior staff members in a team was positively associated with the increased use of coercive measures, such as physical restraint and seclusion.

Finally, of the client characteristics, level of intellectual disability, age of the clients and type of care were related to the type of behavioural interventions reported by staff members. These results concur with the findings that were reported by Emerson et al. (2000), who also found a relationship between personal characteristics of clients and the behaviour of staff. It is remarkable that in the current study the perception of a more severe level of intellectual disability was associated with more measures that restricted the freedom of clients and a greater use of coercive measures. These results indicate that staff working with clients with severe and/or profound intellectual disabilities use more intrusive interventions than staff working with clients with mild intellectual disabilities. Similar results were reported in a study by Willems et al. (2010), where staff exhibited more controlling behaviour in response to clients with a more severe form of ID, which was attributed to their increased need of control and support from staff compared to clients with mild or moderate intellectual disabilities. Another explanation for the greater use of restriction and coercive measures in clients with more severe levels of intellectual disability is that staff members may find it more difficult to adequately interpret intentions of clients with more severe intellectual disabilities and limited means of communication. By using more restriction and coercion, the opportunity for clients to make decisions themselves may be ignored by staff. This can be a target for improvement, as the provision of opportunities for choice has been suggested to be an important component of interventions that aim to reduce the aggressive behaviour of clients with ID (Dyer, Dunlap, & Winterling, 1990; McKnight & Kearny, 2001).

The current study has a number of limitations. A first limitation pertains to the definition of aggression in the questionnaire, which may have been interpreted in different ways by staff. As mentioned before, aggression is a multi-dimensional concept (Megargee, 2011; Ramirez & Andreu, 2006) that also depends on the social standards of the observer and the aggressor (i.e., the individual staff member and the client with ID, respectively). Different interpretations of the instructions in the questionnaire may have led to discrepancies in the information provided by the staff members. Post-hoc analyses, however, did show significant intraclass correlations of .18 for verbal aggression and .49 for physical aggression, which indicates that there was some degree of agreement about the kind of aggression perceived by staff members. Nevertheless, a recommendation for future research is to make use of a more objective measure for assessing the frequency of aggression, for example, by means of behavioural observation.

Furthermore, the four types of intervention, as defined by Broers, and De Lange (1996), were not fully replicated in the current study. Providing personal space and boundary-setting coincided, whereas these types were considered as two separate styles in the theoretical model of Broers, and De Lange (1996). Obviously, in daily care for clients with ID it is difficult to make a sharp distinction between providing personal space and boundary-setting . Although at first sight providing personal space and boundary-setting might seem incompatible, these interventions tend to be combined often by staff in response to aggressive behaviour of people with ID. In other words, in practice, these types of behavioural interventions often co-occur.

CONCLUSION

This study is the first to find empirical support for the existence of a relationship between a negative attitude towards aggression of staff and the use of coercive measures, whereby the attitude of a team seems to have a stronger relationship with staff behaviour than the attitude of individual staff members. This finding is in line with another important result of this study, namely, that the working context of the team seems to be a more important factor for the use of behavioural interventions in response to aggression of people with ID than the individual staff characteristics. Therefore, interventions that aim to enhance quality of care for people with ID should target the negative attitude towards aggression on a team level, because the team attitude seems to be the

most important predictor of coercive measures. As the relationship between individual team members and clients is embedded in a working context where the attitude of a team seems to be an important factor, a training that is aimed at altering or reducing staff's behaviour towards aggression should address the whole team. Nevertheless, one should also pay attention to the individual characteristics of the persons in a team (age, work experience, gender, and attitude) and the characteristics of the groups they are working with (age of the clients, level of intellectual disability, kind for care provided) in order to be able to adequately manage aggressive behaviour in people with ID. Further investigation is necessary, not only to replicate the findings of the current study, but also to examine, for instance, how the attitudes towards aggression of staff can be influenced in order to improve the behavioural interventions of staff in response to aggression of people with ID.

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III

CORRELATES OF DIRECT CARE STAFFS' ATTITUDES TOWARDS AGGRESSION OF PERSONS WITH INTELLECTUAL DISABILITIES

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III CORRELATES OF DIRECT CARE STAFFS' ATTITUDES TOWARDS AGGRESSION OF PERSONS WITH INTELLECTUAL DISABILITIES

ABSTRACT

Background and aim: To explain direct care staff's attitudes (responsive or rejecting) towards aggression of clients with intellectual disability (ID), data were collected about client characteristics as well as individual and team characteristics of 475 direct care staff members, working in 71 teams.

Method and results: Multilevel analyses revealed that a positive team climate was positively associated with both a rejecting and responsive attitude towards aggression. Senior staff members and females showed a less responsive attitude towards aggression, whereas a relatively high percentage of females in a team and a positive attitude towards external professionals were associated with a more responsive attitude towards aggression. Unexpectedly, staff who experienced less verbal and/or physical aggressive incidents of their clients with ID showed a more rejecting attitude towards aggression . Finally, characteristics of the clients with ID accounted for the largest part of the variance in the attitude towards aggression of direct care staff, in particular psychiatric diagnoses.

Conclusions and implications: Further research is necessary in order to understand how team processes affect the attitude towards aggression of direct care staff. Further it is recommended to provide direct care staff with knowledge about mental disorders in clients with ID.

KEYWORDS
Attitudes towards aggression, direct care staff, team climate, attitudes towards external professionals, intellectual disabilities.

INTRODUCTION

The aggressive behaviour of clients with intellectual disabilities (ID) "challenges" the relationship between direct care staff and their clients. The prevalence of clients with ID who show aggressive behaviour can be high (Crocker et al., 2006; Lowe et al., 2007; Tenneij & Koot, 2008; Tyrer et al., 2006) and creates a significant clinical concern in the care for people with ID. There are several factors that complicate the care for or treatment of clients with ID who present aggressive behaviour problems.

First, aggressive incidents may lead to threatening and sometimes even dangerous situations for the clients with ID themselves, for other clients and direct care staff. For clients there is a risk of psychological problems (Fish & Culshaw, 2005; Hawkins, Allen & Jenkins, 2005; Bakker, Nieuwenhuizen, Negenman, Embregts, & Frederiks, 2014) and physical injuries, especially due to restrictive measures, such as restraint by direct care staff in order to control clients' aggressive behaviour and to avoid danger and harm for themselves or other clients with ID (Duxbury, Aiken, & Dale, 2011). For direct care staff the exposure to aggression can be associated with negative psychological consequences, including high levels of stress and symptoms of burnout (Hastings & Brown, 2002; Hensel, Lunsky, & Dewa, 2012; 2013; Mills & Rose, 2011; Rose, Mills, Silva, & Thompson, 2013).

Another complicating factor in care or treatment is that aggression can be a reason for placement breakdown, especially when services have a poorer overall quality (Allen, 1999; Broadhurst & Mansell, 2007; Phillips & Rose, 2010). To be treated in different settings with new direct care workers can be very stressful for a client with ID and a negative indicator for building meaningful relationships, including client-staff relationships.

A final complicating factor in the treatment of clients with ID who present aggressive behaviour problems is that interventions often turn out to be less effective for persons with outward directed aggression (Heyvaert, Maes, Van Den Noortgate, Kuppens, & Onghena; 2012). Harvey, Boer, Meyer and Evans (2009) also found that individuals with ID and disruptive and aggressive behaviour generally responded the least to interventions targeting behaviour change. As a result clients receive less opportunities to achieve treatment goals and develop better social, emotional and practical skills (Grey & Hastings, 2005).

Because of the aforementioned complicating factors, it is important to strengthen the quality of positive contacts between direct care workers and their clients with ID, and to reduce the rate of aggression by using effective and non-intrusive behavioural interventions. Positive behavioural interventions, which account for the function of aggression and subsequently teach the client (functionally equivalent) adaptive skills, are considered the most effective interventions (Didden, Korzelius, van Oorsouw, & Sturmey, 2006; Grey & Hastings, 2005; Harvey et al., 2009; Heyvaert et al., 2012). The role of care workers as 'lay therapists' in for instance cognitive-behavioural therapy for anger management with individuals with ID is promising (Willner et al., 2013). However, these interventions require a range of complex staff skills to cope with the emotions and cognitions of the people with ID (Willner et al., 2013). It is therefore important to examine the complex and dynamic interactions between direct care staff and their clients.

Knotter, Wissink, Moonen, Stams and Jansen (2013) found that the type of intervention used in response to clients with ID who presented aggressive behaviour was strongly related to the context of the team of direct care staff in which interactions between an individual staff member and a client with ID are embedded. At the individual level, one of the factors that influences the interactions between a direct care staff member and clients with ID is the way the direct care staff member perceives and subsequently interprets aggressive behaviour. A responsive attitude towards aggression reflects that direct care staff interpret the function behind the aggressive behaviour from their clients with ID, that is, as a form of communication. A rejecting attitude from direct

care staff towards the aggressive behaviour of their clients reflects that staff interpret aggression as violent and intrusive behaviour, which is evaluated by direct care staff as an unacceptable manifestation of aggression (Jansen, Dassen, Burgerhof, & Middel, 2005). A rejecting attitude towards aggression (i.e., aggression is perceived as offensive, destructive and intrusive) proved to be related to the use of restrictive measures (Knotter et al., 2013). Furthermore, results from Knotter et al. (2013) indicated that a rejecting attitude towards aggression within a team of direct care staff members was even more strongly associated with frequent use of restrictive measures applied by individual team members. The rejecting attitude towards aggression of the team proved to be a substantially more powerful explanatory factor for the use of restrictive measures than the rejecting attitude of individual direct care staff members.

Additionally, the 'climate' of a team may influence the attitudes of direct care staff members towards aggressive behaviour of their clients with ID and, subsequently, the type of interventions used by them. Team climate can be measured by applying the Team Climate Inventory (TCI; Anderson & West, 1999), which assesses participative safety, support for innovation, vision, and task orientation. In several studies this instrument was applied to examine team climate within teams working in health care settings (for instance: Anderson & West, 1998, Ouwens, Hulscher, & Wollersheim, 2009, Rose, Ahuja, & Jones, 2006; Strating & Nieboer, 2009). While Strating and Nieboer (2009) focused on the relation between team climate and team performance, in the study of Rose, Ahuja and Jones (2006) a positive relation was found between team climate and the general psychological wellbeing of direct care staff.

Besides team climate, another important factor that can be associated with the attitudes towards aggression is the team members' experienced support from external professionals (e.g., support from GPs, psychiatrists, psychologists and therapists). Rose et al. (2006) investigated not only the association between team climate and psychological wellbeing of team members, but also the association between team climate, psychological wellbeing and the attitudes of direct care staff towards external professionals. The level of support from, for instance, other direct care staff members (indicating a positive team climate) and external professionals may decrease the level of stress of direct care staff. According to Rose (1999) social support is functioning like a 'social buffer', and this may influence the psychological wellbeing of direct care staff. Rose et al. (2006) indeed found a positive correlation between a positive direct care staff attitude towards external professionals (the 'social buffer') and improvement of their mental health (using the Care Staff Attitude Questionnaire; CSAQ). Their results underline the importance of the association between psychological wellbeing of direct care staff, team climate and experienced support from external professionals.

We therefore investigated whether team climate and the attitudes towards external professionals were related to the attitudes towards aggression of all direct care staff members working in a team. More knowledge about the importance of these factors for the explanation of direct care staff attitude towards aggression of their clients with ID could provide opportunities to improve the quality of relationships between individual direct care workers and clients with ID.

We took into account several individual direct care staff characteristics, client characteristics, and team variables. We expected a positive team climate and a positive attitude towards external professionals to be positively associated with a responsive attitude towards aggression (i.e., aggression perceived as a normal or functional reaction, as a way of communication from a client with ID) and to be negatively associated with a rejecting attitude towards aggression (i.e., aggression of clients with ID perceived by direct care staff as a hurtful reaction, evaluating aggression for instance as offensive, destructive and intrusive). Furthermore, we expected a negative team climate and a negative attitude towards external professionals to be positively associated with a rejecting attitude towards aggression and negatively associated with a responsive attitude towards aggression.

Multilevel regression analyses (Hox, 2010) were used to examine how characteristics of individual direct care staff members and the context in which they operated, including characteristics of the team and clients living in group homes, were related to direct care staff's attitude towards aggression.

Participants

Participants in this study were 475 direct care staff members (working in 71 different teams) employed in seven different facilities in The Netherlands that provide care for people with intellectual disabilities. See for more information the descriptive statistics of the participants in Table 1 a total of 67,8% of the participants were female employees. Participants ranged in age from 17 to 68 years (M = 32.85, SD = 10.75). The minimum amount of professional working experience was less than a year and the maximum was 40 years (M = 8.89, SD = 7.93). A total of 180 of the participants were senior group workers (37,9 %), 188 participants (39,6%) were junior group workers, and 46 (9,7%) were assistant group workers.

TABLE 1 **Descriptive statistics of the participants (N = 475)**

Variables	N	M	SD	%
Gender				
Male	153			32.2
Female	322			67.8
Age groups		**32.85**	**10.75**	
<30 years	256			53.9
31-39 years	91			20.2
40-49 years	76			16.2
>50 years	47			9.8
Professional experience		**8.89**	**7.93**	
< 5 years	222			46.7
6-10 years	110			23.1
11-15 years	60			12.6
16-20 years	38			7.9
> 20 years	45			12.4
Job position				
Assistant	46			9.7
Group worker	188			39.6
Senior group worker	180			37.9
Education				
< 4 years vocational training	212			44.6
> 4 years vocational training	263			55.4
Experienced verbal aggressive incidents				
Daily	336			70.7
Once a week	102			21.5
Once a month	35			7.4
Never	2			.4
Experienced physical aggressive incidents				
Daily	98			20.6
Once a week	185			38.9
Once a month	149			31.4
Never	43			9.1

In table 2 client variables are shown. A total of 299 (62,9%) participants provided care to people with mild intellectual disabilities (IQ: 55 < IQ > 70) and 167 (37,1%) participants provided care to people with severe forms of intellectual disabilities (IQ: 20/25 < IQ > 55). A total of 54,1% (N = 257) of the participants provided care in living groups composed of adults and elderly people with a minimum age of 18 to a maximum age of 79 years, and 45,9% (N = 218) of the participants provided care in living groups composed of children, adolescents and young adults with a minimum age of 8 years to a maximum age of 23 years. The group size varied from a minimum of 3 clients to a maximum of 36 clients (living in separate apartments with a shared community room). The group environment varied from institutional care to a community setting (apartments). Direct care staff members were trained in dealing with psychiatric disorders, mental health problems, and they were used to work with clients with different social problems (see Table 2).

TABLE 2 **Descriptive statistics of the participants (N = 475)* about their clients**

Variables	N	%
Level of ID		
Mild to borderline ID (55 < IQ > 70)	299	62.9
Severe forms of ID (20/25 < IQ > 55)	176	37.1
Age		
Adults / Elderly (18-79 years)	257	54.1
Youth (8-23 years)	218	45.9
Psychiatric diagnoses (DSM-IV-TR)		
Pervasive Developmental Disorder	447	94.1
Attachment problems	322	67.8
Attention Deficit/Hyperactivity Disorder	242	50.9
Mood Disorder	171	36
Psychotic Disorder	126	26.5
Anxiety Disorder	115	24.2
Personality Disorder	113	23.8
Oppositional Defiant Disorder	67	16
Tic Disorder	27	5.7
Social problems		
Addiction related problems	131	27.6
Family-child relation problems	70	14.7
Abuse	71	14.9
Mental health problems		
Physical impairments	84	17.7
Epilepsy	63	13.3

*N = 475 participants provided care to clients with ID.

Procedure

The seven Dutch organizations were informed by a letter about the aim of the study and the research design, and after approval by the board, managers selected 87 teams and arranged contact with the researchers who made an appointment for joining a team meeting. Only teams in which all members agreed to participate in the study were included. An informed consent procedure was used. Inclusion criteria for participating in the project were that the participants had to work in teams that provided around the clock care for children, adolescents, adults and/or elderly persons with an intellectual disability and had experienced verbal (for instance yelling) or physical (for instance hitting) aggressive incidents in their work with their clients. The questionnaires used in this study were distributed and gathered by the first author of the study and by students during team meetings. There were no minimum or maximum criteria for the time of working experience of direct care staff. A total of 16 teams (18%) did not cooperate in this study. Reasons for non-cooperation were lack of time or problems to make an appointment for joining a team meeting with the researchers and the students. Anonymous client data were provided by a questionnaire sent per e-mail or were collected in a telephone interview.

MEASURES

Independent variables

Direct care staff characteristics.

The assessed direct care staff characteristics were: gender, age, years of working experience, position in the team and educational level. For position in the team the response options were: (1) apprentice, (2) assistant group home worker, (3) junior group home worker and (4) senior group home worker. For educational level the response options were: (1) primary education, (2) secondary education, (3) lower vocational training, (4) higher vocational training, (5) university.

Client characteristics.

Client characteristics were: group size, age, level of intellectual disability, psychiatric diagnoses assessed by a professional (trained psychologist and/or psychiatrist), and other problems of clients living in the group homes (for instance, addiction related problems, sexual abuse, family-child relationship problems, delinquency). The characteristics of the client groups were based on anonymous information derived from a seven item questionnaire filled in by a consulting psychologist, or a manager and/or the direct care staff. Age consisted of five response options: (1) children 0-12 years, (2) youth 12-18 years, (3) young adults 18-30 years, (4) adults 30-65 years) and (5) elderly (65+). The level of ID was categorized into five response options (DSM-IV-TR): (1) borderline intelligence 71 < IQ > 90, (2) mild ID 55 < IQ > 70, (3) moderate ID 35 < IQ > 55, (4) severe ID 20 < IQ > 35 and (5) profound ID < 20). Based upon the mean age of the clients in a group home and of their mean level of ID, we distinguished between group homes hosting mainly youth versus those hosting mainly adults, and group homes hosting mainly clients with borderline intelligence and mild ID versus group homes mostly hosting clients with a moderate, severe and/or profound level of ID.

Direct care staff's perception of the extent of aggression in the group.

Aggression was assessed with two items addressing the perceived physical and verbal aggression. For instance: 'How often do you experience physical or verbal aggression in your daily work?' Examples of physical aggression were hitting, kicking, biting and spitting. Two examples of verbal aggression were yelling and scolding. The response options were (1) never, (2) once a month, (3) once a week, and (4) daily.

Team climate.

Team climate as perceived by direct care staff members was assessed by using the Dutch translation of the shortened Team Climate Inventory (TCI; Anderson & West, 1998; 1999). The original 38-item version of the TCI was shortened by Kivimäki and Elovainio (1999) into a 14-item version, which demonstrated

acceptable reliability and validity, and was translated into Dutch by Strating and Nieboer (2009), who demonstrated satisfactory reliability for all scales. The short version of the TCI has a four-factor structure: participative safety (4 items; for example: 'In this team people keep each other informed'), support for innovation (3 items: 'In this team we take time needed to develop new ideas'), vision (4 items; 'In this team we have agreement with the objectives') and task orientation (3 items; 'In this team we are prepared to basic questions'). The 14 questions are rated on a 5-point response scale varying from 'strongly disagree' to 'strongly agree', in which higher scores indicate a better or more desirable team climate. In the present study, the reliability for all four scales was acceptable, ranging from α = .74 to α = .82. The total score was acceptable with α = of .85.

Direct care staff's attitude towards external professionals.

Direct care staff's attitude towards external professionals were assessed by means of the Dutch version of the Care Staff Attitudes Questionnaire (CSAQ; Rose et al., 2006), which was translated by the authors of the current study. The CSAQ contains 20 statements rated on a 5-point Likert type scale varying from (1) strongly disagree to (5) strongly agree. Although the questionnaire has not been extensively validated by Rose, Ahuja and Jones (2006), they found that the internal consistency of the scale was acceptable (α = .81). Contrary to a bipolar construct, as found in the study of Rose et al. (2006), using a principal component analysis, we found a 2-dimensional construct: a positive attitude towards professionals (8 items; for example: 'I find the advice given to me by professionals helpful'; α = .78), and a negative attitude towards professionals (10 items; for example: 'Professionals do not take care staff seriously'; α = .92). We used these two constructs in the present study. Two items were removed because of low factor loadings (< .20), resulting in in a scale of 18 items (see Table 3). The resulting 2-factor model showed a close fit to the data: RMSEA = .057, CFI = .95 and TLI = .94.

TABLE 3 **Factors and reliability of the Care Staff Attitudes Questionnaire (CSAQ)**

Reliability (Cronbach's α = .78)

Factor 1: Positive Attitude towards external professionals

Item		Factor loading
1	I find the advice given to me by professionals helpful.	.69
2	I find that there is not a problem of confidentiality amongst professionals.	.57
3	I feel listened to by professionals.	.76
8	I find that professionals are approachable.	.38
10	If a problem arises at work it is dealt with appropriately.	.54
12	An 'us and them' situation does not exist amongst care staff and professionals at work.	.48
13	Professionals are aware of the risk that care staff are under whilst working with their clients.	.57
14	When care staff report an incident it is investigated immediately.	.45

Reliability (Cronbach's α = .92)

Factor 2: Negative attitude towards external professionals

Item	Aggression…	Factor loading
4	I would like professionals to spend more time on the unit.	.58
5	I find that professionals do not listen to me in staff meetings.	.77
6	I cannot talk to anyone at work if I am experiencing some difficulty in my job.	.84
7	I would not like professionals to attend staff meetings.	.90
11	I do not discuss my problems with professionals because it will not remain confidential.	.88
15	Professionals place too much emphasis on observational work.	.38
16	I find that someone has to get physically hurt before professionals will do anything about the problem.	.53
17	I find that professionals do not take the time to conduct an investigation when there is a high incidence of sick leave amongst care staff.	.64
19	Professionals do not take care staff seriously.	.88
20	Professionals are not aware that morale is low amongst care staff.	.80

Dependent variables

Attitudes towards aggression.

