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Evaluating a staff training program on the interaction between staff and people with intellectual disability and challenging behaviour: An observational study

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ABSTRACT

Background: The aim of this study was to evaluate the effects of a training program focusing on improvement of emotional intelligence (EI) and support staffs' awareness of their behaviour towards people with an intellectual disability based on interactional patterns. The support provided regarding the needs for autonomy, relatedness, and competence was observed in line with self-determination theory (SDT).

Method: A pre-test–post-test control group design ($N = 29$) was used, with 17 support staff participating in the experimental group. For both groups, video recordings of interactions between staff and clients were analysed with an SDT-observation system.

Results: The results showed that a training program focusing on EI and interactional patterns positively affected the support provided by staff with regard to clients' needs for autonomy, relatedness, and competence.

Conclusions: As most EI studies focus on insights and understanding of oneself, this study is an important first step in focusing on staff behaviour during daily interactions.

KEYWORDS
Intellectual disability; staff training; self-determination theory; observational study

Over recent decades, the role of support staff in the care of people with an intellectual disability (ID) has received increased attention. Moreover, their importance in the provision of support for people with an ID has been acknowledged (Hastings, 2010; Shead, Scott, & Rose, 2016). As individuals with an ID are at risk of developing challenging behaviour (Emerson, Robertson, & Wood, 2005; Wallander, Dekker, & Koot, 2003), support staff working with these individuals are often confronted with behaviours like aggression or self-injury. This may result in a range of negative emotional reactions in support staff, such as fear, anger, and anxiety (Mills & Rose, 2011; Rose, Horne, Rose, & Hastings, 2004). Research has shown that negative emotions affect support staff behaviour and, in turn, the interaction between support staff and people with an ID (Allen & Tynan, 2000; Rose, Jones, & Fletcher, 1998). As the interpersonal relationships between support staff and people with an ID are crucial predictors of the wellbeing of people with an ID (Schalock, 2004), interactions between support staff and people with ID as well as aspects that affect these interactions are important to study and target in interventions.

Literature shows that interventions focusing on knowledge, skills, and attitudes of support staff play a crucial role in enhancing the interactions between support staff and people with an ID and improving support staff behaviour (Allen & Tynan, 2000; Embregts, 2009, 2011). Support staff training and coaching has been aimed at several domains, such as positive behaviour support (Lowe et al., 2007), stress management (van Oorsouw, Embregts, Bosman, & Jahoda, 2014), self-determination (Wong & Wong, 2008), and emotional intelligence (EI) (Zijlmans, Embregts, Gerits, Bosman, & Derksen, 2011, 2015). The support staff training developed by Zijlmans et al. (2011) regarding EI is also central to the current study: evaluating its effect on the interactional patterns between support staff and people with an ID by means of self-determination theory (SDT) (Deci & Ryan, 1985, 2000).

According to SDT, a supportive environment, especially autonomy supportive, is important for sound interactional patterns. Autonomy support involves an environment that minimises control and pressure while supporting self-initiatives, providing choices, taking the other's perspective into consideration, and offering

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pertinent information (Williams et al., 2006). Given the fact that support staff are key people in the lives of people with an ID (van Asselt-Goverts, Embregts, & Hendriks, 2013), they have a vital role in creating an autonomy supportive environment, which fosters a feeling of autonomy, relatedness, and competence among people with an ID (Frielink, Schuengel, & Embregts, in press). In turn, satisfaction of the needs for autonomy (i.e., having the feeling that one can make one's own decisions and choices related to personal goals), relatedness (i.e., having a sense of belonging or relating to a group or to another individual), and competence (i.e., having the feeling one can exhibit and regulate one's behaviour resulting in a certain outcome) is highly related to well-being (Deci & Ryan, 2000). Providing such an autonomy supportive environment, and hence fostering the needs for autonomy, relatedness, and competence, is demanding for support staff working with people with challenging behaviour given the high workload and experienced stress (e.g., Mutkins, Brown, & Thorsteinsson, 2011; Rose & Rose, 2005). In the staff training of Zijlmans et al. (2011), which focused on EI, support staff were taught to adequately cope with these challenging situations based on their EI profile.

Hence, given the importance of the three basic psychological needs and the role they play in interactions between support staff and people with an ID, the aim of the current study was to evaluate the effect of a training program focusing on the improvement of EI and support staffs' awareness of their behaviour towards people with an ID on interactional patterns in terms of support of fulfilment of the three basic needs outlined in SDT (i.e., autonomy, relatedness, and competence) during daily interactions. Therefore, this study sought to answer the following research question: To what extent does the training improve the support provided by staff regarding the needs for autonomy, relatedness, and competence of people with an ID during daily interactions?