Attitudes towards aggression was assessed with the Attitude Towards Aggression Scale (ATAS; Jansen, Middel, & Dassen, 2005). The ATAS contains 18 items rated on a 5-point Likert type scale varying from (1) strongly disagree to (5) strongly agree. Jansen et al. (2005) validated the ATAS for use in psychiatric care, and they found a five-factor structure with sufficient reliability: the extent to which aggression is perceived (1) as offensive (7 items); (2) as a form of

communication (3 items); (3) as destructive (3 items); (4) as a form of self-defence (2 items); and (5) as intrusive (3 items). In the study of Knotter et al. (2013) a principal component analysis yielded two components: a responsive attitude towards aggression (for example: 'Aggression is to protect oneself') and a rejecting attitude towards aggression (for example: 'Aggression cannot be tolerated'). In the present study we found satisfactory reliabilities for both scales: 'responsive attitude towards aggression' α = .66 and 'rejecting attitude towards aggression' α = .80.

STATISTICAL ANALYSES

In order to take into account the nested structure of the data, a two-level model was applied, with individual direct care staff nested in teams providing care to groups of clients. The associations between the background characteristics of the individual staff members, the teams of direct care staff members and client characteristics on the one hand and the attitudes towards aggression (responsive and rejecting) on the other hand were tested in multilevel regression analyses (Hox, 2010).

Data were analysed using SPSS-20. All explanatory variables were modelled as fixed factors, and divided into explanatory variables at the individual level (for example gender of a direct care staff member) and at the contextual level (such as the proportion of males within a team). For all continuous explanatory variables (i.e., age, working experience, perceived frequency of aggression, attitude towards external professionals, team climate), the means were calculated (at the team level) and, subsequently, the deviation from team averages was computed for each individual team member (group mean centring; the individual direct care staff member level). A similar approach was used in studies by Willems et al. (2010) and Knotter et al. (2013).

RESULTS

Table 4 provides the results from a stepwise multilevel regression analysis explaining responsive attitude towards aggression, which yielded a significant model: X^2 (df = 9, N = 475) = 60.320, p < .001. The individual direct care staff level accounted for 5% of the variability, while the contextual level (team and client group) accounted for 8% of the variability. Thus, a total of 13% of the variance in responsive attitude towards aggression was explained by the model.

Significant results were found at the level of the individual staff member with respect to gender (b = -.11) and position in the team (b = -.10), indicating that females and senior staff members showed a less responsive attitude towards aggression. Team climate (b = .11) and attitude towards external professionals (b =.10) were also found to be significant. The more an individual team member indicated the team climate to be positive or an individual team member reported to have a positive attitude towards external professionals, the higher the level of responsive attitude towards aggression was.

At the team level a significant result was found for gender (b = .20), which meant that a relatively high percentage of females in a team was related to a more responsive attitude towards aggression.

At the client group level a significant result was found for age of the clients (b = -.15) and ADHD (b = .15), Oppositional Defiant Disorder (b = -.15) and Personality Disorder (b = -.14). If clients with ID were younger (children, youth and young adults) direct care staff showed a less responsive attitude towards aggression. ADHD, besides the intellectual disability of clients, was related to a more responsive attitude towards aggression, and Oppositional Defiant Disorder (ODD) and Personality Disorder (PD) were related to a less responsive staff attitude towards aggression.

TABLE 4 **Multilevel regression analysis of responsive attitude towards aggression (ATAS)**

Results of best fitting model step wise regression modeling for all sample: Beta, t-scores, deviance, Chi Square

Parameters	Nullmodel	Explained… Beta	Model t
Individual staff level			
Female (0 = male, 1 = female)		-.11	-2,23*
Senior group worker		-.10	-2,34*
Team climate		.11	2,66*
Attitude external professionals		.10	2,30*
Team level			
Gender (proportion female)		.20	3,86***
Client group			
Age (0 = adult, 1 = youth)		-.15	-2,73*
ADHD		.15	2,75*
Oppositional Defiant Disorder		-.15	-2,99**
Personality disorder		-.14	-3,16**
Variance			
Contextual level	.08	.00	
Individual level	.92	.87	
Explained variance			
Contextual level		8%	
Individual level		5 %	
Deviance	1340.579	1280.259	
X2 (df = 9)		60,320***	

N = 475 Staff, N = 71 teams
*p < .05, **p < .01, *** p < .001

In Table 5 the results from a stepwise multilevel regression analysis are presented, predicting a rejecting attitude towards aggression, which yielded a significant model: X^2 (df = 8, N = 475) = 51.950, p < .001. The model accounted for 2% of the variance at the individual level and 13% at the contextual (team and client group) level.

Significant variables at the individual level were frequency of physical aggression perceived by individual team members (b = -.10) and the team climate (b = .10), which indicated that direct care staff members who perceived a lower frequency of physical aggression showed a more rejecting attitude towards aggression of their clients with ID. A more positive team climate, as perceived by individual team members, was related to a more rejecting attitude towards aggression.

The only significant variable at the team level was team climate (b = .11), meaning that a more positive team climate, as perceived by the whole team, was related to a more rejecting attitude towards aggression.

At the client group level the following variables were found to be significant: anxiety disorder (b = - .24), tic disorder (b = .41), family-child relationship problems (b = -.20), addiction related problems (b = .23) and abuse (b = .16). Addiction related problems, tic disorder and abuse were associated with a more rejecting attitude towards aggression of direct care staff. Anxiety disorder and family-child relationship problems were related to a less rejecting attitude towards aggression.

TABLE 5 **Multilevel regression analysis of the rejecting attitude towards aggression (ATAS)**

Results of best fitting model step wise regression modeling for all sample: Beta, t-scores, deviance, Chi square

Parameters	Nullmodel	Explained… Beta	Model t
Individual staff level			
Freq. Physical aggression		-.10	-2,40*
Team climate		.10	2,40*
Team level			
Team climate		.11	2,40*
Client group			
Anxiety disorder		-.24	-4,50***
Tic disorder		.41	6,13***
Family-child relationship problems		-.20	-2,51**
Addiction related problems		.23	4,39***
Abuse		.16	2.44*
Variance			
Contextual level		.17	.04
Individual level	.83	.81	
Explained variance			
Contextual level		13 %	
Individual level		2 %	
Deviance	1307.249	1265.300	
X^2 (df = 8)		51.949***	

N = 475 Staff, N = 71 teams
*p < .05, **p < .01, *** p < .001

DISCUSSION

The aim of this study was to examine the associations between team climate, the attitude of direct care staff towards external professionals and direct care staff's responsive and rejecting attitude towards aggression, taking into account several individual direct care staff characteristics, team variables and client characteristics.

Team climate

The current study results underline the importance of a positive team climate in relation to the attitude of direct care staff towards aggression of their clients. A positive team climate was related to both a responsive and rejecting attitude towards aggression at the level of individual team members. A positive team climate was also related to a rejecting attitude towards aggression of teams as a whole. A positive team climate affected a responsive attitude of direct care staff towards aggression, which was in accordance with our expectation. However, the association between a positive team climate and a rejecting attitude towards aggression at both the level of individual team members and for teams as a whole was not expected.

Thus, on the one hand a positive team climate was related to a responsive attitude towards aggression of individual team members, which confirms the results of the study by Rose et al. (2006), who found that a positive team climate was related to improved psychological well-being of direct care staff. It is possible that a positive team climate may lead to improved mental health and less stress by staff (Buljac-Samardžic, 2012). This may lead to a better understanding and/or interpretation of the antecedents and function of the aggressive behaviour of clients with ID by direct care staff, which reflects a more reflective attitude towards aggression. On the other hand, we also found an association between a positive team climate and a more rejecting attitude towards aggression of individual team members and for teams as a whole. This is interesting, because the rejecting attitude towards aggression of teams as a whole influences the way direct care staff behave in their daily work with their clients with ID (Knotter et al., 2013). A possible

explanation might be that a positive team climate seems necessary to work safely. For instance, teams working with clients with ID showing aggressive behaviour often encounter dangerous and harmful situations for themselves, their colleagues and other clients with ID living in the same group. Members of a team strongly depend on each other in such situations. Furthermore, aggressive behaviour perceived by teams as a harmful reaction and therefore as a form of destructive, offensive or intrusive behaviour means that the aggressive behaviour of the client with ID constitutes a threat for the team, which creates fear and hostility toward the aggressive client with ID and vice versa (Brewer, 1999). This could explain the association between a positive team climate and a rejecting attitude towards aggression of teams as a whole. It also underpins the importance of team education about the possible antecedents and/or consequents of the aggressive behaviour of clients with ID (applying functional behaviour analysis, see for instance Paclwaskyj, Kurtz and O'Connor, 2004), besides the need of coaching to establish a positive team climate.

External professionals

Expert knowledge about the strengths and impairments of clients with ID and explanations about the function of the aggressive behaviour may influence the way direct care staff members perceive aggression and the way they behave. Our results show that access to immediate and valuable expert advice and support is related to a more responsive perception of direct care staff members of the aggressive behaviour of their clients with ID. However, no association was found at the team level, which reflects the less significant role external professionals may play in influencing the attitude towards aggression of teams as a whole. A possible explanation could be that in the Netherlands communication between direct care staff and external professionals often occurs at an individual level and not at a team level. Therefore, individual direct care staff members may experience difficulties in sharing the information (and subsequent attitude) gained in those contacts with other team members.

Direct care staff characteristics

Individual direct care staff characteristics, such as gender and job position, explained a larger part of the variance in a responsive attitude towards aggression than in a rejecting attitude towards aggression. This difference reflects that for a rejecting attitude towards aggression the impact of the context is greater than the impact of individual staff characteristics.

Female direct care staff members had a less responsive attitude towards aggression than their male colleagues. This result is in line with the study of Jansen, Middel, Dassen and Reijneveld (2006). They found that male nurses in psychiatric wards showed a more responsive attitude towards aggression (i.e., aggression perceived as a form of communication), whereas their female colleagues showed a more rejecting attitude towards aggression (i.e., aggression perceived as destructive). According to Jansen et al. (2006) this difference could be explained by the fact that in general female nurses feel more intimidated by verbal and physical aggression than male nurses. It seems likely that men, more than women, perceive the relational dimension of aggressive behaviour in a more positive way because they tend to feel less intimidated and afraid.

At the team level, however, more females relative to males in a team predicted a more responsive attitude towards aggression of the direct care staff. Differences between females and males at the individual and team level are striking, and were also found in the study of Knotter et al. (2013). Teams with relatively more men more frequently used coercive measures. Different findings at the individual level (individual male care workers showing a more responsive attitude towards aggression compared to their female counterparts) and at a team level (a higher proportion of male team members predicting a less responsive attitude towards aggression) may be explained by the fact that, according to a study of Yamagishi and Mifune (2009), men more than women have a strong tendency to behave cooperatively in their team, and therefore perceive aggression of their clients with ID as threatening for the team coherence, which may influence their attitude towards aggression and the type of intervention they choose as a reaction to it. It is a finding that merits further study.

At the individual level, the association between the frequency of physical aggression of clients with ID and a rejecting attitude towards aggression of direct care staff is remarkable as well. Direct care staff who perceived a lower frequency of physical aggression showed a more rejecting attitude towards aggression than direct care staff who perceived a higher frequency of physical aggression. Howard, Rose and Levenson (2009) found an association between a higher level of violence and lower levels of fear of violence by direct care staff. They also found that direct care staff encountering higher levels of violence were all trained in managing aggressive behaviour. Training may have altered the perception of their ability to deal with violence (Hastings & Brown 2002).

It is possible that direct care staff working with clients with ID showing more physical aggression would receive more expert information about and coaching to deal with the antecedents and consequences of aggressive client behaviour, and would therefore be more experienced in dealing with aggression than direct care staff who encounter less physical aggression. This might explain the association between more physical aggression and a less rejecting attitude towards aggression of direct care staff. Another plausible explanation could be a selection effect, indicating that the personality traits of direct care staff members who choose to work with clients with ID and severe behaviour problems, such as physical aggression, differs from their colleagues. Perhaps they feel less intimidated, which may result in a less rejecting attitude towards aggression.

Client characteristics

Characteristics of the clients with ID living in the different group homes and/or apartments were also associated with the attitude towards aggression of direct care workers. Especially the comorbidity of psychiatric disorders, besides the level of intellectual disability, explained a large part of the variance in the attitude towards aggression of direct care staff.

The psychiatric diagnose ADHD for instance was associated with a responsive attitude towards aggression and on the other hand the psychiatric diagnoses ODD and PD were associated with a less responsive attitude towards aggression of direct care staff.

Tic disorder was associated with a more rejecting attitude towards aggression and anxiety disorder was associated with a less rejecting attitude towards aggression. A possible explanation for differences in association between client's psychiatric diagnoses and the attitude of direct care staff towards their clients who present aggressive behaviour may be the way direct care staff perceive the different behaviour symptoms of the psychiatric disorders. For instance the behaviour symptoms of ODD, PD and tic disorder are associated with behaviour symptoms that can be very intrusive for direct care staff, and may therefore lead to negative emotional feelings influencing the way direct care staff members perceive the aggressive behaviour of their clients with ID (Chester, 2010; Došen, 2007). Direct care staff showed a less rejecting attitude towards aggression for clients with ID diagnosed with an anxiety disorder. Perhaps clients with ID who experience severe anxiety problems provoke feelings of sympathy and empathy by direct care staff, which may result in a less rejecting attitude towards aggressive behaviour.

Another explanation might be that psychiatric disorders are often under-diagnosed or diagnostically overshadowed in people with ID (Chester, 2010; Christensen, Baker & Blacher, 2013; Došen, 2007). For that reason direct care staff may have little knowledge about the nature of most psychiatric disorders. This could also be an explanation for the fact that in our study ADHD was associated with a responsive attitude towards aggression of direct care staff. ADHD proved to be, apart from autism and attachment problems, the most common clinical diagnosis of the clients with ID involved in this study. It is plausible to suggest that direct care staff had more common knowledge about this disorder.

Amount of explained variance

The total amount of variance explained in the attitude towards aggression of direct care staff is not high, which may explained by the complex and multi-causal nature of these attitudes (Sameroff, 2010). It is possible that there are still unknown factors not taken into account in this study, which may influence the attitude towards aggression of direct care staff, such as

organisational standpoints, the team manager's style of leadership or the way problems are solved within teams (Buljac-Samardžic, 2012).

Limitations of this study

Self-report questionnaire data have particular limitations, such as a degree of subjectivity. To illustrate, self-report about the actual frequency of the physical and verbal aggression of clients with ID may be filtered through interpretation. It is therefore recommended to use video feedback besides questionnaires when analysing the influence of individual and collective direct care staff behaviour and client aggressive behaviour (see for instance, Embregts, 2002). In addition, the participating staff members indicated that the answer options measuring the frequency of verbal and physical aggression were too broad. Therefore, it is recommended to use measurements with more defined answer options, like the Modified Overt Aggression Scale (MOAS, Oliver, Crawford, Reece, & Tyrer, 2007), besides video observation, in order to measure the frequency of aggressive behaviour in future studies. Another limitation is that the questionnaires assessing team climate were distributed during team meetings. It is possible that team members answered in a social desirable way despite the instructions given during these team meetings in which anonymity and the importance of individual answering was emphasized.

In this study we decided to use no exclusion criteria based on the total amount of working experience of direct care staff because we aimed to examine the attitude towards aggression of all staff members working in the same team. Notably, it is plausible to suggest that staff who have working experience of less than a year with a client with ID have more difficulties in interpreting the signals and function of the aggressive behaviour than staff who have had the opportunity to work (much) longer with the same client. However, in this study working experience did not explain differences in the responsive or rejecting attitude towards aggression of direct care staff.

A final limitation is that the prevalence and diversity of psychiatric diagnoses is high in people with ID, which negatively affects interrater reliability of assessments of psychiatric disorders in patients with ID (Došen, 2007). For this study psychiatric classifications were provided by a clinician without a double check. Therefore, information on mental disorders should be handled with care.

CONCLUSION

Our results suggest that a positive team climate is not a guarantee for a team's responsive attitude towards the aggressive behaviour of their clients with ID. A team with a positive team climate may show a rejecting attitude towards aggression. It is therefore important to expand our knowledge of the influence of team processes on direct care staff's attitude towards aggression and their behaviour in order to develop effective training and coaching programs.

The team's contact with external professionals proved to be associated with a more responsive attitude towards aggression of individual team members, but surprisingly no association was found at the team level, meaning that external professionals play a minor role in developing a more responsive or less rejecting team attitude towards aggression. It is recommended to pay more attention to how external professionals influence the team's attitude towards aggression of their clients with ID. In the Netherlands, for instance, the advice of external professionals, such as psychiatrists and psychologists, is often given to an individual direct care worker, and perhaps it is better to provide advice to the whole team.

In further research paying attention to gender differences in teams is recommended especially in teams working with clients who show high rates of aggression. For the clinical practice it is important to acknowledge that when teams do not encounter high levels of aggression, and for that reason receive no coaching or information in order to deal with aggressive behaviour of their clients, they may develop a more rejecting attitude towards aggression. It is therefore recommended that those teams also receive refresher courses and if necessary coaching to deal with aggressive behaviour of clients with ID from the perspective of prevention.

Finally, client characteristics accounted for the largest part of the variance in both a responsive and rejecting attitude towards aggression of direct care staff. It is therefore recommended to provide direct care staff with current knowledge about psychiatric diagnoses in clients with ID and of effective interventions to target psychiatric disorders.

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IV

TRAINING DIRECT CARE STAFF WORKING WITH PERSONS WITH INTELLECTUAL DISABILITIES AND CHALLENGING BEHAVIOUR: A META-ANALYTIC REVIEW STUDY

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IV TRAINING DIRECT CARE STAFF WORKING WITH PERSONS WITH INTELLECTUAL DISABILITIES AND CHALLENGING BEHAVIOUR: A META-ANALYTIC REVIEW STUDY

ABSTRACT

Two separate meta-analyses were conducted to examine (1) the effects of training programs on the behaviour of direct care staff working with clients with ID who present challenging behaviour problems (predominantly aggressive and violent behaviour), and (2) the effects of staff training on the challenging behaviour of their clients with ID. A 3-level random effects model was used for both meta-analyses to account for both within and between study variance. Results showed that staff training was moderately effective in changing staff behaviour, but no convincing evidence was found for an effect on the reduction of challenging behaviour of persons with ID. The type, content and goal of training did not moderate the effects of staff training, whereas sample and study characteristics (e.g., sex participant or year of publication) did. The way a training program is delivered to staff may be much more important than characteristics of a training.

KEYWORDS

Meta-analysis, staff training, challenging behaviour problems, persons with intellectual disabilities

INTRODUCTION

Direct care staff working with persons with Intellectual Disabilities (ID) and severe challenging behaviour problems (predominantly aggressive and violent behaviour) have an important and difficult job. They have to strike the balance between preventing harm and providing opportunities for growth to adequately deal with or reduce challenging behaviour. To prevent harm to themselves, to other clients or to colleagues, and to create a safe environment, staff workers may perceive they have no alternatives than to use restrictive interventions, especially when they encounter physical aggression. Unfortunately, these interventions can be counterproductive in the long term, especially when no efforts are made to provide a functional analysis of the clients' behaviour and to provide treatment for the challenging behaviour (Hastings & Remington, 1994).The use of restrictive practices can cause persons with ID to feel unsafe, frustrated, angry, stressed and anxious, and can also cause negative experiences for staff (Fish & Culshaw, 2005; Hawkins, Allen, & Jenkins, 2005). Therefore, training programs have been developed to teach direct care staff workers how to treat or to safely prevent, manage or cope with behaviour that "challenges". The current meta-analytic study summarizes the extant knowledge on the effectiveness of these training programs that may be client-behaviour oriented or staff-behaviour oriented.

Taylor (2002) described four broad categories of methods that can be applied by staff in order to change challenging (aggressive) behaviour of persons with ID. First, strategies aimed at managing rather than reducing the challenging behaviour problems (reactive strategies). Second, ecological interventions, such as changing environmental conditions that may be antecedents of the occurrence of challenging behaviour. Third, procedures based on learning theory (contingency management) to promote new behaviours, which displace or replace challenging behaviour through the introduction of new contingencies of reinforcement and/or punishment (for instance, extinction or time-out). At last, positive programming procedures or treatment programs to teach the client new skills, abilities and strategies to cope with their environment without the need to rely on challenging behaviour (for instance, skills training, relaxation training or psycho-educational approaches).

Contrary to the methods described by Taylor (2002), which are in particular focused on changing the challenging behaviour of clients with ID, Hastings (2010) described two broad perspectives that are primarily focused on staff. The first focuses on changing the behaviour of direct care staff. This implies that the studied training targets staff behaviour, which can be measured in terms of staff outcomes and changes in clients' behaviour (for instance, a reduction in the level of challenging behaviours). Examples are staff training in Positive Behaviour Support (PBS; Grey & McClean, 2007) or Active Support (Smith, Felce, Jones, & Lowe, 2002). The second focuses on the emotional needs of direct care staff, including stress interventions, such as an acceptance and mindfulness-based stress management training for direct care staff (McConachie, McKenzie, Morris, & Walley, 2014). Probably, a combination of both perspectives may prove to be most effective, because interactions between staff and client are thought to be bidirectional (Hastings, 2005), with challenging client behaviour being both a cause and result of problematic interactions.

Staff behaviour (for instance, the way they provide corrective feedback to their clients with ID) and their negative attitude and communication towards their clients with ID were found to be related to aggressive behaviour of clients (Embregts, Didden, Huitink, & Schreuder, 2009). Aggressive incidents often result in staff considering themselves a victim of aggression or feeling threatened by clients (Tenneij & Koot, 2008), which may further affect their attitude and behaviour towards the challenging behaviour of clients with ID. In line with the idea that clients' behaviour impacts the behaviour of staff, Willems, Embregts, Hendriks, and Bosman (2016) found that the challenging behaviour of clients with ID was associated with less friendly and more assertive control by staff.

Staff training with a sole focus on changing staff behaviour in order to reduce the challenging behaviour of their clients may not be enough. Given that clients influence direct care staff behaviour in (bidirectional) interactions with their clients, it is also important to focus on the emotions, beliefs and psychological resources of direct care staff in training programs when they encounter dangerous situations in their work, especially when they encounter severe physical aggressive incidents on a daily basis.

Stoesz and colleagues (2016) conducted a review of 32 studies examining strategies for training school staff to address challenging behaviours of students with ID. They described three different domains of staff training, namely, training staff to reduce, manage, or cope with challenging behaviour. They concluded that the research they reviewed provided no evidence on whether it is better to focus on the reduction of the frequency of challenging behaviour or to train staff adaptive (stress) management strategies in order to manage or to cope with the impact of the challenging behaviour. They did find, however, in line with a meta-analysis of staff training by Van Oorsouw, Embregts, Bosman and Jahoda (2009), that a combination of training methods, such as workshops and practical skill development and on-the-job feedback on performance of specific skills, seemed the most effective way of staff training.

Besides a focus on training content or training methods, it may also be important to focus on the different learning styles (training goal) of direct care staff. Farrell, Shafei and Salmon (2010) developed a theoretical model of staff-client interaction in other domains of learning than skill acquisition alone. They assumed that staff training, first, has to focus on teaching staff to understand how challenging behaviour influences their attitudes, values, emotions and competencies before starting an intervention in which staff need to learn new skills. In line with this, Williams, Dagnan, Rodges and McDowell (2012) concluded in their review that it may be important to focus not solely on necessary knowledge or training skills, but also on the attributions of staff regarding their clients who show challenging behaviour.

Van Oorsouw, Embregts, and Bosman (2013) conducted a narrative review of 11 studies on staff training (2013), distinguishing three goals of staff training: to improve staff's knowledge, to improve skills, or to change staff's attitude towards challenging behaviour. Van Oorsouw and colleagues (2013) found that the main focus of most of the training programs was to improve staff knowledge and skills, without focusing on staff attitudes towards challenging behaviour. None of the included studies paid attention to the perspectives of clients in the evaluations of staff training programs, and only six studies assessed treatment effectiveness based on changes in clients' challenging behaviour. No conclusions about the most effective form of training for staff who encounter challenging (aggressive) behaviour of clients with ID could be drawn from the review by Van Oorsouw and colleagues (2013). Moreover, it was not clear from their review whether staff training can positively affect the challenging behaviour of clients with ID.

In sum, information about effective staff training has increased over the years, but it is still important that we expand our knowledge on which types of training may yield the greatest effects on staff's behaviour towards challenging incidents in their work. And finally, does staff training indeed change the way clients with ID behave, such as reducing the rate of challenging incidents? Therefore, the current meta-analytic study first focuses on training effectiveness of direct care staff when they experience challenging incidents in their work, and second on a change in clients with ID showing challenging behaviour problems.

Aim of this study

This study consists of two multi-level meta-analyses, accounting for both within and between study variance in effect sizes, which prevents loss of information, and increases statistical power to examine overall effect sizes and moderators. The first meta-analysis examines the effects of staff training on the behaviour of direct care staff working with clients with ID who present challenging behaviour problems. The second meta-analysis examines the effects of staff training on the behaviour of their clients with ID. With the multilevel meta-analyses the magnitude of effects (training effects) across all eligible intervention studies were studied. Additionally, we examined if the goal of the training (attitude, knowledge or staff skills), training content (to prevent and manage CB or to cope with the impact of CB for staff), type of outcome (the frequency and severity of challenging behaviour or developing skills for their clients with ID), study characteristics (for instance, post-test, follow up and quality), intervention characteristics (for instance, training format), assessment characteristics (for instance observation or questionnaire) and characteristics of the participants (staff or clients) moderated the effects of the training programs.

METHOD

Inclusion Criteria

The following inclusion criteria were formulated to select studies for the two meta-analyses. First, the study had to focus on a training for direct care staff working in a care facility (around the clock-care provided in residential or community or a combination of both settings) for people with ID. We excluded studies focusing on parents, educators, and staff working in a different field, such as staff working in psychiatry or working with elderly people without an intellectual disability. Second, we included only studies on staff training with a relation to the challenging behaviour of their clients with ID. Challenging behaviour has been defined as: "Culturally abnormal behaviour(s) of such an intensity, frequency or duration that the physical safety of the person or others is likely to be placed in serious jeopardy, or behaviour which is likely to seriously limit use of, or result in the person being denied access to ordinary community facilities" (Emerson, 1995). Third, the studies had to have a control group in order to compare the results of the training in the experimental group with the results of a control group (in which they received no training, treatment/ care as usual or an alternative established training). Finally, the studies had to report about the effects of the training on staff or clients' outcomes in a way that made it possible to calculate an effect size.

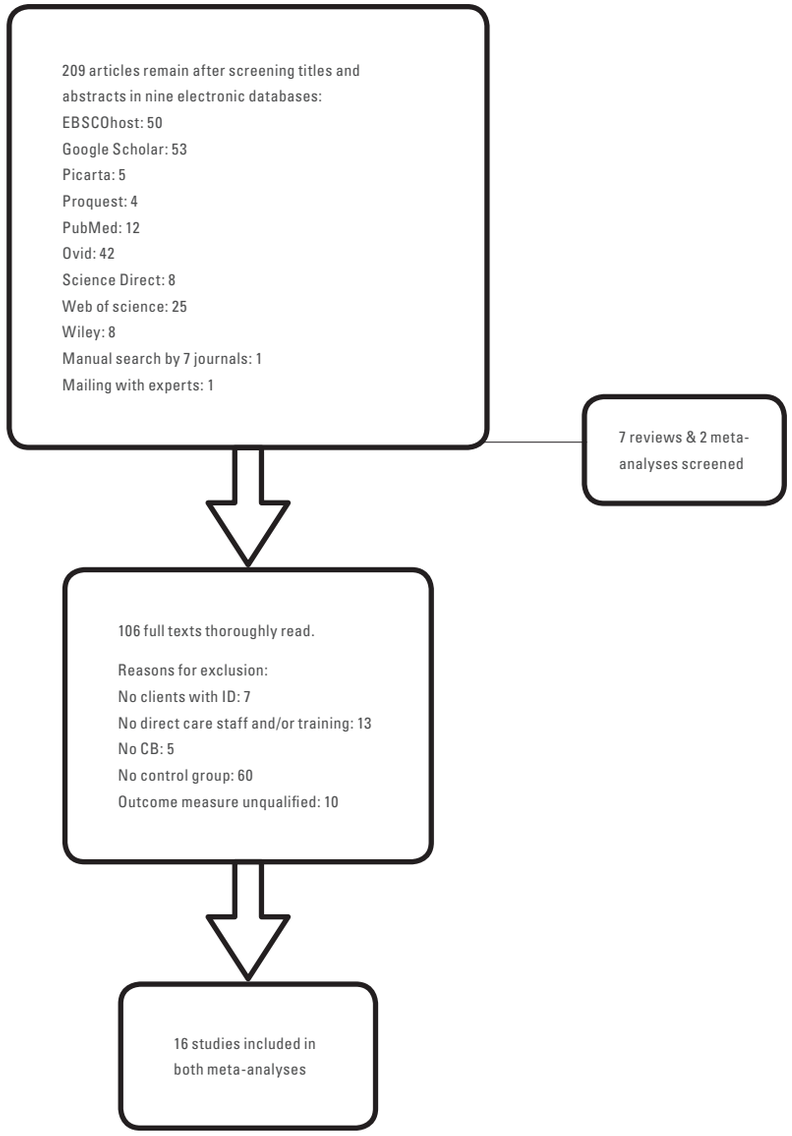
Selection of studies

The search time frame was until August 2016. We set no limits concerning the publication year. The data search strategy (conducted by the first author) consisted, first, of an electronic data search in nine databases: EBSCOhost, Google Scholar, Picarta, Proquest (including dissertations and Theses), PubMed, Ovid (including Medline, ERIC & PsychINFO), Science Direct, Web of Science and Wiley. After that, a manual search followed of six specialised journals and the references of eight reviews and two previous meta-analyses on this topic (Campbell, Robertson, & Jahoda, 2014; Cox, Dube, & Temple., 2015; Fix & Fix, 2013; La Vigna & Willis, 2012; MacDonald & McGill, 2013; Scheltes & Loohuis, 2008, Stoesz et al., 2016; Van Oorsouw, Embregts, Bosman, & Jahoda, 2009; Van Oorsouw et al., 2013; Williams, Dagnan, Rodgers, & McDowell, 2012). The six specialised journals, selected because of their relevance to the topic under study and their primary focus on the care for people with ID, were the American Journal on Intellectual and Developmental Disabilities (previously titled: American Journal on Mental Retardation), Journal of Applied research in Intellectual Disabilities, Journal of Intellectual and Developmental Disabilities, Journal of Intellectual Disability Research, International journal of Developmental disabilities (previously titled: British journal of Developmental Disabilities) and Research in Developmental Disabilities. A final part of the search strategy consisted of mailing experts and asking for any preliminary results of still running projects or unpublished studies. Only papers written in English or Dutch were included.

Search string

The search string included four combined variables (in both American and British spelling variations): training, staff, clients with ID and challenging behaviour. For training the following keywords were used: training, intervention, workshop or education. For staff the following key words were used: staff, direct care staff, care workers, social workers, nurses, personal, employee. For persons with ID the following keywords were used: clients, persons, individuals with intellectual, developmental, learning disabilities or retard*, handicap*/ mental handicap*. For challenging behaviour the following keywords were used: aggress*, challenging behav* and behav* problems. Some databases provide the opportunity to search in specific parts of the publications (i.e., in the title, abstract, or key-words). The first author conducted the screening and selection process. When in doubt, the second, third or last author was consulted and a consensus decision was made after discussion.

FIGURE 1 **Flow chart of the search strategy.**



Search strategy

Figure 1 presents a flow chart of the search strategy. The initial search resulted in 209 potential articles after screening the title. This was narrowed down to 106 articles after further inspection of the abstracts and removing double article titles from the result list of the nine electronic databases. After further inspection of the method and results sections another 90 articles were excluded. Finally, a total of 11 studies (with 86 effect sizes and N = 1079 participants) met the inclusion criteria for the meta-analysis of staff outcomes, and a total of 7 studies (with 40 effect sizes and 580 participants) met the inclusion criteria for the meta-analysis of client outcomes.

Appendix 1 shows the study characteristics of the included studies in the meta-analysis examining the behaviour of direct care staff. In six of the 11 training programs, learning staff more about the definition and causes of challenging behaviour of their clients with ID and adequate approaches is considered as a central part of the program. Giving staff insight in their stress management, emotional intelligence, and training skills to decrease their stress levels are a central part of seven of the 11 training programs. Finally, five training programs did use information on both the challenging behaviour of clients with ID and staff characteristics, such as attributions, or skills how to adequately manage or cope with the challenging behaviour of clients with ID.

Appendix 2 shows the study characteristics of the included studies in the meta-analysis of client outcomes. Learning staff more about the definitions of choice and how to develop a choice program for clients with ID is a central part of two of the seven training programs. Two other programs especially focused on learning staff more about the importance of daily, meaningful activities for clients with ID, while the remaining two training programs focused on the importance of learning staff skills to assess the behaviour of their clients in order to develop and implement an adequate support plan. All six training programs have in common that they aim to learn staff techniques and skills how to develop an adequate support plan, although the focus of the support plans differs among programs. Finally, one training program focused on improving the quality of staff-client interactions.

Coding the Studies and Potential Moderators

The first author coded the included studies according to the suggestions of Lipsey and Wilson (2001). All studies (study 1, staff and 2, clients) were double coded by the first and third author of this manuscript. The inter-rater reliability (after consensus meeting) proved to be perfect, with a 100% agreement between the two coders. The potential moderators were grouped into training goal and content (study 1), type of outcome (study 2) and intervention, study, sample, and assessment characteristics (both studies). Some variables (training format, techniques and content and type of outcome) were first coded as a string variable.

Training goal study 1 (staff).

We distinguished three types of training goals for staff, namely knowledge, skills and attitude. This refers to a theoretical model of staff training from Farrell et al. (2010), who distinguished between three domains of staff learning; attitude, knowledge and skills. Van Oorsouw et al. (2013) distinguished the same three domains of staff training in their review.

Training content study 1 (staff).

For training content, we distinguished between two types of staff training, namely, first to prevent and manage challenging behaviours (like aggression) and, second to cope with the impact of the challenging (aggressive) behaviour based on the two broad perspectives about staff training from Hastings (2010). Stoesz and colleagues (2016) classified articles also according to Hastings' (2010) perspectives about training into (1) reduce; (2) manage and/or (3) cope with the challenging behaviours.

Type of Outcome study 2 (clients).

In relation to clients' behaviour two types of outcomes were distinguished based on the four categories of methods to deal with CB from Taylor (2002), namely: staff teaching clients with ID adaptive behaviour (such as providing more opportunities for clients to make choices in their daily program); or as a result of staff training (ecological changes), decreases in the frequency or severity of CB of clients with ID. The type of outcome of clients' behaviour could moderate the effect size of staff training according to a meta-analysis of Van Oorsouw and colleagues (2009).

Study characteristics (both studies).

We coded several study characteristics that may influence the effect sizes for both studies. First, the impact factor of the journal in which the study was published (continuous variable) was coded, as a first indication of study quality (Saha, Saint, & Christakis, 2003). Second, the year of publication (continuous variable) was coded, because we expected the quality of studies to improve through the years, as the statistical and methodological knowledge have increased in social research over the last decades.

Third, the quality of the study (categorical variable) was coded by using the study quality checklist from Van der Stouwe (2016). Van der Stouwe (2016) constructed a new study quality coding list, based on the Quality Assessment Tools for Quantitative Studies (QATQS, Thomas, Ciliska, Dobbins, & Micucci, 2004), the Quality Index (QI, Downs, & Black, 1998), and the Cochrane Collaboration's tool for assessing risk of bias (Higgins et al., 2011). The quality checklist consists of 15 items assessing publication status (one item), selection bias, study design, blinding/dependence of authors, outcome measures, attrition and dropout, intervention, and sample description (each consisting of two items). Every item had four response options, with the least study quality assigned zero, and the maximum study quality assigned 3 points. Studies could therefore receive a score between 0 and 45 points for study quality.

In the present study, scores ranged from 13 to 25 points (mean = 20.90, median = 20) for the meta-analysis of staff behaviour, and for clients outcomes the scores of the quality index ranged from 12 to 23 points (mean = 19,63, median = 20). Overall the studies included in both meta-analyses varied between low (12 points for instance the study of Ip & Szymanski, 1994) and medium (25 points for instance the study of McConachie et al.,

2014) quality. The distribution of the scores of the quality index was not normally distributed. We therefore transformed the continuous quality checklist scores into a dichotomous variable by means of a median split, which proved to be the most straight forward (i.e., natural) cut-off point given the distribution of effect sizes: 1. medium quality (>20 points) and 2. low quality (<20 points).

Finally, the design of the study was coded (pre-post versus follow-up: studies with only pre- and post-measurement versus studies with a follow up measurement as well).

Intervention characteristics (both studies).
We distinguished two types of training format (in service or in service combined with "coaching on the job"; COJ) and two types of techniques (a single training technique or a combination of techniques) for both meta-analyses. This was done because of the findings of a meta-analysis conducted by Van Oorsouw and colleagues (2009) and a review from Stoesz and colleagues (2016), who found that training formats combined with COJ and a combination of training techniques, such as feedback, instruction and practicum, could moderate the effect size of a training. Third, we coded the duration of the training (in hours) as a potential moderator. Stoesz and colleagues (2016) in their review also investigated the influence of the training's duration, and found evidence that although extensive training (> 5 days) may lead to better results, better results can also be accomplished with moderate (1-5 days) and brief (< 1 day) training. So, the duration of a training might moderate the effect size. Finally we coded the time of the total intervention (including post versus follow-up period) and attrition.

Assessment characteristics (both meta-analyses).
Assessment of the effect of the training was coded in terms of observational measures, such as video recordings of staff-client interactions and questionnaires, such as the Challenging Behaviours Attributions Scale (CHABA; Hastings, 1997). See appendix A.1 & B.1 for the included measurements per study.

Sample characteristics (meta-analysis 1, staff).
Sample characteristics coded were the proportion of males, age, gender, working experience of direct care staff, the setting (only residential or both residential and community settings), age of clients (adults and mixed age, such as youth and adults) and level of ID (mild and more severe forms of ID) of the clients. It seems important to include sample characteristics, because the frequency and severity of challenging behaviour (e.g., aggressive behaviour) can vary by different sample characteristics. For instance, aggressive behaviour (as part of CB) is often a reason for referral to residential services of persons with ID. The prevalence rates and severity of aggression may therefore be higher in residential settings than in community settings (Taylor, 2002).

Sample characteristics (meta-analysis 2, clients).
The following sample characteristics were coded for the second meta-analysis: proportion male clients, age (continuous variable) and level of ID (mild and more severe forms of ID).

Calculation and Analysis
Effect sizes were transformed into Cohen's d by using the calculator of Wilson (2013) and formulas described by Lipsey and Wilson (2001). Most d-values were calculated based on reported means and standard deviations. If authors only mentioned that the relation was not significant, the effect size was coded as zero (Lipsey & Wilson, 2001).

For both meta-analyses, we centred continuous variables around their mean, and transformed categorical variables into dummy variables. Extreme effect size values (> 3.29 SD from the mean; Tabachnik & Fidell, 2013) were adjusted by winsorizing these outliers. In winsorization procedures extreme values are replaced by less extreme values, effectively moving the original extreme values toward the centre of the distribution (Mulry, Oliver, & Kaputa, 2007). Three outliers were identified and were winsorized. Standard errors and sampling variance of the effect sizes were estimated using formulas by Lipsey and Wilson (2001).

In the majority of the studies, it was possible to calculate more than one effect size. That is, most studies reported on multiple outcome variables, multiple scales to assess the effect of a staff training or had multiple informants (for instance, staff and clients with ID). It is possible that effect sizes from the same study are more alike than effect sizes from different studies, violating the assumption of independency underlying classical meta-analytic strategies (Hox 2002; Lipsey & Wilson, 2001). To deal with the dependency of effect sizes, we applied a multilevel approach to the present meta-analyses as suggested by Van den Noortgate and Onghena (2003). The advantage of a multilevel approach is that it accounts for the hierarchical structure of the data, where the effect sizes are nested within the studies. Therefore, all information in the studies can be preserved and maximum statistical power is generated, which allows comprehensive moderator analyses (Assink et al., 2015).

We used a 3-level random effects model to account for three levels of variance. Level 1 is the sampling variance of the effect sizes. Level 2 is the variance between effect sizes within a study, and level 3 is the variance between studies (Wibbelink & Assink, 2015). The sampling variance for the observed effect sizes (level 1) was estimated by using the formula of Cheung (2014). Log-likelihood-ratio-tests were performed to compare the deviance of the full model to the deviance of the models excluding one of the variance parameters, making it possible to determine whether significant variance was present at the second and third level (Wibbelink & Assink, 2015). Significant variance at level 2 or 3 indicates a heterogeneous effect size distribution, meaning that the effect sizes cannot be treated as estimates of an overall (mean) effect size. In that case, we proceeded to moderator analyses, because the differences between the effect sizes may be explained by outcome, study, sample, and/or intervention characteristics. For each of the two meta-analyses, each category of the potential moderator was filled with at least three independent studies.

The two meta-analyses were conducted in R (version 3.3.1) with the metapor-package, employing a multilevel random effects model (Houben, van den Noortgate, & Kuppens, 2015; Van den Bussche, Van den Noortgate, & Reynvoet, 2009; Viechtbauer, 2010). To estimate the model's parameters the restricted maximum likelihood estimate (REML) was applied (Van den Noortgate & Onghena, 2003). The Knapp and Hartung method (2003) was performed to test individual regression coefficients of the models and for calculating the corresponding confidence intervals (see also Assink et al., 2015; Houben et al., 2015; Wibbelink & Assink, 2015). The advantage of the Knapp and Hartung method (2003) is that the chance of making Type I-errors is better under control (Wibbelink & Assink, 2015).

Publication bias

We made several efforts to prevent publication bias. For instance, by extending our search strategy to retain non-published material as well, but this could not guarantee the absence of publication bias. In order to assess the possible influence of publication bias, we performed a trim and fill procedure (Duval & Tweedie, 2000) by drawing a trim and fill plot in R (version 3.2.0) using the function "trimmfill" of the metaphor package (Viechtbauer, 2010). The trim and fill procedure corrects for funnel plot asymmetry by imputing estimated missing effect sizes that are calculated on the basis of existing effect sizes.

RESULTS

The results of each meta-analysis are described below. Table 1 shows the overall effects of staff training programs on staff behaviour and on behaviour for clients with ID.