Method

Participants and procedures

This study was conducted within four residential treatment facilities for children, adolescents, and adults with a mild ID and challenging behaviour. These four residential treatment facilities, located in mixed urban or rural areas throughout the Netherlands, accepted an invitation from the researchers to participate in the current study. This invitation was sent to all residential treatment facilities for children, adolescents, and adults with a mild ID and challenging behaviour ($N = 17$) in the Netherlands. Using a pre-test–post-test control group design, the study was approved by the scientific and ethics committee of one of the participating facilities; this ethical approval was disclosed to the other participating facilities.

To recruit participants, the second author presented the research plan to the managing board of the facilities. Next, all teams working with people with an ID and challenging behaviour were selected by the managers. In total, 216 support staff worked in these teams. Using simple random sampling, support staff were allocated to the training (experimental) group. The support staff, who were not allocated to the experimental group, were automatically assigned to the control group. Subsequently, support staff selected a client with whom they experienced difficulties interacting with prior to the start of the research. It should be noted that support staff participated in subgroups of three and that each subgroup selected one client. Next, both the experimental and the control group conducted video recordings of themselves interacting with clients. Support staff in the control group were informed of the fact that they were the control group, but they did not know the content of the training program of their colleagues in the experimental group nor the purpose of the video recordings.

Clients or their representatives provided written informed consent for making these video recordings. Prior to the training program, support staff were able to indicate whether they wanted to participate in the current study or not, without any consequences. None of them declined the invitation to participate.

The data presented in the current study were part of a larger research study (i.e., numerous video recordings were made for the purpose of video-feedback). Therefore, not all video recordings of the 216 staff members were useful for the current study. We decided to include video recordings of support staff based on the following criteria: (a) support staff and client must both be clearly captured by the video camera; (b) in case of verbal communication, the observer had to be able to hear and understand both the support staff and the client; (c) dominant sound, for example, of radio or television in the room that causes arousal should be absent; (d) the taped interaction had to be a one-on-one situation; and (e) a video recording had to have a minimum duration of 5 minutes. Based on these selection criteria, the video recordings of 47 (out of these 216) support staff remained. However, only 29 clients were related to these 47 video recordings, because several staff members worked with the same client (due to the subgroups of 3 support staff). As we wanted to focus on unique dyads of clients and support staff, a random selection of the support staff working with the same client was made using simple random sampling, resulting in 29

unique dyads. Although support staff were requested to produce video recordings of 10 minutes, the duration of these video recording ranged from 5 to 45 minutes; some participants forgot to turn off the camera whereas others only taped for 5 minutes. Rather than scoring the video recordings as a whole, thus independent of their duration, we choose to divide all video recordings into fragments of 2 minutes to take into account the variability of the behaviour of support staff and people with an ID. That is, for example, a video recording of 6 minutes consisted of three fragments and video recordings of 30 minutes were divided into 15 fragments (for the analyses, mean scores for each video recording were calculated). Each fragment was judged, independent of the total duration of the recording.

The age of the clients (20 male) ranged from 11 to 61 years ($M = 25.0$, $SD = 14.7$). Twenty-six of the participating clients (89.7%) had a mild to borderline ID (IQ 50–85), two (6.9%) had a moderate ID, and one (3.4%) had a severe ID. Most prevalent psychiatric diagnoses were autism spectrum disorder (37.9%) and attachment disorder (24.1%). Table 1 presents relevant descriptive statistics of the participating support staff.

Intervention

Professional trainers specialised in EI and in analysing interactional patterns between support staff and people with an ID delivered the training program described in more detail by Zijlmans et al. (2011). During the first two days of the training program, support staff were trained on the concept of EI and its significance for themselves, their clients, and their team work. Support staff received feedback on their own EI, based on their scores on the Dutch version of the Bar-On Emotional Quotient-inventory (EQ-i) (Bar-On, 1997; Derksen, Jeuken, & Klein Herenbrink, 1998), and formulated individual goals that were translated into developmental plans. Examples of individual goals were: "I would like to work in a more structured and methodical way with this client", or "I would like to improve my ability to read and understand emotional signals of this client". Support staff worked on their plans individually, with two feedback sessions organised one and a half and three months after the start of the training program.