TABLE 1 **Overall effects of staff training on staff behaviour and behaviour of clients with ID**

Outcome	*S*	*k*	Mean *d*	*95%CI*	P	level 2	level 3	%Var. Level 1	%Var. Level 2	%Var. Level 3
Staff	11	85	0.411	0.221–0.600	< 0.001***	0.006	0.080	27,4	5,04	67,6
Client	7	40	0.305	-0.103 – 0.712	0.138	0.130	0.209	11,1	34,1	54,8

Remark:
s = number of studies
k = number of effect sizes
p = *p*-level
level 2 and level 3 = variance
%variance = explained variance

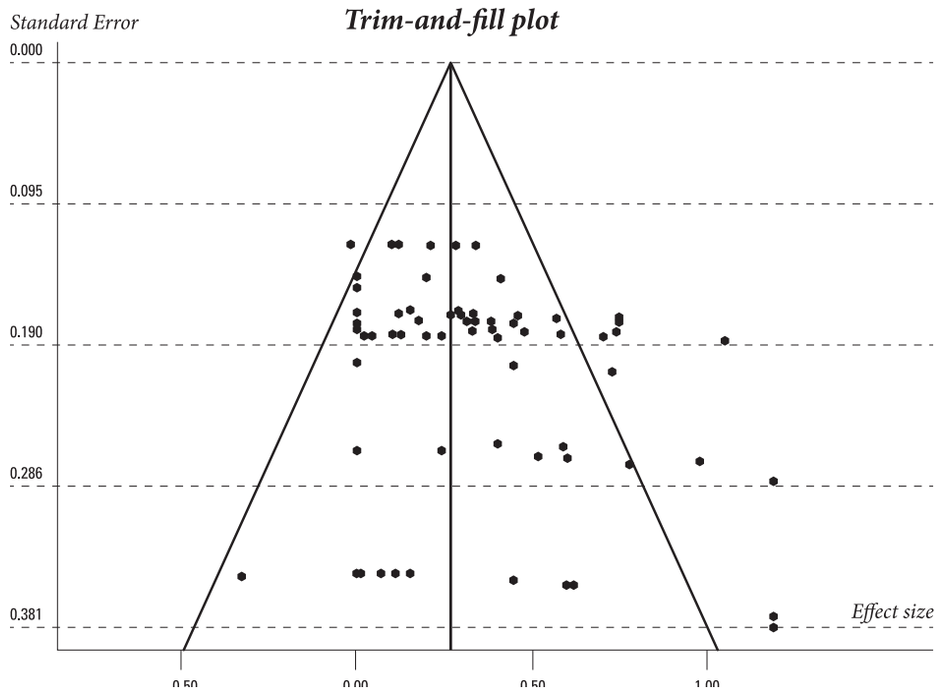
Effect training in staff behaviour

The meta-analysis of the effect of training programs on staff behaviour contained 11 independent studies (s), reporting on 86 effect sizes (k), and a total of N = 1286 subjects. The total sample consisted of n = 579 subjects in the experimental groups, and n = 707 subjects in the control groups.

Overall effect on staff behaviour

A significant medium effect (d = 0.411) of the training on staff behaviour was found, indicating that, on average, the training programs positively influenced staff's behaviour. The presence of publication bias is unlikely, as the trim-and-fill plot did not show any imputed effect sizes on the left side of the funnel (see Figure 2). Since the variance was significant at the third

FIGURE 2 **Trim-and-fill plot staff**



level, we conducted moderator analyses of outcome, training content, study, intervention, assessment and sample characteristics to examine which factors moderated the effect of training on staff's behaviour. Table 2 shows the results of these moderator analyses.

Results of moderator analyses on training for staff behaviour

Statistical power proved to be insufficient to detect small effects. Notably, age of staff just failed to reach statistical significance at p < .10 (see Table 2).

TABLE 2 **Meta-Analysis of Staff Training on Staff Outcomes**

Moderator variables	*s*	*k*	β_0 (mean *d*)	t_0	β_1	t_1	$F(df_1, df_2)$
Training goal	11	85					$F(2,83) = 0.810$
Skills			0.362	3.101**			
Knowledge			0.453	4.445***	0.091	0.976	
Attitude			0.375	3.536***	0.013	0.149	
Training content	11	85					$F(1,84) = 0.057$
Cope with CB			0.394	2.825**			
Reduce or managing with CB			0.692	2.227*	0.049	0.239	
Study characteristics							
Study quality	11	85					$F(1,84) = 2.132$
Low			0.558	4.046**			
Medium			0.297	1.460*	-0.261	-1.460	
Year of publication	11	85	0.408	4.035***	-0.012	-0.527	$F(1,84) = 0.278$
Impact factor	10	84	0.362	3.879***	-0.131	-1.045	$F(1,83) = 1.093$
Post or follow-up	11	85					$F(1,84) = 0.007$
– Post			0.409	4.218***			
– Follow-up			0.414	3.984***	0.005	0.083	
Measure	11	85					$F(1,84) = 6.523$**
– Observation			1.030	3.887***			
– Questionnaire			0.338	4.780***	-0.692	-2.554*	
Intervention characteristics							
Training hours	11	85	0.383	3.769***	-0.001	-0.957	$F(1,84) = 0.916$
Time baseline-post intervention	10	61	0.361	3.201**	-0.037	-1.110	$F(1,60) = 1.231$
Time baseline-follow up	6	24	0.243	2.561*	-0.012	-0.636	$F(1,22) = 0.405$
Attrition	10	84	0.386	4.081***	-0.002	-0.846	$F(1,73) = 0.716$
Format intervention	11	85					$F(1,84) = 0.074$
– In service			0.401	3.401**			
– In service and COJ			0.466	2.525	0.065	0.272	
Techniques intervention	10	75					$F(1,84) = 0.182$
– Instruction	11	85	0.506	2.134*			
– Combination of techniques			0.395	3.618***	-0.112	-0.427	
Characteristics direct care staff							
Percentage male staff	11	77	0.429	4.528***	2.292	2.434*	$F(1,76) = 5.927$*
Age care staff	10	74	0.379	4.597***	-0.031	-1.488	$F(1,73) = 2.215'$
Working experience staff	11	77	0.413	3.949***	0.004	0.140	$F(1,76) = 0.020$
Characteristics setting & clients							
Setting	11	85					$F(1,84) = 0.421$
– Residential			0.353	2.575			
– Mixed			0.483	3.341**	0.129	0.648	
ID clients	6	42					$F(2,40) = 0.931$
– Mild			0.369	0.879			
– Severe			0.169	0.401	-0.200	-0.337	
– Mixed			0.765	3.256**	0.395	0.788	
Age clients	6	57					$F(1,56) = 0.033$
– Adults			0.448	1.524			
– Mixed age			0.526	1.700'	0.078	0.183	

Remark:
* significant by $p < 0.05$ ** significant by $p < 0.01$ *** significant by $p < 0.001$

training goal and training content.
Regarding staff behaviour, the specific training goal (skills, knowledge, attitude) and training content (to prevent or manage CB or to cope with the impact of CB) did not moderate the effect of a training program.

study characteristics.
The following study characteristics: study quality, year of publication, impact and design of the study did not significantly moderate the effect of staff training.

intervention characteristics.
Intervention characteristics (training hours, time intervention, attrition, format and training techniques) did not moderate the effect of staff training.

assessment characteristics.
The type of measurement (observation vs. questionnaires) significantly moderated the effect of training programs' effectiveness on staff behaviour. Assessment of the outcome through observation(d = 1.030) yielded larger effect sizes than by means questionnaires (d = 0.338).

sample characteristics.
The percentage male staff in the experimental group significantly moderated the effect of staff training programs on staff behaviour. The higher the percentage of male staff workers in the experimental group the higher the effect size of a training (b = 0.591). Other sample characteristics (age, working experience of direct care staff or setting and characteristics of the clients with ID) did not significantly moderate the effects of a staff training program on staff outcomes.

EFFECT OF STAFF TRAINING ON CLIENTS' BEHAVIOUR

The meta-analysis of the effect of staff training on behaviour of clients with ID contained 7 independent studies (s), reporting on 40 effect sizes (k), and a total sample of N = 583 subjects. The total sample consisted of n = 333 subjects in the experimental groups, and n = 250 subjects in the control groups.

Overall effect on clients' behaviour

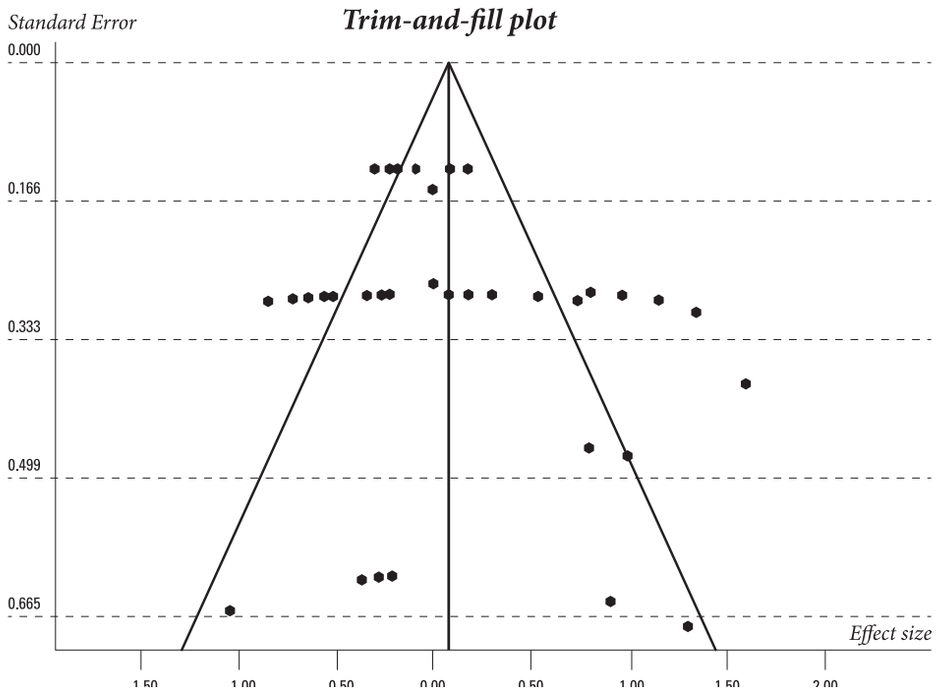
Table shows that there was no significant overall effect for staff training programs on the behaviour of clients with ID (d = 0.305), which means that the power of this meta-analysis was insufficient to test small effect sizes. The presence of publication bias is unlikely, as the trim-and-fill plot showed no imputed effect sizes on the left side of the funnel (see Figure 3). Because of significant effects on level 2 and 3 (see Table 1), moderator analyses were performed in order to examine which factors moderated the effect of staff training on clients' behaviour within and between studies (see Table 3 for the results).

TABLE 3 **Meta-Analysis of Staff Training on Client Outcomes**

Moderator variables	*s*	*k*	β_0 (mean *d*)	t_0	β_1	t_1	$F(df_1, df_2)$
Type of outcome	7	39					$F(1,37) = 3.276$
Skills			0.535	2.048*			
Challenging behaviour			0.151	0.593	-0.391	-1.810	
Study characteristics							
Study quality	7	40					$F(1,38) = 0.797$
Medium			-0.096	-0.189			
Low			0.406	1.713	0.502	0.893	
Impact factor	6	39	0.073	0.433	-0.152	-1.312	$F(1,37) = 1.722$
Post or follow up	7	40					$F(1,38) = 0.074$
– Post			0.316	1.510			
– Follow up			0.269	1.251	-0.046	-0.272	
Measure	7	40					$F(1,38) = 1.618$
– observation			0.662	1.918			
– Questionnaire			0.118	0.465	-0.545	-1.272	
Intervention characteristics							
Training hours	6	34	0.247	1.316	0.014	1.751	$F(1,32) = 3.066$
Time intervention (including baseline & follow-up)	7	40	0.353	1.555	-0.025	-0.705	$F(1,38) = 0.497$
Attrition	5	33	0.216	0.946	-0.001	-0.047	$F(1,31) = 0.002$
Format intervention	7	40					$F(1,38) = 0.014$
– In service and COJ			0.345	1.271			
– In service			0.284	0.661	-0.061	-0.119	
Techniques intervention	7	40					$F(1,38) = 0.014$
Combination of techniques			0.542	1.271			
– Instruction			0.284	0.661	-0.061	-0.119	
Characteristics clients							
Percentage male clients	6	39	0.143	0.813	-0.012	-0.824	$F(1,37) = 0.679$
Age clients	7	39	0.358	1.573	-0.029	-0.718	$F(1,37) = 0.515$
Clients mild ID	5	35	0.324	1.152	0.011	1.150	$F(1,33) = 1.322$
Clients severe forms ID	5	35	0.324	1.152	-0.011	-1.150	$F(1,33) = 1.322$

Remark:
* significant by $p < 0.05$ ** significant by $p < 0.01$ *** significant by $p < 0.001$

FIGURE 3 **Trim and fill plot clients with intellectual disabilities**



Results of moderator analyses on training for the behaviour of clients with ID

Results of moderator analyses on training for the behaviour of clients with ID None of the moderators used in this meta-analysis (e.g., type of outcome, study characteristics, intervention, assessment and sample characteristics) did moderate the effect of staff training on clients' behaviour. However, type of outcome (adaptive behaviour and frequency or severity of CB) as well as amount of staff training hours showed small effects that just failed to reach significance at $p < .10$, which indicates lack of statistical power to detect small moderator effects.

DISCUSSION

By conducting two separate meta-analyses, the current study aimed to assess the effect of staff training programs on staff behaviour working with clients with ID and challenging behaviour and on client behaviour. Further, it was aimed to examine which outcome, study, intervention and sample characteristics influenced the strength of the effects of staff training programs. Overall, we found a significant and moderate effect size for staff training programs on direct care staff behaviour.

Several factors influenced the effect of training on staff behaviour. For instance, observations yielded larger effects than questionnaires. An explanation would be that observation is a more valid method to assess whether staff change their behaviour in daily practice after training than questionnaire self-report, which might be less objective. Another explanation is the risk of dependency of researchers involved with the development, implementation and evaluation of their own training program (Petrosino & Soydan, 2005). Perhaps in those studies with dependent researchers the risk for bias is greater when observation is used, which may be sensitive to the biased perception of researchers who are not blind to the hypothesis that their intervention is expected to have an effect. Notably, also non-dependent researchers may be biased in their observations if not blind to the hypotheses they are testing (Hoyle, Harris, & Judd, 2002).

A higher frequency of male participants in the experimental group yielded a larger effect size in the meta-analysis of staff outcomes. A possible explanation would be gender differences in learning styles (Everiens & Ten Dam, 1994) to the extent that formats of the included training programs might provide more or better opportunities for male staff and/or can be more appealing for males, who may have experienced more exposure to injury in containment compared to females (Carmel & Hunter, 1989, 1993). Another explanation may be that male and female staff display different behavioural tendencies in contact with their clients with ID. For instance, studies by Knotter, Wissink, Moonen, Stams and Jansen (2013) and Knotter, Stams, Moonen and Wissink (2016) showed that teams with a higher proportion of

male staff showed more negative attitudes towards aggression and used more intrusive and coercive interventions than teams with a lower proportion of male staff (or female only teams) when confronted with aggressive behaviour of their clients with ID. In particular team dynamics might account for this finding.

Furthermore, we did not find a significant overall effect of staff training on changing clients' behaviour (i.e., aggressive behaviour). This possibly indicates that training direct care staff will not directly result in changing the aggressive behaviour problems of their clients with ID. This may be due to the small amount of (small) included studies and a resulting low power to find prove for training effectiveness on client's behaviour.

Another explanation for a lack of significant overall effect of staff training on clients' behaviour could be that it is difficult for staff to transfer learned skills or knowledge from a training setting to daily practice in which they care for clients with ID who also show behaviour that challenges. Van Oorsouw and colleagues (2009) also conducted a meta-analysis of staff training and found that the type of goal of a training could moderate the effect size of a training. They found that staff skills not aimed at changing client skills or client behaviour were trained more effectively than skills that aimed at improving clients' skills or behaviour. The explanation of Van Oorsouw and colleagues (2009) for their results is that training staff how to change clients' skills or behaviour is more difficult, which also requires a more comprehensive training format (for instance, a combination of in-service training and coaching-on-the-job). It is remarkable that none of the training programs for staff in our study focused on a team approach or an organizational approach to change not only the skills and knowledge of direct care staff, but also to obtain the most optimal ecological conditions for the delivery of the intervention (Campbell et al., 2014).

Another explanation for the finding that staff training overall did not seem to change clients' behaviour could be that the majority of the training programs included in this meta-analysis did not make a clear distinction between the types of challenging behaviour of the clients with ID who were included. The concept of 'challenging behaviour' refers to several types of problem behaviour, such as aggression, destructive behaviour and self-injury (Emerson et al., 2001). Those types of behaviour in turn have, according to a study of Emerson and colleagues (2001), several topographies, and therefore will differ not only in appearance, but also in the impact on staff psychological wellbeing and behaviour. For instance, aggression can be hitting others with hands or feet, verbal aggression, hitting others with objects, meanness/cruelty, scratching others, pulling other's hair, pinching others and biting others. This example underpins the broad spectrum of behaviours covered by one word: aggression. Giving more attention to the specific types of aggression (for instance, verbal versus physical aggression) or to the function of aggression (for instance, reactive versus proactive aggression) in staff training programs seems important, because different types of aggressive behaviour can have different antecedents and consequences, and these types could ask for different approaches from staff (Polman, Orobio de Castro, Van Boxtel, & Merk 2007).

A final explanation for not finding a significant overall effect on clients' behaviour could be that many training programs did not aim to reduce the frequency or severity of the challenging (aggressive) behaviour in the first place, but aimed to improve, for instance, the daily structure (active support). Diminishing aggression or other types of challenging behaviour was a long-term outcome measure of the training, but was often not directly addressed in the training. This may explain the lack of evidence of training effectiveness in reducing the frequency and severity of the challenging behaviour of clients with ID. We should note that it is often difficult to change the (often long existing) challenging (aggressive) behaviour patterns of clients with ID, because they represent their way of coping with difficult situations in their daily life (Campbell, 2010).

Limitations

An important limitation of both meta-analyses is that the amount of studies that could be included was limited. The power of both meta-analyses to test small effects was therefore low, which indicates that we must be cautious

when interpreting the (non-significant) results. Especially the exclusion of weaker studies, that is, studies not using a control group design, reduced the total number of studies to be included in our meta-analyses. Moreover, most studies examining staff or client behaviour outcomes did not use a standardized criterion measure, which should be regarded as a major shortcoming of these studies. There is obviously a need for more robust studies on the effectiveness of staff training programs, especially with a focus on the translation of the learned knowledge, skills or changing attitude of staff into practice. Even less is known about the effect of staff training on the decrease of challenging behaviour by clients with ID. Using an intervention matrix for psychological therapies for challenging behaviour (including staff training programs), Campbell and colleagues (2014) concluded that much of the research on challenging behaviour research has been small 'n' experimental work in specialist or laboratory settings. They plead for more and better research under clinically representative conditions resulting in sustainable interventions that can be generalised to ordinary community settings. Another limitation is the lack of information about the level of intellectual disability of the clients in studies that focused solely on staff outcomes, which impeded moderator analyses of the level of ID in the staff outcome meta-analysis.

Recommendations

Based on the results of our meta-analyses, several recommendations can be made. First, it should be noted that the choice of assessment within a study design could influence the effect size. The risk of dependency should be taken into account when authors are involved with the implementation and evaluation of the training. Furthermore, the choice of standard criterion measures within future studies about staff training programs provide more opportunities to compare results with each other and calculate the effects of those training programs.

Second, attention should be paid to gender differences in learning styles by direct care staff in developing staff training programs in future research.

Third, staff training programs should take the function of the aggressive behaviour into account. It is difficult to focus on "average challenging behaviour of clients with ID", because the antecedents, type, goal and impact of the behaviour that "challenges" may differ from person to person. It is therefore recommended to pay attention to the individual, multi-causal nature of most of the aggressive incidents in training programs (Farrell et al., 2010; Hastings, 2005), for example, by using an individual Client-Focused Training concept.

A fourth recommendation is that future research on the effectiveness of staff training should use (besides a randomized control group design) a follow-up period for a sufficiently long period (i.e., 12 month) after training in order to investigate long term effects of staff training on clients' aggressive behaviour. Because of long lasting patterns of many aggressive behaviour problems, the effect of a change in the way staff behave towards their clients with ID who show aggressive behaviour may take time.

Fifth, we recommend that in research on the effectiveness of staff training attention be paid to the (correct) transfer of staff skills acquired in the training to the daily work setting (Jahr, 1998). It was remarkable that none of the training programs included in our meta-analysis focused on training team beliefs and team interaction of direct care staff (Knotter, Wissink, Moonen, Stams, & Jansen, 2013). Besides a functional analysis of the clients' behaviour which "challenges" the relation with an individual direct care worker in the environment in which the behaviour occurs, it is recommended to investigate the interactions in the team (attitude and team climate) and organization characteristics (support, culture, beliefs) on staff-client interactions (Knotter et al., 2016).

Despite the conclusion of Van Oorsouw and colleagues (2013) and Hastings (2010) that clients should no longer be excluded in the evaluation of staff training programs, this is still scarcely done. Our finally recommendation is that the perspectives, attributions and behaviour of the clients with ID, which could reveal unknown and rich information, are combined with other staff oriented information before starting a training program for staff or evaluating the effects of a training program for staff especially when they are confronted with aggressive behaviour problems from their clients with ID.

CONCLUSION

The overall conclusion is that staff training seems effective in changing staff behaviour, but also that the type of training and content or training goal did not significantly influence the effects of staff training. In future research attention should be paid to study, assessment, and sample characteristics (proportion male staff in experimental group), because we showed that these variables moderated the effects of interventions. We should conduct further research to expand our knowledge on training effectiveness of direct care staff training programs in relation to the challenging behaviours of clients with ID. Ecological variables, such as team climate or organization culture or the motivations of direct care staff attending staff training programs, should be taken into consideration. Last but not least, further attention should be paid to the perspectives of clients involved in training programs, addressing their needs and the quality of their relationship with direct care staff.

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APPENDIX 1 Characteristics of Included Studies of Meta-Analysis on Staff Outcomes

Authors	Year	N	Post/ Follow	Training Content	Type of Outcome	Measurement
1. McKenzie et al.	2000	132	Follow up*	One-day session CB course about: criteria of a learning disability, definition & management CB, client choice & duty of care (m)	Knowledge	Questionnaire developed for training (McKenzie et al., 1999a) (McKenzie et al., 1999b) (McKenzie et al., 2000)
2. Campbell & Hogg	2008	276	Follow up	Cognitive representation course: 8 sessions about definition CB, role of staff, constructional approach, behavioural principles, e.g. aversive and non-aversive approaches, observation, changing settings & quality (m)	Attitude / knowledge	The Challenging Behaviour Representation Questionnaire (CBRQ; Campbell, 2007a)
3. Van Oorsouw et al.	2010	70	Post	Managing CB course: 7 sessions about causes of CB and signs by clients with ID, but also symptoms of trauma and needs of staff after incidents, combined with use of physical interventions, e.g. basic posture, transfer, sidestep, reactions at clients' aggressive behaviour (m)	Knowledge & skills	Questionnaire developed for training (Van Oorsouw et al., 2010) Observation video recorded physical intervention techniques
4. Zijlmans et al.	2011	60	Post	Emotional intelligence (EI): 3 sessions about concept EI and individual development plants about staff's own EQ-i profiles (c)w	Knowledge & skills	The Dutch version of the Bar-On Emotional Quotient-inventory (EQ-I, Bar-On, 1997)
5. Bethay et al.	2013	34	Follow up	Acceptance & commitment: 3 sessions about mindfulness & acceptance skills in combination with applied behaviour analysis (c)	Skills	The General Health Questionnaire-12 (Goldberg, 1978) Burnout Believability Scale (BBS: Betay et al., 2013)
6. McConachie et al.	2014	120	Follow up	Acceptance & mindfulness: One-day session and half day refresher session about mindfulness & acceptance skills (c)	Attitude, knowledge & skills	The General Health Questionnaire-12 (Goldberg, 1978) The Warwick-Edinburg Mental Well-Being Scale (WEMBS: Tennant et al., 2007) The Staff Stressor Questionnaire (SSQ: Hatton et al., 1999 a/b) The Acceptance and Action Questionnaire-II (AAQ-II: Bond et al., 2011) The White Bear Suppressive Inventory (WBSI: Wegner & Zanakos, 1994)
7. Van Oorsouw et al.	2014	62	Post	Stress management: 4 sessions about stress physiology, combined with elements from acceptance & commitment (c)	Knowledge & skills	Writing assignment about self-awareness regarding personal stress management developed for training (Van Oorsouw et al., 2014)
8. Zijlmans et al.#	2014	37	Post	Staff-client interaction & EI: 8 sessions and also 2 subgroup sessions about the concept of emotional intelligence, feedback on their own EQ-i profile in relation to their interaction with clients (c)	Skills	Observation by video recordings of staff-client interactions observation system (Custers et al., 2011)

Remark:
inclusion in both meta-analyses
*no baseline-post-follow-up only baseline-follow up

Hastings (2010) two broad perspectives about training staff:
(c) To cope with the impact of CB (knowledge or skills improving the emotional needs of staff)
(m) to prevent or manage CB (training staff new knowledge or skills)

APPENDIX 1 Characteristics of Included Studies of Meta-Analysis on Staff Outcomes

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Hastings (2010) two broad perspectives about training staff:
(c) To cope with the impact of CB (knowledge or skills improving the emotional needs of staff)
(m) to prevent or manage CB (training staff new knowledge or skills)

APPENDIX 1 Characteristics of Included Studies of Meta-Analysis on Staff Outcomes

Authors	Year	N	Post/ Follow	Training Content	Type of Outcome	Measurement
9. Zijlmans et al.	2015	132	Post	EI & staff-client interaction: 7,5 sessions about the concept of emotional intelligence, feedback on their own EQ-i profile in relation to their interaction with clients (c)	Attitude & skills	Dutch version of the Bar-On Emotional Quotient-Inventory (EQ-i, Bar-On, 1997) Emotional Reactions to Challenging Behaviour Scale (ERCBS, Mitchell & Hastings, 1998) Dutch version of the coping Inventory for Stressful Situations (CISS, Endler & Parker, 1999)
10. Pruijssers et al.	2015	276	Follow up	Guideline for diagnosis anxiety & CB: 2 sessions about the theoretical background of the guideline and practical skills for the use of the guideline (m)	Skills	Self-Efficacy Scale Managing anxiety and CB (Pruijssers et al., 2015)
11. Poppes et al.#	2016	70	Follow up	Relabelling behaviour: 1 session (1,5 hours) about CB by clients with profound intellectual and multiple disabilities (PIMD): characteristics of CB and health problems, definition causes and consequences, but also about attributions of staff and intervention options (m)	Attitude	Challenging Behaviour Attributions Scale (CHABA: Hastings, 1997)

Remark:
inclusion in both meta-analyses
*no baseline-post-follow-up only baseline-follow up

Hastings (2010) two broad perspectives about training staff:
(c) To cope with the impact of CB (knowledge or skills improving the emotional needs of staff)
(m) to prevent or manage CB (training staff new knowledge or skills)

APPENDIX 2 Characteristics of Included Studies of Meta-Analysis on Client Outcomes

Authors	Year	N	Post/ Follow	Training Content	Type of Outcome	Measurement
1. Ip & Szymanski	1994	21	Post	Choice program on CB: Sessions for staff within a 3 weeks period about: definition of choice and alternatives, instructions and feedback about development & implementation of a Daily Choice Plan	Decrease CB	Observation Sheet for Challenging Behaviors and Choices (Ip & Szymanski, 1994)
2. McKnight & Kearney	2001	11	Follow up	Choice availability: 5 sessions and a post intervention session about: definition of choice and effects on adaptive and maladaptive behaviour of clients with ID, instruction and feedback to improve choice availability at eating, leisure and personal hygiene activities for their clients.	Decrease CB & increase adaptive behaviour	Resident Choice Assessment Scale (RCAS, Kearney et al., 1995b) Vineland Adaptive Behavior Scale (VABS-M; Sparrow et al., 1984) Vineland Maladaptive Behavior Scale (VMBS, subscale VABS-M)
3. Smith et al.	2002	188	Follow up*	Active support: consisted of 3 phases. Phase one is 1 session (1,5 hours) about: considering clients' activity preferences, domestic requirements (e.g. household routine), and the breadth of recreational activities. Developing and implementing daily activity planning & monitoring system. In second phase 3 sessions with instructions and feedback during working situation by trainer. Third phase weekly sessions by managers.	Increase adaptive behaviour	Adaptive Behavior Scale Part One (ABS, Community and Residential Version, Nihira et al., 1993) Observations by video records staff-client interactions

Remark:
inclusion in both meta-analyses
*no baseline-post-follow-up only baseline-follow up

APPENDIX 2 Characteristics of Included Studies of Meta-Analysis on Client Outcomes

Authors	Year	N	Post/ Follow	Training Content	Type of Outcome	Measurement
4. Grey & McClean	2007	60	Post	Multi-element Behaviour Support: 9 sessions (case training) about behaviour assessment report, behaviour support plan and reviewing progress support plan.	Decrease CB	Incident & Analysis Sheet (La Vigna & Willis, 1992)
5. Chou et al.	2011	68	Follow up	Active support: consisted of 3 phases. Phase one: 2 sessions about concept active support. Phase two: 2 sessions and one half post session about developing and implementing daily activity planning. Phase three: interactive training about techniques during working by participants, supervisors and managers.	Decrease CB & increase ad. beh.	Index of Participation in Domestic Life (IPDL; Raynes et al., 1994) Index of Community Involvement-Revised (ICI-R; Raynes et al., 1994) The Choice Questionnaire (CQ; Stancliffe & Parmenter, 1999) The Mood Scale (MS; Evans et al., 1999) The Social Network Index (SNI; Center for Developmental Disability Studies, 2004) The ICAP Maladaptive Index (Bruininks et al., 1986) The Adaptive Behaviour Scale (ABS) – Taiwanese version (Shu, 2006)

Remark:
inclusion in both meta-analyses
*no baseline-post-follow-up only baseline-follow up

APPENDIX 2 Characteristics of Included Studies of Meta-Analysis on Client Outcomes

Authors	Year	N	Post/ Follow	Training Content	Type of Outcome	Measurement
6. Zijlmans et al.#	2014	37	Post	Staff-client interaction & EI 8 sessions and also 2 subgroup sessions about the concept of emotional intelligence, feedback on their own EQ-i profile in relation to their interaction with clients.	Decrease CB	Video recordings of staff-client interactions observation system (Custers, Kuin, Riksen-Walraven & Westerhof, 2011)
7. Poppes et al.#	2016	195	Follow up	Relabelling behaviour: 1 session (1,5 hours) about CB by clients with profound intellectual and multiple disabilities (PIMD): characteristics of CB and health problems, definition causes and consequences, but also about attributions of staff and intervention options.	Decrease CB	Behaviour Problem Inventory (Rojahn et al., 2001) Adaptive version for Profound Intellectual and Multiple Disability (BPI-PIMD), Poppes et al., 2016a)

Remark:
inclusion in both meta-analyses
*no baseline-post-follow-up only baseline-follow up

V

ANTECEDENTS OF INTERACTIONS BETWEEN STAFF MEMBERS AND AGGRESSIVE CLIENTS WITH ID: A QUALITATIVE STUDY

THIS CHAPTER IS SUBMITTED FOR PUBLICATION:

Knotter, M.H., Moonen, X.M.H., Wissink, I.B., Finkenflügel, H.J.M., & Stams, G.J.J.M. (2018). Antecedents of Interactions Between Staff Members and Aggressive Clients with ID: A Qualitative Study.

V ANTECEDENTS OF INTERACTIONS BETWEEN STAFF MEMBERS AND AGGRESSIVE CLIENTS WITH ID: A QUALITATIVE STUDY

ABSTRACT

Background: There is limited research on contextual antecedents that shape interactions between staff members working in institutions for people with ID and their clients with intellectual disabilities (ID) who behave aggressively.

Aim: The aim of this study was to gather knowledge on factors influencing the interactions between staff members and clients with ID who behave aggressively.

Method: Five experts of the Dutch CCE (Centre of Consultation and Expertise) were interviewed in an open-ended topic based format. A content-analysis was performed on the data to reveal factors affecting client– staff interactions.

Findings: Results show that severity of problem behaviour, living group dynamics, staff abilities, team climate, perceived support by team members from management and psychologists, long-term employment contracts, and the service climate affect staff-client interactions.

Conclusion: A safety service and working climate for supporting staff is necessary to reduce incidents of aggressive encounters between staff and their clients with ID.

KEYWORDS

Aggression, intellectual disabilities, staff, service climate.

INTRODUCTION

During the last decades, research on effective training programs to alter the behaviour of care staff working with clients with intellectual disabilities (ID) who show aggressive behaviour has increased. A meta-analysis on the effectiveness of staff-training programs (Van Oorsouw, Embregts, Bosman, & Jahoda, 2009) showed that a combination of in-service training and coaching-on-the-job was the most promising format for obtaining positive training results, such as improving the skills or knowledge of staff members. In a recent meta-analysis of Knotter, Spruit, De Swart, Wissink, Moonen and Stams (2018) it was shown that staff training can be effective in changing staff behaviour. It was shown that the results presented in this study were associated with the research design used (e.g., type of assessment used in the studies) and characteristics of the participants (e.g., their gender) and despite the results of the study from Van Oorsouw et al. (2009), not with the characteristics of the training programs included in the study (e.g., goal or techniques). However, Knotter et al. (2018) did not find any positive effects of staff training on clients' aggressive behaviour. They pointed at a possible influence of ecological variables in staff training programs, such as team climate, organization culture and the level of motivation of direct care staff attending staff training programs.

According to Farrell, Shafei and Salmon (2010) variables that determine the context in which staff-client interactions occur should be taken into account, which is thought to result in a better integration of learned skills into daily practice. Unfortunately, studies addressing contextual characteristics (i.e., team characteristics or the amount of support provided by external professionals) that may possibly influence direct care staff behaviour as a response to aggressive behaviour of clients with ID are rare (Hastings, 2005).

Knotter, Wissink, Moonen, Stams and Jansen (2013) found that a higher percentage of male staff workers in a team, a higher percentage of experienced team members and a rejecting team attitude towards aggressive behaviour of clients with ID were related to more frequent use of coercive measures. These team characteristics explained three times more variance in the use of coercive measures than did individual characteristics of staff members.

In another study of Knotter et al. (2016) it was shown that a positive team climate (i.e., a climate characterized by a shared vision, participative safety, support for innovation and high task orientation) was related to both a responsive individual attitude and a rejecting team attitude towards aggression. Thus, the results of that study showed that team climate was related to staff's attitude and behaviour, but more research was deemed necessary to understand the underlying processes, especially at the team level.

Knotter et al. (2016) also found that support of external professionals positively affected staff's individual responsive attitudes towards aggression. The results of this study pointed at the importance of the quality of support provided to staff, which in turn could positively affect staff-client interactions. Another study under scribing the importance of organizational support towards staff is Green, Albanese, Cafri and Aarons (2014) study on transformational leadership. They found that leaders who engage in transformational leadership behaviour were more likely to create a positive organizational environment. Furthermore, they found that this supports providers in developing a positive working alliance with their clients.

Meanwhile, according to a report of the Ministry of Social Affairs and Employment (2016), aggressive incidents still occurred frequently in care facilities for people with ID in the Netherlands, which reflects the urgency of doing more research, especially to get a better understanding of what factors are possibly related to positive or negative interactions between staff members and clients with ID who behave aggressively. Bronkhorst, Tummers and Steijn (2018) assessed the impact of an multifaceted program to improve the safety climate in care organizations in the Netherlands. However there are no national guidelines for health care organizations in the Netherlands on how to improve the safety climate in organizations providing care to people with ID and challenging behaviour. In England NICE (National Institute for Health and Care Excellence) helps clients, parents, experts and organizations in health care to improve health and social care. A service model addressing care for people with learning disabilities and challenging behaviour is to be published in 2019 (GID-QS10072).

It is important to address the influence of contextual factors in Dutch care organizations that is possibly related to the occurrence of negative interactions between staff members and clients with ID behaving aggressive, and of factors that are possibly related to more constructive interactions. To reach that goal, experts working for the Dutch Centre for Consultation and Expertise (CCE) were interviewed. These experts offer consultation to care institutions. The interviews focused on the experts' experiences during these consultation projects in which severe aggressive behaviour problems of clients with ID had resulted in a situation of crisis in care organizations for people with ID. The aim of the interviews was to explore factors that are related to the nature of the interactions between staff and clients with ID who behave aggressively.

The CCE offers assistance to different types of healthcare institutions for long-term care (like institutions providing care to people with psychiatric problems, the elderly, or people with ID). The CCE works with independent experts in order to provide customised advice and support. In doing so, the CCE is a supplementary service to standard national healthcare services. Experts of the CCE offer help to organizations and teams when they indicate that they need this kind of support, for instance, in dealing with clients who show aggressive behaviour. The CCE experts analyse the situations in situ and give expert opinions and support on how to deal with these complex situations.

In CCE teams, experts in the field of psychiatry, medical care, or regular care for people with ID, psychologists, pedagogues and family consultants work together with clients, parents and staff to find new solutions for complex situations. According to their mission statement (CCE, 2017), the main operational principles of the CCE are concerned with the personal and environmental factors that may evoke challenging behaviour. CCE experts can give feedback to care institutions related to work processes, cultural aspects and organizational characteristics that may influence challenging behaviour in, for instance, clients with ID. Therefore, interviewing experts of the CCE gives an opportunity to gain a qualitative insight in the problems that can be encountered within the daily practice of Dutch health services in providing care to people with ID and aggressive behaviour problems, and in the factors that might be related to the staff member–client interactions. As CCE experts are in contact with professionals in many institutions where aggressive behaviour of clients occur, they can be considered as authorities with a broad view on the subject, having no organisational interests (thus keeping a more objective view), who are able to compare different approaches to deal with aggression of clients with ID.

We expected that interviewing CCE experts could provide us with valuable and diverse insights in the factors that influence the interactions between staff members and clients with ID who behave in an aggressive manner. The aim of the current study was to discover factors related to both negative and constructive interactions between staff and clients with ID who behave aggressively in care institutions. Following the qualitative and explorative nature of the current study, no a priori hypotheses were formulated (Korstjens & Moser, 2017).

METHOD

Respondents

Five experts were interviewed; two female and three male experts. The mean age of the experts was 55.4 years (range between 51-62; SD = 4,04). The mean amount of working experience as a CCE expert was 9.2 years (range between 2-16; SD = 5,30). Their educational backgrounds varied from higher professional education to university degrees in nursing, social work, management and social sciences. All five CCE experts were working in the Dutch CCE region north-east.

Design

A team of 15 CCE experts were asked by the first author to participate in this study. Five CCE experts (33%) agreed. Reasons why other experts declined to participate were not explored.

The first author conducted individual open-ended topic based interviews at several locations. The interviews were topic driven, but in an open conversation format, enabling the extensive exploration of questions. The interviewer used the following topic list as shown in Table 1.

TABLE 1 **Topic list**

1.	Questions from care givers / care organizations towards CCE.
2.	Experiences of CCE experts about the situations of "crisis".
3.	The choice for an independent expert.
4.	Conditions to start with a project.
5.	The focus of the project.
6.	The cooperation with staff, team or the organization.
7.	Factors related to negative and positive (i.e., constructive) staff-client interactions.
8.	The durability of the advices.

After an opening question ('What did you experience in your consultations concerning 'crisis' situations involving a client showing aggressive behaviour?') several topics were addressed and discussed in an open manner.

All interviews were audio recorded and verbatim transcribed by the first author. Complete interview data were scanned for relevant text fragments (following the research questions), and were analysed by the first author, and subsequently discussed with the fourth author.

Data analysis

The first step in data analysis was to manually code the transcripts in Excel spread sheets. A combination of elemental and affective coding methods was used (Saldaña, 2016). For instance, the first author searched for content-based or conceptual phrases representing a topic of the research question (elemental) and also searched for subjective opinions, emotions and attitudes of the respondents related to the topics in the research question (affective). Subsequently, codes were clustered into categories using pattern coding (grouping codes into a smaller number of categories, themes and concepts). Finally, axial coding linked the research question to (sub)categories (Saldaña, 2016). See Table 1 and 2 for an overview of the categories of factors (client, living group, staff, team, organizational factors) related to more negative interactions (risk factors) and to more constructive or positive interactions (protective factors) between staff members and aggressively behaving clients with ID.

There were no known conflicts of interest and all authors certify responsibility.

RESULTS

The analyses of the interview materials yielded two subcategories, namely, risk factors (i.e., factors that seem to be related to more negative interactions between staff members and aggressively behaving clients with ID) and protective factors (i.e., factors that seem to be related to more constructive or positive interactions between staff members and aggressively behaving persons with ID) at the individual client level, residential group level, staff member level, team level, and at the organizational level. The results presented in Table 2 and 3 are subsequently discussed.

TABLE 2 **Factors related to negative interactions between staff members and aggressively behaving clients with ID (risk variables)**

Client	Living group	Staff member	Team	Organization
Complexity of the aggressive behaviour	Negative group dynamics at the living group	Lack of knowledge	Ineffective	Focus on control
		Lack of skills	Focus on control	Lack of boundaries
		Lack of specific emotional / personal competencies	Avoiding aggressive incidents	Lack of support
			Closed culture	Inconsistent policy
				Closed culture
				Demanding external influences
				No adequate housing

Risk factors

Risk factors were found at the client level, staff level, team level, and organizational level.

Client factors.

The complexity of the aggressive behaviour of the clients can make it difficult to react in a constructive way to aggressive behaviour of clients with ID. Especially when the aggressive behaviour is explosive, peer- or staff directed and/or unexpected, leading to dangerous situations for peers and staff. This behaviour increases the likelihood of coercive measures resulting in a decrease of quality of life.

Negative group dynamics.

The combination of clients with severe behaviour issues living together can cause a negative group climate, which evokes even more aggressive behaviour problems resulting in negative group dynamics.

Staff factors.

Staff's lack of knowledge about the dynamics of the severity of the intellectual disability and/or about the history of the client, or about the nature of a treatment program negatively influences the interactions between a staff member and a client with ID who behaves aggressively. When a staff member overrates the practical and intellectual abilities of the client due to a lack of knowledge of his or her actual level of performance, a client may react in an aggressive way due to stress.

Lack of skills of staff members, such as the inability to analyse aggressive incidents or to use the Plan-Do-Check-Act cycle in a proper way, are related to more negative interaction patterns between staff members and aggressively behaving clients with ID.

Additionally, the lack of several personal staff competencies emerged from the data as a factor that complicates the interactions between a member of the direct care staff and a client who behaves aggressively. For instance, when a staff member is not able to reflect on the impact of his or her behaviour on clients with ID, it can be difficult to change aggressive interaction patterns with clients who behave aggressively. A staff member who helps a client dressing up, triggering a negative response of the client (e.g., name calling), and subsequently emphasizing the aggressive wording of the client, without considering what could have triggered the client's reaction, may reinforce aggression instead of reducing it.

Besides the lack of introspective abilities, high personal standards can hinder effective interaction. For instance, when staff members interpret the aggressive behaviour using their own standards and values exclusively instead of looking at possible causes of aggression from the clients' perspective the reactions by staff may not fit the needs of the client, and subsequently provoke a client to show more aggressive behaviour.

Finally, when a staff member is not able to reflect on the quality of care provided and the quality of the daily routines at the living group (including taking the client's perspective), it is likely that inadequate staff behaviour patterns will continue to exist. An example would be that a staff member does not explain to the client why she uses pictures in her communication with the client, while she does not know if the client understands the pictures that are used.

Team factors.

An ineffective team performance can influence client-staff interaction patterns in a negative way, such as a high percentage of staff turnover or absenteeism, a high frequency of conflicts among team members, a lack of a team vision, no structural evaluation of results of behavioural interventions at the team level and different styles of working with a client without a link to the treatment program of the client.

A strong team focus on controlling/managing the aggressive behaviour of clients with ID in order to prevent aggressive incidents is considered to be a risk factor, because it seems to lead to repression, such as the frequent use of coercive measures. Highly controlling teams often have a team vision emphasizing the importance of a strict day-structure offered to clients with ID, without space for self-determination. In contrast, teams showing a tendency to avoid aggressive incidents, by avoiding setting boundaries or limiting the challenging / aggressive behaviour of clients, can be a risk factor too. Those teams can also show resistance towards help and advice from CCE consultants due to feelings of anxiety among team members, and a reluctance to change interactions with their clients.

Finally, a team with a closed team culture can increase negative interactions between staff and clients. For instance, a team without open communication, which accepts no help or advice from experts outside the team, or a team that considers parents with critical feedback about the care of their child with ID as trouble makers or busybodies can lead to negative interactions. Those teams can also show resistance towards help and advice from CCE consultants, which could be an additional cause of negative interactions.

Organizational factors.

At the organizational level, organizations with a strong focus on control (regarding aggressive behaviour problems of their clients) may reinforce negative interaction patterns between staff and clients with ID who behave aggressively, especially when the individual needs of a client with ID conflicts with organizational goals. Organizations with a primary focus on avoiding safety risks for staff members tend to neglect the needs of the client with ID, and are less willing to support teams to change their working style according to the advices of CCE consultants.

On the other hand, organizations with a primary focus on the needs of their clients with ID are in danger of neglecting the needs of their staff, which could also negatively affect the interaction patterns between staff and clients. An example would be that organizations fail to set clear boundaries regarding aggressive incidents with clients, for instance by not reporting incidents of clients' abuse of staff members to the police or not restricting the freedom of a client in hazardous situations. This can result in safety risks for clients and staff, and to a general blurring of moral standards which, in the end, may also be detrimental for staff-client interaction patterns within a care institution.

Another risk variable that emerged from the analyses to negatively impact interaction patterns between staff members and clients with ID who behave aggressively, is when organizations do not provide sufficient support (from manager or psychologists or pedagogues) to teams that experience a high frequency of severe aggressive incidents. To illustrate, without adequate organizational support those teams function as dysfunctional teams, for instance, because of experiencing high levels of stress, which could also be a cause of staff turnover or absenteeism. The support of a team leader seems to be imperative for staff to feel accepted and safe in their work.

Organizations that are continuously changing their mission and vision can be at risk for negative interactions between staff members and their clients. These organizations are not able to conserve expertise, and cannot assess the results of these frequent changes. Especially frequent changing managers and consulting behavioural scientists can affect the quality of care for clients with aggressive behaviour problems in a negative way.

A closed organizational culture can also be a risk factor. No open communication and unwillingness to call for help or to implement the advice from external consultants and miscommunication with parents or other important persons around the client with ID can lead to conflicts and stress, which in turn may negatively affect the quality of care provided to clients with ID.

Finally, inadequate housing (for instance, small group homes with a high risk for noise disturbance) or demanding external influences (like budgets cuts or waiting lists for external placement) can be organizational risk factors that maintain negative interaction patterns between staff members and aggressive clients with ID.

Protective factors

From the results of the analyses several factors related to more positive staff–client interaction patterns emerged. These positive factors at the staff, team, and organizational level are presented in Table 3, and subsequently discussed.

TABLE 3 **Factors related to positive interactions between staff members and aggressively behaving clients with ID (protective factors)**

Staff members	Team	Organization
Skilled communication with the client	Having a clear team concept	Having clear organizational concepts
Personal characteristics	Clear pattern of team relations	Openness in communication
	Long-term contracts	Adequate support
	Consultation structure	Investing in expertise
		Adequate housing
		Monitoring treatment programs

Staff factors.

Staff members' competencies are important for making contact and communication with the client. Examples of staff members' competencies are: a responsive attitude towards aggression (seeing the client as a person with exceptional needs instead of only looking at the severity of the aggressive behaviour problems), showing interest in the personal history of the client, and making contact not only with the client himself, but also with important family members. Additionally, personal characteristics that can be considered protective in the contact with the client are patience, enthusiasm to work with clients with ID, willingness to take responsibility, being not too afraid but also not too though and, finally, being able to reflect on your own behaviour in contact with the client.

Team factors.

According to the analysis of the data the following factors emerged as dimensions that are related to more positive interactions between staff and clients with ID who behave aggressively. A team with a clear and shared team concept about the care towards their clients is important in that all members of the team are conscious about their role and behaviour towards their clients with ID.

Teams with clear relationship patterns, such as safety and open communication about feelings and expectations, and sharing responsibilities, can support each other even when situations are difficult and dangerous. This support can diminish their perceived level of stress, which might positively influence their way of supporting clients with ID. When a team of staff members works a long time together, for instance because the staff members have long-term contracts, this enables them to build meaningful working relationships with their clients and with each other. This is an important aspect of team work, which could influence their quality of support to clients with ID.

Finally, a last protective factor for building constructive interactions between staff and clients is a team that does ask for help, reflects on their actions, works together with professionals from outside the team, and shows flexibility to change the support in the best interest of the clients' needs.

Organizational factors.

The following protective organizational factors were found to be related to more positive interaction patterns between staff and clients with ID. Organizations that have clear organizational concepts (solution-focused) and

in the meantime have attention for a healthy working (for staff) and living climate (for clients with ID) affect the interactions between staff and clients in a positive way. These organizations are supportive for clients and their family/ parents, and for staff when speaking a common language, and sharing mutual norms and values. To be open in communication is not only important for staff members in interaction with clients with ID or with their parents or other relatives, but also for effective organizational management.

The quality of staff's interactions with their clients with ID who behave aggressively increases when clients, parents, staff, doctor, psychologist or therapist are working together (interdisciplinary cooperation), combining their expertise in order to provide adequate support for the needs of the client with ID. Especially relevant seems monitoring health and psychological problems of clients, because such problems are considered to be important antecedents of pain and distress, and subsequently of aggressive behaviour.

When organizations combine interdisciplinary cooperation with attention for staffs' expertise by facilitating refreshing courses, and also provide staff support on a regular basis by competent and experienced managers and psychologists and pedagogues, this increases the quality of interactions between staff and clients. More knowledge on, for instance, the level of cognitive, social and emotional functioning of clients is thought to positively influence the attitude and behaviour of staff towards the client.

Finally, an organization with attention for adequate housing for their clients with ID, and attention for monitoring and evaluation of the results of the treatment programs, is considered to be a protective organizational factor.

DISCUSSION

In order to gain information on the factors that may influence the interaction patterns between direct care staff and their clients with ID who show aggressive behaviour, five experts of the CCE (Centre of Consultation and Expertise) were interviewed. This interview study gives a first insight in factors that may influence behavioural responses of direct care staff to clients with ID showing aggressive behaviour.

Competencies and personal characteristics of staff members, such as the ability to analyse aggressive incidents, self-reflection and their attitude towards aggression, influence those interaction patterns. Contextual factors, including the complexity of the behaviour of clients or the dynamics in the client's living group (clients with severe behavioural problems living together), dynamics of the team (for instance, an ineffective team or a closed culture among team members), and organizational factors like vision, policy and housing, influence interaction patterns between a staff member and his or her client who behaves aggressively. For that reason observation and analyses should not only be directed at the level of staff, but also directed at the social environment of the client, the way a team of staff members work together, and towards the organizational support staff members receive. For instance, the importance of the positive influence of a clear organizational and team vision and policy towards individual staff-clients interactions reminds us to invest more in interventions that not only positively influence staff-client interactions (reducing the rate of aggressive incidents), but that also have an impact on a proper facilitation of those interactions by providing a healthy working and living climate.

In a meta-analysis by Hong, Liau, Hu and Jang (2013) the antecedents, consequences and moderators of service climate within organizations (i.e., employees' consensual beliefs about the organization's emphasis on service quality throughout the service production, delivery, and consumption processes) were studied. It was found that service climate mediated the effect of Human Resource (HR) practices and leadership on employee attitudes and performance, which were then translated into customer satisfaction and subsequent financial performance. Furthermore, service-oriented HR practices (i.e., oriented to service quality) and leadership appeared to have stronger relations with service climate than did general high-performance HR practices and leadership. It can be concluded that when organizations invest in selection, training and performance appraisal for employees and

when management focuses on setting goals and ensure that employees receive support, the service climate will improve.

In line with the findings of Hong et al. (2013), which pertained to organizations in general, Clare et al. (2017) focused on organizational factors within a community service for adults with ID. They interviewed team members about their perceptions of their personal well-being, team functioning and organizational commitment, quality and culture. It was found that multidisciplinary services for people with ID must have an agreed organizational vision in order to raise awareness of all team members about their own role in the organisation and the goals of their team. They also pointed at the importance of management to facilitate teams in sharing their knowledge and expertise in regular team meetings, because this could improve team cohesion. An agreed vision and team cohesion influence not only the team climate and commitment of staff towards their organization, but also staff's personal well-being and reduction of their level of stress (Bronkhorst, 2015; Clare et al., 2017).

These results are in line with the findings in this study pointing at organizational and team factors influencing staff-client interactions in a positive way, such as a clear organizational and team concept, having a clear communication style, investing in adequate support and expertise and evaluation of and subsequently monitoring the results of the treatment programs.

The experiences of the CCE experts in this study are in line with assumptions from the social-ecological model of Sameroff (2010), showing that behaviour cannot be separated from the social context, and also with research presented by Hastings. For instance, Hastings (2005) and Hastings et al. (2013) showed that the interaction between a direct care worker and his or her client with ID who behaves aggressively may be influenced by several individual staff member characteristics (e.g., age, sex, work experience, attitude or emotions and stress level), and by individual characteristics of the client with ID (e.g., level of ID, psychiatric disorders, age, emotions and stress level), and also by characteristics of the larger system around a client (team- and organizational culture).

The urgency of paying attention to the context in which aggressive interactions appear comes from a survey study examining the impact of the aggressive behaviour of adults with ID living in several community settings in Canada under 419 staff members (Hensel, Lunsky, & Dewa, 2014). It was concluded that managers or team leaders must acknowledge the need to support staff members who witness aggressive incidents. In general, full attention is going to the one who is injured, but Hensel et al. showed that staff members who witness aggression are more likely to induce negative psychological consequences like stress, than directly experiencing them. This could negatively affect their attitude and behaviour within a team and their interactions with clients. One could imagine that this is also the case for the clients themselves. Witnessing aggressive incidents at the living group could result in feelings of fear and distress, which may lead to aggressive reactions.

Unfortunately, research into the influence of the context remained only descriptive until 2005, and as a result the evidence base for the relations between organizational and team aspects on the one hand and staff-client interactions on the other hand remained weak. The present study's findings may be a first step towards future research on examining the factors that influence staff-client interactions from the organizational and team culture.

The ability to provide good quality of care (characterized by low levels of staff stress, positive staff emotions, responsive staff attitudes) depends on secure relationships between team members (team climate) and between them and those who support the team (i.e., team manager and/or consulting psychologists). The team manager and the consulting psychologist in their cooperation with the team are important influencers. In line with this finding the CCE developed a training program for consulting psychologists and team managers pointing at their influencing role in these processes and the importance of mutual cooperation for effective support for teams who deal with clients who show challenging behaviour problems (CCE, 2017). Hicks, Gibbs, Weatherly and Byford (2009) stated that successful interventions in children homes (without ID)

depend upon a complex balance of informal and formal processes. They revealed that the team manager has an important role in these processes and that when the team manager is able to "shape" the teams in such a way that staff uses coherent strategies towards children, the outcomes for these children will be more positive (i.e., less exclusion from school and a better group climate). However, as Hicks et al. (2009) described, there is no single recipe for how to be a good manager. This is actually a social process concerning all actors and parties included.

Despite our results and the findings in the study of Hicks et al. (2009), self-supporting teams have been introduced in Dutch health care (Bouman & Finkenflügel, 2016), whereby the influencing role of a team manager diminishes. However, according to a report of the CCE (2017), addressing their 2016 work in the care for people with ID in the Netherlands, there are concerns about the quality of organizations working with self-supporting teams, because the CCE experts witnessed an increasing communication distance between management and professionals and uncertainty about roles and responsibilities.

In (self-supporting) teams the team climate (team vision, mutual cooperation, ongoing evaluation) and expert advice are important factors influencing staff behaviour directing the interaction with their clients with ID who show aggressive behaviour. Knotter et al. (2016) showed that a positive team climate and access to immediate expert advice and direct support were related to a more responsive staff perception of the aggressive behaviour of their clients with ID. Knotter et al. (2016) also found a relation between a positive team climate (i.e., shared vision, participative safety, support for innovation and high task orientation) and a more rejective team attitude towards aggressive behaviour of their clients with ID. The results presented in this study show that it is a difficult task for direct care staff and the organizational support system to strike the balance between providing a safe working environment for staff (with adequate protocols to deal with aggression, use of a risk inventory, use of protection systems like beepers and limit setting, etc.) and support for staff to develop a responsive attitude (i.e., viewing clients with ID as persons who behave in a challenging way for a reason, and not as persons who intend to be threatening). Providing a safe working environment is the responsibility of all professionals in the organization. Notably, a primary focus on team safety may lead to a more rejective team attitude towards the aggressive behaviour of clients with ID (i.e., aggression being seen as a threat to the team and their individual members). It is important to implement national guidelines in health care organizations for persons with ID and aggressive and violent behaviour, like the English NICE guidelines (see for instance guidance's NG10, 2015; NG11, 2015; NG 54, 2016; NG93, 2018 and GID-QS10072; to be published in 2019). Implementation of guidelines can help to develop a safe service climate, especially when aggressive and violent behaviour is threatening the safety of both clients and staff.

Unfortunately, the ability to report and evaluate incidents is not always present in teams. This may be one of the risk factors for aggressive behaviour in staff-client interactions. Finding the right causes of the aggressive behaviour depends on staff's professional relationship with their clients (i.e., their knowledge about client's abilities and disabilities, the history, the relationships with other clients in the living group or with the family), their expertise (being properly trained), their working relationship with each other, with their team manager and consulting psychologists (for evaluation and feedback) and of clear protocols and easy to use registration tools for reporting aggressive incidents.

Limitations

This study is based on a small sample and on information from experts from one Dutch region only, omitting perspectives of clients, parents and other relatives, team leaders, consulting psychologists and managers. Therefore, the generalizability of the results is limited, and one should be cautious drawing firm conclusions. It is recommended to include perspectives of these other types of informants in a future study.

CONCLUSION

The data provided by the experts of the Dutch CCE region North-East who participated in this study provided us with interesting first insights in the contextual factors that may influence staff-client interactions in daily practice in the Netherlands. Direct care staff are a corner stone for organizations providing good quality of care to persons with ID. Interventions decreasing the frequency and severity of aggressive behaviour problems must not only target the individual who behaves aggressively, but also the context in which the aggressive behaviour occurs, such as staff-client interactions, team aspects (i.e., ability to cooperate, and willingness to accept support) and organizational aspects (vision, policy and the way staff is supported by management).

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VI

SUMMARY AND GENERAL DISCUSSION

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INTRODUCTION

In most studies and staff training programs the term "challenging behaviour" is used to describe behaviour problems (including aggression, self-injury and stereotypical behaviour patterns) of clients with ID. However, it is difficult to generally describe "challenging behaviour of clients with ID", because the antecedents, type, goal and impact of the behaviour may differ from person to person. Direct care staff consider aggressive behaviour to be the most severe form of challenging behaviour (Lambregts, Kuppens, & Maes, 2009), which affects their emotions (Lambregts et al., 2009) and style of working, that is, they tend to show more assertive control (Willems, Embregts, Bosman, & Hendriks, 2014).

Persons with ID showing aggressive behaviour often live in care institutions, where they receive (mandatory) around the clock care from direct care staff (Taylor & Novaco, 2005). This can be considered a complex task, because there is an increased risk for staff being hurt physically and/or emotionally, which may lead to high levels of arousal and negative emotions or negative attitudes towards their clients. Recognizing their own influences on the manifestation of aggression, and perhaps even sometimes acknowledging their aggression-evoking role in the dynamic interactional process between them and clients is perhaps the most complex and difficult part of their work.

In order to understand challenging behaviour, Hastings et al. (2013) described challenging behaviour as a means of the client to communicate

something. For staff, it is therefore important to find out what the function is of the aggressive behaviour they encounter. Interdisciplinary support, training and education by professionals who are not personally involved in the constant dynamic interactions of staff with their clients are thought to be valuable to help staff understand the possible causes of the aggressive behaviour (Rose, Mills, Silva, & Thompson, 2013). Besides, providing emotional support to staff members can help them overcome the aftermath of negative events with clients who behave aggressively. Such a package of interventions could lead to a change in staff's attitudes and reactions towards the aggressive behaviour of their clients with ID (Valenkamp, 2011).

In this dissertation, the main research aim was to acquire more knowledge on the nature of responses of staff towards clients with ID showing aggressive behaviour, and to identify factors that may enhance good care for these clients in order to contribute to their quality of life. There was a focus on the impact of aggressive behaviour of persons with ID on staff's attitudes and their behavioural reactions, while accounting for the influence of contextual factors. Several factors were identified at a client, team and organizational level, including the quality of support which the interdisciplinary team (i.e., psychiatrists, medical doctors, psychologists, therapists) working with staff provided, and the quality of training programs which have been developed to help staff to deal with challenging (aggressive) behaviour problems of their clients with ID.

In this chapter, the main findings of the studies presented in this dissertation are summarized and discussed, followed by a discussion of the implications of the results. Next, the main conclusions are considered in the context of the strengths and limitations of the studies, and recommendations for further research as well as for practice and policy are presented.

In various studies the way staff behave when encountering challenging (i.e., aggressive) behaviour of their clients with ID was examined (see for instance, Hastings, 2005; Willems, Embregts, Stams, & Moonen, 2010). However, staff's reactions to aggressive behaviour of clients with ID have not often been explored from a socio-ecological perspective. Therefore, in chapter 2 several individual and contextual factors of staff behaviour were assessed, and in chapter 3 staff's attitudes towards aggressive behaviour of their clients with ID were examined. In chapters 4 and 5 the influences of several contextual variables on the effectiveness of staff training and interventions used in the Dutch care facilities for clients with ID were studied.

SUMMARY CHAPTERS 2, 3, 4 & 5

Chapter 2 Staff behaviour in relation to aggressive behaviour

In chapter 2 the behaviour of staff who experienced aggressive incidents of clients with ID in an institutional setting (around the clock care) was studied. Data were collected from 121 staff members (working in 20 direct support staff teams) on background characteristics of the individual staff members and their teams (gender, age, years of work experience, position and education), the frequency and form of experienced aggression of clients with ID (verbal or physical), staff members' attitudes towards aggression, and the types of behavioural interventions they performed (providing personal space and behavioural boundary-setting, restricting freedom and the use of coercive measures). Additionally, client group characteristics (age of clients, type of care and client's level of intellectual disability) were assessed.

Multilevel analyses were performed to examine the relationship between all variables and the behavioural interventions included. The results showed that for providing personal space and behavioural boundary-setting as well as for restricting freedom, the proportion of variance explained by the context (staff team and client group characteristics) was three times larger than the proportion of variance explained by individual staff member characteristics. For using coercive measures, the context even accounted for 66% of the variance, whereas only 8% was explained by individual staff member characteristics. Negative attitudes towards aggression of the direct support team as a whole proved to be an especially strong explaining variable for the use of coercive measures by them. To diminish the use of coercive measures, interventions could therefore be directed towards influencing the attitudes of direct support teams instead of aiming at individual staff members.

Chapter 3 Attitude towards aggression

In order to gain more knowledge on factors that may influence staff behavior, in chapter 3 direct care staff's (responsive or rejecting) attitudes towards aggression of clients with ID were further examined. Data were collected on client characteristics, as well as on individual and team characteristics of 475 direct care staff members, not involved in the study discussed in chapter 2, working in 71 teams. By using multilevel analyses it was revealed that a positive team climate was positively associated with both rejecting and responsive attitudes towards aggression. Senior staff members and female staff showed less responsive attitudes towards aggression, whereas a relatively high percentage of female staff in a team and positive attitudes towards the assistance from external professionals were associated with a more responsive attitude towards aggression. Unexpectedly, staff who had experienced less verbal and/or physical aggressive incidents of their clients with ID showed more rejecting attitudes towards aggression. Finally, characteristics of the clients with ID accounted for the largest amount of variance in attitudes towards aggression of direct care staff, in particular the presence of psychiatric diagnoses.

Chapter 4 Staff training in relation to challenging behaviour

Chapter 4 consists of two separate meta-analyses examining (1) the effects of training programs on the behaviour of direct care staff working with clients with ID who present challenging behaviour problems (predominantly aggressive and violent behaviour), and (2) the effects of staff training on the challenging behaviour of their clients with ID. A 3-level random effects model was used for the two meta-analyses to account for both within and between study variance. Results showed that staff training was moderately effective in changing staff behaviour, but no convincing evidence was found for an effect on the reduction of challenging behaviour of persons with ID. The type, content and goal of training did not moderate the effect of staff training, whereas sample and study characteristics (e.g., sex of the participant or type of measurement used) did. It was concluded that the way a training program is delivered to staff may be of much more importance than the specific characteristics of a training. Another conclusion was that further research should be conducted to expand knowledge on effectiveness of direct care staff training programs in relation to the challenging behaviours of clients with ID.

Chapter 5 Interactions between staff members and clients with ID who behave aggressive, a qualitative study

Chapter 5 is a qualitative study on the influences of contextual characteristics on staff employed in institutions for people with ID who behave aggressively. Five experts were interviewed in an open-ended topic based format. Results showed that characteristics of the client, the living group, staff, team and organization all influence the interactions of staff members with their clients with ID who behave aggressively, both in a negative and positive way. That is: the severity of the behaviour problems of the clients, the dynamics between clients living in a group, staff's personal competencies, the quality of the communication between team members, the perceived support delivered by management and consulting psychologists, the presence of long-term employment contracts for staff members within teams, and finally the service climate were all mentioned as factors that affected staff–client interactions.

The presence of a clear organizational vision statement about aggression and a supporting policy for staff, clients and parents were considered to be associated with positive reactions towards aggressive behaviour of clients with ID (for instance, showing a more responsive attitude towards aggression). In turn, positive staff reactions towards aggressive behaviour were related to a responsive style of working, which was related to good quality of care for clients with ID. In order to improve quality of care for clients with ID who behave aggressively, it was considered to be important to start with a clear organizational view on the service climate desired, and to implement a safe and healthy team climate. Teams should receive organizational support, including training to improve their skills to make proper contact with their clients, resulting in a reduction of the number of (unexpected) aggressive situations.

DISCUSSION

According to Braine (1994) one of the four possible effects of aggression is that it can lead to an aversive reaction by the victim. Therefore, staff confronted with (verbal or physical) aggressive behaviour of their clients with ID may develop a rejective attitude towards aggression. This means that aggression is perceived as offensive, destructive and intrusive behaviour, which needs to be controlled by applying coercive measures, such as fixation or seclusion. The use of coercive measures (especially physically interventions, like fixation), however, can lead to negative emotions by clients with ID, such as anxiety and anger, which in turn can lead to even more aggressive reactions towards staff (Hawkins, Ellen, & Jenkins, 2005). This could lead to a so called negative (coercive) circle of aggression, which occurs when staff members react to their client's aggression with more control because they evaluate the aggression as directed at them personally (Jahoda & Wanless, 2005). Whereas in reaction to the increased control by staff, clients with ID show more aggressive behaviour, interpreting coercive measures as acts of aggression by staff (Hawkins et al., 2005).

In research, there is growing attention for the inter-personal relationship between staff and clients with ID (see for instance Hastings, 2005; Willems et al., 2010). Research points at the importance of acknowledging the reciprocal role of staff's emotions, attitude and behaviour towards client's emotions and behaviour in interventions targeting the reduction of aggressive incidents. Hensel, Lunsky and Dewa (2013) found that staff reported the most emotional difficulties when they perceived their colleague to be intentionally injured compared to a direct experience of aggression. According to Hensel et al. (2013), many staff members evaluate personal experienced aggression to be a part of their job that should be dealt with. This finding is interesting because it indicates that staff's feelings and behaviour may differ depending on the specific context in which the aggression occurs. One could imagine that this is also the case for clients with ID. Witnessing an aggressive incident between a client and staff member could evoke feelings of unsafety. Such feelings can negatively affect clients' behaviour, for instance, by showing aggressive behaviour.

The findings reported in this dissertation underline the major importance of contextual factors (e.g., characteristics of the living group, team and organization) related to staff and client behaviour. No compelling evidence was found for the influence of individual characteristics. Staff training programs targeting individual staff members' behaviour were only moderately effective in changing staff behaviour, whereas no evidence was found for the effectiveness of these programs changing aggressive behaviour of clients with ID. No staff training programs were found that did address contextual factors, or with a primary focus on team climate, aimed at changing staff behaviour and clients' aggressive behaviour in a positive way. The relation between the contextual factors and staff responses to clients with ID showing aggressive behaviour, in particular for rejective staff attitudes towards aggression at a team level, and the lack of interventions targeting such negative team attitudes, make it clear that there is an urgency for further research. It seems necessary to develop interventions which target not only the aggressive behaviour of the client with ID, but also focus on organizational aspects and on staff collaboration to meet the complex needs of clients with ID. In such a way the application of ineffective and (sometimes inhuman) coercive measures can be reduced for people with intellectual disabilities who behave aggressively.

Notably, Baumeister, Bratslavsky, Finkenauer, and Vohs (2001) showed that in general for humans often intrusive events, negative emotions, unfriendly or conflicting interactions, and negative and conflicting behaviours have stronger and more lasting behavioural consequences than comparable positive events and interactions: 'bad is stronger than good'. Results reported in this dissertation are in line with these findings. The ultimate question to be answered is "what can be done to promote positive reactions by staff?" Changing the context might be the answer to that question.

In situations of conflict and insecurity, staff members should be encouraged to trust and help each other when they perceive unsafe situations as was reported in chapter 5. This is a difficult task for staff, and also a neglected part of interventions targeting the aggressive behaviour problems of clients with ID, which is until now not well researched. Working in a team often means that staff work in shifts

providing 24-hour care for people with ID, and carrying out the same tasks for the same group of clients. They often work alone and, in case of dangerous situations, they have to rely on other colleagues for assistance (for instance by using beepers). The incoming team members depend on the observations and information of the staff member who experiences an aggressive incident with a client. The possibility that the information of that staff member may be biased by negative emotions, such as fear or anger, could in fact influence their subsequent intervention behaviour (for instance, by applying coercive measures).

Informal team processes constitute another complicated aspect of teamwork, which is also often neglected in interventions and in research. These informal team processes, also designated as an informal working culture (Hastings & Remington, 1994) or an affective team climate (Leveque, Roose, Van Roelen, & Van Rossem, 2014), refer to the attitudes of team members towards their colleagues and the mutual interaction of team members. "These informal interactions may generate positive attitudes and perceptions of each other and of the team's functioning, similarity of ideas or even consensus, and a sense of coherence and trust, but they may also generate negativity, competition and conflict resulting in stress (Leveque et al., 2014, pag. 115.)".

According to the Theory of Planned Behaviour (Ajzen, 1991) a principal predictor of staff behaviour is the concept of "intention". Intention is regarded as the motivation necessary to perform behaviour. One of the three determinants of intention is according to Ajzen the "subjective norm" (besides attitude and perceived control). Ajzen defines the subjective norm as the perception of general social pressure from important others to perform or not to perform a given behaviour. It is possible that staff's perception of social pressure imposed by important team members to apply for instance coercive measures controlling aggression, could in fact influence individual team members' intentions and the actual interactions with the client. It could be a possible explanation for the results found in the first study (chapter two) whereby the rejective attitude of a team as a whole was associated with a more frequent use of coercive measures. Especially informal team processes could have an influencing role in the development of subjective norms.

According to Doosje, Ellemers, and Spears (1995) individuals do not always feel free to perceive their environment in their own way. Rather, their perceptions are often controlled by the consensual 'social reality' induced by the status hierarchy in a particular social context. It is important to encourage individual staff members to influence team dynamics in such a way that a client can benefit from it, and, if necessary, to question the status hierarchy and the way the team responds to aggressive behaviour of clients with ID. Based on the results of our study presented in chapter two it is advisable to have a mix of ages in teams, of experienced staff and novices, and a mix of female and male team members. It also appears recommendable to provide enough organizational support for teams, aiming at a healthy working climate and creating a space for regular team meetings in which the underlying causes of the aggressive behaviour of clients with ID can be discussed. Teams should share knowledge on the way problems can be solved, and should receive emotional support while doing that (Farrington, Clare, Holland, Barrett, & Oborn, 2015; Buljac-Samardžic, 2012).

In chapter three it was also argued that providing the team with valuable expert advice is important, in particular to examine the underlying causes of aggressive behaviour problems of clients with ID. Access to expert advice to be directed at a team level instead of aiming at individual team members was also advocated. In the Netherlands, this expert knowledge is provided by internal and external experts (for instance by the CCE), but more attention is needed for strategies to effective influence staff behaviour from the perspective of informal team processes. The input of external professionals can result in a positive change of the informal work culture and can enhance shared positive attitudes towards aggression. A reflective team attitude towards aggression can lead to an improvement of positive contact between staff members and their clients with ID, resulting in better outcomes (i.e., less aggression and improved quality of life). Efforts aimed at improving the team climate should therefore go hand in hand with constant education and training, emphasizing the possible underlying causes of the aggressive behaviour, resulting in the implementation of effective interventions to reduce aggression in such a way that the living

climate for persons with ID will improve in a positive way (Van der Helm, 2011). This could lead to a permanent reduction of aggressive incidents (Ros, Van der Helm, Wissink, Stams, & Schaftenaar, 2013).

It is unlikely that only providing expert advice is enough to influence the attitude of a team of staff members towards aggression, according to the results of the study reported in chapter three. Providing support by a team leader also appeared very important, especially for those teams experiencing a great burden of responsibility. Results presented in this dissertation (chapter one) show that if (senior) staff members are engaged in management or coordination tasks, this might increase the tendency of staff to restrict the freedom of their clients. According to Buljac-Samardžic (2012) a team leader who shows a coaching style with attention paid to education, combined with emotional support and stimulating a problem solving approach, expands the sense of safety of team members. Such an approach could diminish the burden of responsibility that staff members experience.

Ideally, interventions, education and training should target the competencies of staff members, such as the ability to analyse the nature of aggressive incidents, working according to a plan-do-check-act cycle, showing an open style of communication, being able to reflect on the impact of their own behaviour, and showing a responsive attitude (chapter 5). Finally, from an organizational perspective, it is important for organizations to invest in sharing knowledge and in education of staff members, especially when organizations evaluate the outcomes of staff training in line with evidence-based practice (Campbell & Hogg, 2008). Training should also be aimed at enhancing staff competences to keep record of, monitor and evaluate each aggressive incident from multiple perspectives (i.e., from a client, staff and a setting perspective). Furthermore, staff should be facilitated to reflect on their own behaviour, for instance by analysing transactional processes and learning from collected data of aggressive incidents. Interventions should be aimed at staff's professional relationship with their clients with ID (Willems, 2016), their mutual working relationship and the collaboration of staff with their team manager and consulting psychologist or orthopedagogue.

The informal team processes, the level of expert advice, education programs and sufficient emotional support by a team leader are aspects of a sound organizational service climate, which could affect the quality of life of clients with ID in a positive way (Pãtras, Martínez-Tur, Estreder, Garcia, Moliner, & Peiró, 2018). An organizational service climate emerges from the shared ideologies, assumptions and values of the employees. Providing a clear organizational concept could influence the attitude and behaviour of staff towards clients with ID in a positive way (Aarons & Sawitzky, 2006). In a study of Flynn, Hastings, Gillespie, McNamara and Randell (in press) the positive work motivation of staff members was found to be influenced by the environment in which staff work. The authors assume that teambuilding and social and emotional based systems to support staff in their work setting are important to improve the motivation of staff members, and could reduce the level of experienced emotional exhaustion. Emotional exhaustion is one of the most important predictors of burn-out according to a study of Hensel, Lunsky and Dewa (2015). This is in line with the results of research presented by Bronkhorst (2015), who found that when health care organizations invest in a safe organizational climate both the physical and psychological health of the employees improve.

It is a complex task for organizations to strike the balance between investing in a safe organizational climate for their employees and to provide the best possible quality of care for their clients, respecting their independence and autonomy. According to the results of a study presented by one of the Dutch labour unions (CNV Zorg & Welzijn, 2018) addressing aggression in Dutch health care for people with ID, more than 50% of the 640 respondents (mainly staff working in day-care centres and in residential facilities for people with ID) experienced physical (70%) or verbal (79%) aggression in their work, and 53% of the respondents reported an increase of aggressive incidents during the last year. According to CNV, Dutch health care organizations fail to implement practice-based and evidence-based programs to prevent aggression. They report that many organizations cannot find competent staff, and they point at the extreme high percentage of flex workers. Flex working can put pressure on

the quality of care for clients with ID. This recent report underpins the urgency to provide a safe service climate and realize an adequate HRM policy in Dutch care organizations for people with ID.

In 2008, the Dutch 'Inspection for Health Care' (IGZ) in collaboration with several Dutch labour unions and other partners in health care signed the declaration ´Care for Freedom´ aiming at diminishing the use of coercive methods in order to improve the quality of life of persons with exceptional needs, including persons with an ID (IGZ, 2008). In 2011, IGZ published a study on the quality of care of persons with ID who were restricted in their personal freedom organization (IGZ; 2011). They concluded that sufficient quality of care and safety were not always guaranteed in the 24 health care organizations that had been visited by them. The report's main conclusion was that further improvements were needed, particularly in terms of the implementation of an individual support plan, while more attention should be payed to the manner in which restrictive measures were applied. In approximately half the locations visited, the patient and/or his representative were not adequately consulted about the content of the support plan or the use of restrictive measures. In addition, the majority of care providers could not show a recent risk inventory. On the positive side, IGZ noted an increasing emphasis on training staff to cope in a better way with challenging behaviour of clients with ID, and on multidisciplinary collaboration of staff with other professionals, yet concluding that the balance between quality and quantity of staff providing care to clients with ID was a vulnerable one.

As already mentioned, in the report of CNV (2018) the struggle of organizations not being able to employ qualified staff was addressed, which might result in an unsafe working environment for staff. Organizations should create a safe working environment for staff by providing them proper education in order to guarantee them being qualified to work according the latest guidelines, thus guaranteeing a safe living environment for clients with ID. However, in the mean time there is a constant pressure on organizations to employ qualified staff. Many organizations are dealing with high rates of employee turnover and are coping with more and more clients with ID showing problem behaviour (CNV, 2018). It is possible that because of these difficulties these organizations accept a more restrictive staff policy, with no room for the development of autonomy and independence (i.e., self-determination) of clients with ID, not meeting the major concerns of the IGZ (2011). The use of medication to drug clients with ID without a therapeutic reason (De Kuijper & Vrijmoeth, 2014; Sheehan, Kimona, Giles, Cooper, & Hassiotis, 2018) is a risk when organizations cannot employ competent staff. This could negatively affect the quality of care for clients with ID.

Organizations and professionals need professional assistance for building a healthy organizational climate in which good quality of care is embedded in a safe working environment and a safe living climate. There is an emerging need for nationwide service standards and a comprehensive service model in the Dutch care for people with ID, especially when aggressive incidents occur frequently. A promising Dutch program could be 'Safe Plus' (Bronkhorst, Tummers, & Steijn, 2018), aiming at the improvement of the safety of the organizational and working climate for staff. But organizations should also receive financial support from the Dutch government to be able to invest in more (competent) staff. Unfortunately, until now this seems no urgent issue on the political agenda.

Efforts are made to create national guidelines for the treatment of challenging behaviour problems in adults with ID (NVAVG, 2017), also aiming at the reduction of off label use of psychotropic drugs. The English NICE guidelines are an example of good practices, not only focusing on how to prevent or treat challenging behaviour problems in an effective way (NICE; NG11 Challenging Behaviour and Learning Disabilities; prevention and interventions for people with learning disabilities whose behaviour challenges, 2015), but also on providing information about the service design, for instance by strategic planning and targeting the infrastructure (see NG 93; learning disabilities and behaviour that challenges; service design and delivery, 2018 or GID-QS10072; service model for people with learning disabilities and challenging behaviour to be published in March 2019). Unfortunately

information for organizations about the influence of the team context on staff's attitude and behaviour (informal team processes) and type of interventions to create a positive team atmosphere (for instance, open communication and room for discussion and reflection) are still underrepresented in these guidelines.

It is important to support the self-determination (for instance by autonomy support; Frielink, 2017) of clients with ID living in health care organizations. This seems especially important when challenging behaviour puts pressure on the quality of care provided by staff, not only because health care organizations have to live by the law (for instance, the Dutch medical contract act; WGBO), but also because self-determination is an essential dimension of the quality of life (Schalock & Verdugo, 2002). Feedback from the clients themselves (and/or from family members) can increase the impact of an expert advice and the possibility of shared decision-making and collaborative care planning (Sheehan et al., 2018). When a team works together with their clients and families using client feedback to assess the needs, preferences and dislikes and induce an individual interpretation of the concept of quality of life, this may change staff attitudes into a more responsive way (see for instance, Hutchington, Hastings, Hunt, Bowler, Banks, & Totsika, 2014). According to the report of IGZ (2011) and Sheehan et al. (2018) it is important to improve self-determination of clients with ID who behave aggressively, and to diminish restrictions of freedom.

In sum, to improve the quality of staff-client interactions it is important to reduce dangerous or stressful situations for both clients with ID and staff members during aggressive incidents. More knowledge on the nature and causes of the aggressive behaviour (including more information on the impact of psychiatric diagnoses) from experts could influence the way staff interpret the aggressive behaviour of their clients in a more responsive way. The team and organizational context influence staff-client interactions. Therefore, more attention towards the service and team climate in the development of national guidelines, staff training programs or treatment programs targeting the reduction of aggressive behaviour is needed.

Limitations of this dissertation

The studies presented in this dissertation offer no causal explanations and generalisation of results is limited. It is therefore recommended to conduct further research in larger and more heterogeneous populations in order to replicate the findings of the studies in this dissertation. A second limitation is that verbal and physical aggression were only measured by means of questionnaires. In order to fully capture the multidimensional nature of aggressive incidents by clients with ID living in residential facilities, future research should use both behavioural observation and other means of registration of incidents of aggression in addition to questionnaires. Finally, not all possible factors that could influence staff attitude and behaviour could be examined within this research project.

Implications for further research

Although different factors with regard to the setting in which the dynamic interaction between staff and their clients occurs were researched, future research could assess more details about the influence of the service climate, the team climate (especially regarding the informal or affective team climate), the living group climate and the impact of support by external professionals and team leaders on the inter-personal relationships between staff and persons with ID. For instance, by aiming at the informal working culture, it could be interesting to assess the social competencies of team members and their popularity in the team and in the organization (see for instance De Bruyn, Cillessen, & Wissink, 2010).

In future research, staff training programs targeting clients' aggression could include a person focused view on client perspectives, characteristics and history. In clinical practice and in research the perspectives of clients and relatives on the support they receive cannot be missed. By combining this with functional analysis of aggression and with an analysis of team processes, a more evidence-based organizational view on how support should be given could be introduced. In line with this, training programs for staff should not only concentrate on improving skills, knowledge or on changing staff's attitudes,

but should also concentrate on the organizational structures that support these programs (Campbell, Robertson, & Jahoda, 2014). Hereby, longitudinal training concepts are mandatory, because of the often long existing aggressive behaviour patterns of clients that programs target (Campbell, 2010).

Finally, it is recommended to invest in national service model standards in order to improve a safe working climate for staff and quality of life of people with ID who depend on long-term care.

CONCLUDING REMARKS

The aim of the current dissertation was to examine the dynamic interactions between (teams of) staff member(s) and clients with ID who show aggressive behaviour. In our opinion clients with ID, even if they behave in an aggressive way, should be considered as individuals who need adequate care instead of persons being intrusive or annoying. Also, it is always important to investigate the possible causes of aggression. We have identified staff variables and team variables that affect the attitudes and behaviour of staff members towards their clients with ID who behave aggressively, and we identified possibilities for staff to develop meaningful relationships with their clients with ID, with as little aggression as possible.

The results of this dissertation justify the conclusion that organizations providing care for people with ID should pay more attention to contextual factors, such as developing a clear organizational vision, providing adequate support and organizing regular team meetings in order to create a safe and supportive environment for clients as well as for the direct care staff who support them. Such an approach could contribute to a more positive and safer working climate, and to an improved quality of life for people with ID.

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APPENDICES

Samenvatting (Nederlands)

Curriculum Vitae

Publicaties

Overzicht bijdrage congressen

Dankwoord

SAMENVATTING

Het onderzoek in dit proefschrift richt zich op de houding en het gedrag van begeleiders die te maken krijgen met het agressieve gedrag van mensen met een (licht) verstandelijke beperking (L)VB). De manier waarop begeleiders handelen als zij in hun dagelijks werk geconfronteerd worden met agressie is door de jaren heen onderwerp geweest van verschillende onderzoeken.

In dit proefschrift is nadrukkelijk aandacht voor de invloed van contextuele factoren op de houding en het gedrag van deze begeleiders. Voorbeelden van contextuele factoren zijn: het team waarin gewerkt wordt, de mate van ondersteuning die begeleiders ontvangen van deskundigen en de kenmerken van de groep cliënten met een VB die bij elkaar wonen in een 24-uurs setting. Daarnaast is er ook aandacht voor de effectiviteit van trainingen aan begeleiders die met name gericht zijn op het omgaan met uitdagend gedrag.

Het voornaamste doel van het onderzoek is zicht te krijgen op de werkzame factoren die het contact tussen een begeleider en zijn of haar cliënt met een (L)VB kunnen optimaliseren. Een waardevol en vertrouwd contact kan het resultaat van een behandeling versterken die gericht is op het verminderen van agressie, maar kan ook de kwaliteit van leven vergroten.

Hoofdstuk 1: Algemene Inleiding

In de algemene inleiding (H1) wordt een korte literatuurweergave gegeven van onderzoek over de prevalentie en definitie van agressie, de impact die agressie kan hebben op het gedrag en welzijn van begeleiders en de impact van het beheersmatig handelen van begeleiders op het gedrag en welzijn van personen met een (L)VB die agressieve gedragsproblemen vertonen. Dit alles wordt beschouwd vanuit sociaal ecologisch perspectief. Bij een agressie-incident tussen een begeleider en zijn of haar cliënt is er niet alleen een interactie tussen twee personen, maar ook met de verschillende systemen daar omheen, zoals bijvoorbeeld het team of de woongroep. Tot slot wordt er verkend wat er in de literatuur bekend is over het scholen van begeleiders opdat zij in staat zijn hun werk te doen als zij worden geconfronteerd met agressief gedrag. Welke ondersteuning is er nodig om te zorgen dat begeleiders op een veilige en respectvolle manier kunnen omgaan met agressie-incidenten tijdens hun werk?

In de hoofdstukken 2 tot en met 5 worden de resultaten van de vier onderzoeken gepresenteerd. In hoofdstuk 2 is onderzocht welke kenmerken van individuele begeleiders en hun teams, maar ook van de woongroep waar ze ondersteuning bieden, in verband kunnen worden gebracht met hun interventiegedrag als zij in het werk met agressie worden geconfronteerd. In hoofdstuk 3 is onderzocht welke factoren de houding van begeleiders ten aanzien van agressie kunnen beïnvloeden. In hoofdstuk 4 worden de resultaten van twee meta-analyses weergegeven die betrekking hebben op de effectiviteit van trainingen aan begeleiders die in hun werk uitdagend gedrag tegenkomen. In hoofdstuk 5 wordt in een interview gevraagd naar de ervaringen van consulenten werkzaam voor het Centrum voor Consultatie en Expertise (CCE) met consultaties in de zorg voor mensen met een verstandelijke beperking, waar agressie een rol speelde. Welke factoren kunnen van invloed zijn op de interactie tussen een begeleider en zijn of haar cliënt die zich agressief gedraagt? Voorbeelden van factoren zijn: kenmerken van de persoon met een (L)VB, de begeleider, het team en de organisatie.

Hoofdstuk 2: Gedrag van begeleiders in relatie tot agressief gedrag

In hoofdstuk 2 is het gedrag van begeleiders onderzocht als zij worden geconfronteerd met agressief gedrag van cliënten met een (L)VB die in een instelling wonen. Van 121 begeleiders (werkzaam in 20 verschillende teams van 1 organisatie) zijn gegevens verzameld over achtergrondkenmerken als geslacht, leeftijd, werkervaring, functie en scholing. Ook zijn gegevens verzameld over de frequentie en verschijningsvorm (verbaal of fysiek) van agressief gedrag van de cliënten met (L)VB, de houding van begeleiders ten aanzien van agressie en welke typen gedragsinterventies zij gebruiken (van ruimte bieden en grenzen stellen tot het beperken van de vrijheid en het gebruik van Middelen of Maatregelen; M of M). Tot slot zijn er achtergrondkenmerken verzameld van de cliënten (woonachtig op een woongroep) zoals leeftijd, ZorgZwaartePakket (ZZP) en de mate van de verstandelijke beperking.

Om de relatie tussen de verschillende gedragsinterventies en de hierboven genoemde kenmerken te onderzoeken zijn multilevel regressieanalyses uitgevoerd. Uit de resultaten blijkt dat de gedragsinterventies: ruimte bieden en grenzen stellen, het beperken van vrijheid en de variantie -verklaard door omgevingsvariabelen- drie keer groter is dan de variantie verklaard door kenmerken van de individuele begeleider. Onder omgevingsvariabelen worden het team van begeleiders en de kenmerken van de cliëntgroep verstaan. Voor het toepassen van M of M blijkt de context zelfs 66% van de variantie te verklaren, ten opzichte van slechts 8% van de kenmerken van een individuele begeleider.

Een afwijzende houding ten opzichte van agressie van een team begeleiders als geheel blijkt een krachtige voorspeller voor het frequenter toepassen van M of M. Om het toepassen van M of M te verminderen is het aan te bevelen om interventies te richten op het team als geheel in plaats van op de begeleider als individu.

Hoofdstuk 3 Houding ten aanzien van agressie

Om meer inzicht te krijgen welke factoren het gedrag van begeleiders beïnvloeden wordt in hoofdstuk 3 de houding van begeleiders (afwijzend ofwel responsief) ten opzichte van agressief gedrag van hun cliënten met

een (L)VB onderzocht. De kenmerken van een nieuwe onderzoeksgroep bestaande uit 475 begeleiders (werkzaam bij 8 verschillende organisaties) en de kenmerken van 71 teams zijn verzameld alsmede de gegevens die betrekking hebben op hun cliënten met een (L)VB.

Na een multilevel regressieanalyse blijkt dat een positief teamklimaat positief samenhangt met zowel een afwijzende als een responsieve houding ten aanzien van agressie. Begeleiders met een afwijzende houding ten aanzien van agressie interpreteren agressief gedrag van hun cliënten met een VB als inbreuk makend ofwel bedreigend. Begeleiders met een responsieve houding zijn in staat de functie achter het gedrag te signaleren, waarbij zij bijvoorbeeld agressie interpreteren al zijnde een signaal van communicatie of van zelfverdediging.

Begeleiders met veel werkervaring en vrouwelijke begeleiders blijken een minder responsieve houding ten opzichte van agressie te hebben. Als begeleiders de ondersteuning, die ze ontvangen van externe deskundigen als waardevol waarderen, blijkt dat samen te hangen met een meer responsieve houding. Een groot aantal vrouwelijke begeleiders in een team hangt samen met een meer responsieve houding van een team als geheel. In tegenstelling tot de verwachting blijkt dat begeleiders die te maken hebben met weinig agressie een meer afwijzende houding hebben ten aanzien van agressie.

Tot slot blijken kenmerken van de cliëntpopulatie de grootste hoeveelheid variantie met betrekking tot de houding van begeleiders ten opzichte van agressie te verklaren. In het bijzonder de psychiatrische diagnoses.

Hoofdstuk 4 Training van begeleiders in relatie tot uitdagend gedrag

Hoofdstuk 4 bestaat uit 2 aparte meta-analyses. In de eerste analyse wordt de effectiviteit van trainingsprogramma's op het gedrag van begeleiders onderzocht, die te maken krijgen met uitdagend gedrag (waaronder agressief gedrag) van cliënten met een (L)VB en in de tweede analyse de effectiviteit van een training aan begeleiders met betrekking tot het probleemgedrag van cliënten met een (L)VB.

Voor beide meta-analyses is een multilevel (op 3 verschillende niveaus) random effect model gehanteerd om zowel de variantie binnen een onderzoek en tussen de verschillende onderzoeken te kunnen verklaren. De resultaten tonen aan dat trainingsprogramma's aan begeleiders gemiddeld genomen effectief zijn. Echter er is geen bewijs gevonden dat het trainen van begeleiders ook resulteert in het verminderen van het aantal agressie-incidenten van mensen met een (L)VB. Het type training, de inhoud van de training en het doel van een training blijken de effectiviteit niet te beïnvloeden. Dit is wel het geval voor de kenmerken van de onderzoeksgroep en de kenmerken van het onderzoeksdesign (bijvoorbeeld het geslacht van de begeleider in de onderzoeksgroep ofwel de gebruikte onderzoeksmethode). De conclusie is dat de manier waarop een training wordt gegeven mogelijk invloedrijker is dan de kenmerken van een training. Tevens wordt vervolgonderzoek naar de effectiviteit van trainingsprogramma's aan begeleiders aanbevolen, waarbij nadrukkelijk de link wordt gelegd tussen het trainen van begeleiders en het verbeteren van de kwaliteit van ondersteuning c.q. het verminderen van agressieproblemen bij personen met een (L)VB.

Hoofdstuk 5 interacties tussen begeleiders en cliënten met een verstandelijke beperking die zich agressief gedragen: een kwalitatief onderzoek.

Het onderzoek weergegeven in hoofdstuk 5 richt zich op de invloed van omgevingskenmerken. In het bijzonder de invloed hiervan op het contact tussen begeleiders en hun cliënten met een (L)VB. Te meer als agressie dit contact onder druk zet.

Vijf coördinatoren werkzaam bij het CCE, zijn geïnterviewd door middel van open vragen aan de hand van vaste onderwerpen. Uit de analyse van de resultaten komt naar voren dat de kenmerken van de cliënt met een (L)VB die zich agressief gedraagt, de kenmerken van de woongroep, de kenmerken van de begeleider, van het team en de organisatie zowel positief als negatief het contact van een begeleider en zijn of haar cliënt beïnvloeden. Voorbeelden van kenmerken zijn: 1) de complexiteit van het probleemgedrag, 2) de dynamiek tussen cliënten onderling, 3) de persoonlijke competenties van begeleiders, 4) de kwaliteit van de communicatie tussen teamleden, 5) de mate van ondersteuning van managers (teamleiders) en orthopedagogen/

psychologen, 6) de aanwezigheid van vaste contracten in een team en tot slot 7) het organisatieklimaat. Het hebben van een heldere visie in een organisatie en een daarop gestoeld beleid om begeleiders, cliënten en hun familieleden te ondersteunen blijken positieve interacties tot stand te brengen tussen begeleiders en hun cliënten. Deze positieve interacties hangen samen met een goede kwaliteit van zorg, wat responsief van aard is met betrekking tot de noden van personen met een (L)VB. Om de kwaliteit van zorg te beïnvloeden wordt het verstandig geacht om als organisatie eerst een duidelijk standpunt in te nemen over wat een gewenst klimaat is dat richting geeft aan een veilig en gezond werkklimaat. Teams moeten ondersteuning krijgen vanuit de organisatie, waaronder scholing om hun contactuele vaardigheden te verbeteren. Hierdoor is de verwachting dat het aantal (onverwachte) gevaarlijke situaties zal afnemen.

Hoofdstuk 6 algemene discussie

In de algemene discussie worden de bevindingen van de vier onderzoeken beschouwd. De belangrijkste conclusies worden beschreven alsmede de beperkingen. Tot slot worden aanbevelingen voor de klinische praktijk en vervolgonderzoek besproken.

Als belangrijkste conclusie kunnen we stellen dat factoren uit de context (o.a. kenmerken van het team en de groep cliënten met een (L)VB) een grotere invloed hebben op de houding en het gedrag van begeleiders ten aanzien van agressie dan individuele kenmerken. Een andere conclusie is dat trainingsprogramma's (zowel nationaal als internationaal) om begeleiders te scholen in de omgang met agressie nauwelijks aandacht hebben voor beïnvloeding van het team annex inbedding in een organisatieklimaat. Vervolgonderzoek naar de effectiviteit van deze trainingen is noodzakelijk om de effectiviteit aan te kunnen tonen tussen het scholen van medewerkers en het reduceren van agressie-incidenten. Vooralsnog is daar geen bewijs voor gevonden.

Het is van belang dat zowel organisaties in de zorg voor mensen met (L)VB als wetenschappelijk onderzoek aandacht hebben voor de invloed van teamprocessen op het handelen van begeleiders. Niet alleen door aandacht te hebben voor formele teamprocessen, maar ook en wellicht vooral voor de informele teamprocessen. Echter het werkklimaat wordt zeker ook beïnvloed door een organisatieklimaat. Het is voor zorgorganisaties balanceren tussen het bieden van een veilig werkklimaat aan begeleiders en het bieden van ondersteuning met ruimte voor zelfbepaling aan personen met een (L)VB als die om welke reden dan ook kampen met agressieproblemen. Meer inzichten over wat werkzaam is (o.a. beïnvloeding van (informele) teamprocessen, scholing aan begeleiders, behandelingen voor agressieproblemen) en meer ondersteuning bij het ontwikkelen en implementeren van agressiebeleid is voor organisaties wenselijk.

Mensen met een (L)VB, zelfs als zij zich agressief gedragen, moeten beschouwd worden als personen met rechten en mogelijkheden, met behoefte aan afgestemde ondersteuning in plaats van hen te zien als complexe, grens overschrijdende en irritante personen. Hun agressie of boosheid kan soms een reactie op de door hen ervaren bedreigende of stressvolle situatie zijn. Het is altijd belangrijk de achterliggende oorzaken te onderzoeken wanneer men in aanraking komt met een situatie waarbij een persoon met een (L)VB agressief is. Men dient zich telkens af te vragen wat de mogelijke verklaringen zijn voor dit gedrag en wat de achterliggende noden zijn. In interventies die als doel hebben de agressieproblemen van een persoon met een (L)VB te verminderen moet op zijn minst aandacht zijn voor het verminderen van stressvolle ervaringen/ situaties in het leven van die persoon en ze moeten gericht zijn op het verbeteren van de kwaliteit van het contact met belangrijke anderen. Dit kan bijvoorbeeld door begeleiders te trainen op welke wijze zij kunnen motiveren en ondersteunen bij het maken van eigen keuzes. Aandacht voor de kwaliteit van het leef-, werk- of schoolklimaat van de persoon met een (L)VB in interventies zal dan kunnen resulteren in een hogere kwaliteit van leven. De personen die veel kleur geven aan dit klimaat zijn de begeleiders. Zij hebben daarbij, net zoals de persoon met een (L)VB zelf, recht op een kwalitatief goed werkklimaat met optimale ondersteuning vanuit de organisatie.

CURRICULUM VITAE

Maartje Knotter is op 20 mei 1979 in Almelo geboren. In 1997 behaalt zij haar HAVO diploma aan de Christelijke Scholengemeenschap Het Noordik te Almelo. Van 1997 tot 2001 studeert ze Sociaal Pedagogische Hulpverlening (SPH) aan de Christelijke Hogeschool Windesheim in Zwolle.

In het jaar 2000 begint haar loopbaan als begeleider op een woongroep voor mensen met verstandelijke beperkingen bij De Twentse Zorgcentra (DTZC), locatie de ColckHof. Ze heeft verschillende functies gehad bij dezelfde organisatie van begeleider, persoonlijk begeleider, teamcoördinator en vanaf het jaar 2008 tot op heden is ze werkzaam als orthopedagoog.

Ter voorbereiding op de opleiding pedagogische wetenschappen aan de Universiteit van Amsterdam volgt ze in de jaren 2002 en 2003 wiskunde A aan het James Boswell Instituut te Utrecht. In 2003 start ze met de opleiding pedagogische wetenschappen bij de Universiteit van Amsterdam en in 2008 studeert Maartje cum laude af. Ze ontvangt op 5 januari 2009 in Amsterdam de scriptieprijs van de faculteit Maatschappij en Gedragswetenschappen 2007-2008 voor haar afstudeerscriptie en ook een nominatie voor de scriptieprijs van de Universiteit van Amsterdam 2007-2008.

Vanaf 2009 werkt Maartje in samenwerking met De Twentse Zorgcentra en de Universiteit van Amsterdam als buitenpromovenda aan haar promotie-onderzoek onder begeleiding van prof. dr. X.M.H. Moonen, prof. dr. G.J.J.M. Stams en dr. I.B. Wissink. De resultaten van dit onderzoek staan beschreven in dit proefschrift.

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OVERZICHT BIJDRAGE AAN CONGRESSEN (NATIONAAL EN INTERNATIONAAL)

2007 Focus op onderzoek

2008 Werkconferentie agressie, De Twentse Zorgcentra (DTZC)

2009 Expertmeeting Korsakov Kenniscentrum
Congres Evidence Based Practice (EBP), Utrecht.

2010 Congres Geen klier voor plezier, Utrecht (key note)
Congres Leren van de buren
Van Koetsveldlezing , Hardenberg
Themabijeenkomst agressie vakbonden & VGN, Amersfoort
Congres Euregionaal Congresbureau (ECB), Eindhoven (key note)
Najaarssymposium platform psychiatrie & VB (key note)

2011 Harten 10, DTZC
Jaarlijks congres LVB & criminaliteit, Zwolle (key note)
7th European Congress on Violence in Clinical Psychiatry, Praag

2012 Landelijk symposium: Professioneel omgaan met LVB'ers met bijkomende psychiatrische- en gedragsproblemen, ECB, Eindhoven (key note)
Studiedag Philadelphia zorg, Harderwijk (key note)
Congres Het Hietveld, Apeldoorn
Actualiteitencollege forensische orthopedagogiek UvA, Amsterdam

2013 Presentatie coördinatoren CCE regio Noord-Oost, Zwolle
8th European Congress on Violence in Clinical Psychiatry, Gent
Congres met het oog op behandeling- 3
Omgaan met agressie en weerstand in de ambulante hulpverlening, ECB, Eindhoven (key note)

2014 ISED seminar Tilburg University (poster presentatie), Tilburg
Presentatie thema-avond vrijwilligers De Twentse Zorgcentra

2015 10 th European Congress for Mental Health in Intellectual Disability, Florence (poster presentatie)
9th European Congress on Violence in Clinical Psychiatry, Kopenhagen
Gastcollege forensische orthopedagogiek UvA, Amsterdam
Studiedag Connecting & Kudding & Partners, de Meervaart, Amsterdam
Wetenschapsbijeenkomst, De Twentse Zorgcentra

2016 Jaarlijks congres LVB & criminaliteit, Zwolle
5th International Conference on Violence in the Health Sector, Dublin

2017 Wetenschapsbijeenkomst, De Twentse Zorgcentra
ISED seminarie Universiteit van Leuven, Leuven
11th European Congress Mental Health in Intellectual Disability, Luxembourg

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Geert Jan, jij was het die tijdens het samenwerken aan mijn doctoraalscriptie zei dat ik wel kon promoveren. Je gaf aan in jouw toespraak gedurende de diploma-uitreiking in het jaar 2008 dat het vele malen waarschijnlijker zou zijn dat ik in het jaar 2011 zou gaan promoveren dan dat de Elfstedentocht zou worden gereden in datzelfde jaar. Nu is het langer gaan duren voordat het moment daar is, maar je hebt op een punt na zeker gelijk. Mijn dissertatie is klaar en de Elfstedentocht is tot op heden niet gereden (met dank aan de opwarming van de aarde). Ik wil jou en zeker ook Els hartelijk danken voor de ondersteuning die ik in al die jaren heb gekregen. In het bijzonder waardeer ik jouw optimistische kijk, jouw humor en jouw gedrevenheid, maar vooral het gegeven dat jij het vertrouwen gaf dat ik die klus wel kon klaren. Zonder dat was ik waarschijnlijk nooit aan dit traject begonnen.

Xavier, van copromotor bij de start en vanaf het jaar 2016 tot nu mijn promotor. Een mooie combinatie met Geert Jan. Jij bracht het realisme en de rust gedurende het promotietraject en gaf aan dat een promotietraject langer kan duren, helemaal als er tussentijds kinderen worden geboren. Ik heb op velerlei wijze van jou geleerd. Ik heb erg veel bewondering voor het werk dat jij verzet en we delen waarschijnlijk dezelfde passie wat betreft het verbeteren van de kwaliteit van ondersteuning aan mensen met licht verstandelijke beperkingen. Mijn dank is groot voor jouw geduld, realisme en doorzettingsvermogen.

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Arend, waar moet ik beginnen. Ik vraag me af of je wist waar je aan begon toen je met mij een relatie kreeg. In eerste instantie ging ik naast mijn werk studeren, daar steunde je mij van harte in. Toen dacht je wellicht nu is het wel klaar nadat ik mijn doctoraaldiploma haalde en een baan had als orthopedagoog. Maar nee hoor, zwanger van ons eerste kindje ging ze ook nog promoveren. En dat duurde zo lang dat ook ons tweede kindje tijdens dat traject geboren is. Toch heb jij nooit geklaagd, stond je altijd voor mij

klaar en heb je mij door dik en dun gesteund. Wat ben je een mooie man en ik houd heel erg van jou. Mirte, jij was net geboren en kwam al heel jong in aanraking met de Universiteit van Amsterdam. Je ging als kleine baby mee naar de nominatie van de scriptieprijs van de UvA en ook had je- met een klein zwart UvA –T-shirtje aan- een afspraak bijgewoond met Geert Jan en mijn leidinggevende, wat de basis vormde voor een promotietraject. Ik ben ontzettend blij met jou als dochter, die langzaam steeds groter wordt, een eigen persoontje gaat worden en die haar eigen weg gaat kiezen. Ik houd van je en ben blij dat je met jouw creativiteit mij kon helpen bij het tekenen van een illustratie bij het gedicht van dit manuscript. Sofie, ook jij hebt een mama meegemaakt die vaak naar zolder vertrok om te werken aan het "boek". Het boek is klaar en jij helpt net zoals jouw grote zus bij het maken van een illustratie. Ik ben heel blij met je en houd van je. Ook jij wordt steeds groter, een eigen mensje, dat straks stevig in de wereld gaat staan. Ik ben blij met jullie, met Arend, ons jonge hondje Nora en konijn Koos. Jullie zijn mijn basis vanwaar ik energie krijg, ik koester daarom ons samen zijn.

Ik hoop dat wij nooit uitgeleerd zijn: "*Discendo discimus*"!

Many staff members experience aggressive incidents when working with Intellectual Disabilities (ID). In this dissertation the impact of aggressive incidents of clients with ID on staff behaviour and staff attitude is assessed, accounting for the influence of contextual factors, such as the team climate and the assistance external professionals provide. Special attention is paid to the quality of training programs which have been developed to help staff to deal with aggressive behaviour of their clients with ID .

Veel begeleiders die werkzaam zijn in de zorg voor mensen met (licht) verstandelijke beperkingen krijgen te maken met agressieve cliënten tijdens hun werk. In dit proefschrift wordt the invloed van agressief gedrag van cliënten met (licht) verstandelijke beperkingen op de attitude en het gedrag van begeleiders beschreven, waarbij gekeken is naar de invloed van factoren in de context zoals het teamklimaat en de geboden ondersteuning door deskundigen. Ook is er in dit proefschrift aandacht voor de kwaliteit van trainingen, die ontwikkeld zijn om begeleiders te ondersteunen die in hun werk geconfronteerd worden met agressief gedrag van cliënten met verstandelijke beperkingen.