In addition, video-feedback sessions were initiated during six group sessions of 90 minutes. In preparation for these video-feedback sessions, support staff were asked to make video recordings of themselves interacting with the client they selected. Support staff and the trainer viewed the videotape together and the staff member being observed was first asked to comment. Next, both the trainer and the support staff linked the staff behaviour to the desirable staff behaviour and the EI of the support staff. For example, if the desirable staff behaviour was to recognise and name a client's emotions, this was linked to the actual behaviour of the support staff in the video recording and to the interpersonal subscales of the EQ-i, like empathy. The trainer followed a pre-established protocol for verbal description of correct and incorrect responses, contingent praise, and corrective comments to guarantee consistency of feedback across sessions.

In the final training session, support staff received feedback on their new EI profiles, based on a newly administered EQ-i and made plans for further development. In addition, after finishing the training program, support staff were again asked to make video recordings of themselves interacting with their client.

Table 1. Descriptive statistics of participant groups.

	Experimental group ($N = 17$)	Control group ($N = 12$)
Gender		
Women	9	6
Men	8	6
Age		
M	35.53	35.33
SD	10.29	10.53
Education		
Intermediate vocational education	5	5
Higher vocational education	8	6
University	1	1
Other	3	–
Work experience ID (months)		
M	84.59	150.71
SD	52.42	120.42
Work experience with specific client (months)		
M	44.47	53.21
SD	35.80	63.73
Contract (hours a week)		
M	30.55	31.10
SD	4.11	4.82

Measure

The video recordings of the interactional patterns between support staff and people with ID were scored using an observation system developed by Custers et al. (2011). Based on SDT (Ryan & Deci, 2000), this observation system determines the quality of interaction between elderly people and their support staff using three scales that are equivalent to the three basic psychological needs of SDT: autonomy, relatedness, and competence.

To be able to use the scales to determine the quality of interactions between support staff and individuals with an ID and challenging behaviour, the authors consulted six support staff and discussed the applicability of the scales of Custers, Kuin, Riksen-Walraven, and Westerhof (2011) regarding their interactions with people with an ID and challenging behaviour. Support staff indicated that the scales described by Custers et al. focused mainly

on physical care, whereas working with people with an ID and challenging behaviour more often entails supportive forms of care, such as helping them with choice-making or stimulating them to fulfil daily skills more independently. Based on these comments, the observation system was adapted to the support for people with an ID and challenging behaviour for the purpose of the current study. That is, more examples were added and the emphasis from forms of physical care shifted to supportive care. In addition, the authors discussed the content of the scales and specified some parts by adding examples or changing original examples.

Furthermore, the method of scoring used in the original scale of Custers et al. (2011) was adapted in the current study. That is, as previously described in the "Participants and procedures" section, rather than scoring the video recordings as a whole, thus independent of their duration, we choose to divide all recordings into fragments of 2 minutes to take into account the variability of the behaviour of support staff and people with an ID, and to prevent a preselection of the video recordings. The adapted version of the observation system contained three 7-point rating scales for staff behaviour (1 = *very low*, 2 = *low*, 3 = *moderately low*, 4 = *moderate*, 5 = *moderately high*, 6 = *high*, and 7 = *very high*). These scales give an indication of the degree to which support staff contribute to the fulfilment of clients' needs for autonomy, relatedness, and competence during interactions.

Autonomy

The support for the need of autonomy is about the extent to which support staff respect the individual with an ID as a person with their own perspectives and choices. Examples of descriptions belonging to a high score on support of the need for autonomy are:

> Support staff clearly respect and appreciate the ideas and opinions of the client. Moreover, support staff treat the client as an autonomous individual with their own wishes and beliefs. In addition, support staff offer opportunities to the client to express their own ideas and wishes.

Relatedness

The support for the need of relatedness is about the extent to which support staff show empathy and warm interest in the person with an ID, make conversations with, and provide emotional support to the person with an ID. Examples of descriptions belonging to a high score on support of the need for relatedness are:

> Support staff provide adequate emotional support to the client. In addition, support staff seem calm, show empathy and take time to make the client feel safe and accepted. Furthermore, support staff respond adequately to the emotional signals of the client and comfort the client verbally as well as non-verbally.

Competence

The support for the need of competence is about the extent to which support staff support the person with an ID in their daily routines by structuring the situation and by showing supportive and helping behaviours. Examples of descriptions belonging to a high score on support of the need for competence are:

> Support staff provide adequate structure and explanation and stimulate the client to perform tasks and activities. Moreover, support staff compliment the client on adequately performed activities and adapt their pace to that of the client. Furthermore, support staff do not dominate the interaction and do not patronise the client.

Inter-observer reliability

To determine the inter-observer reliability of the coding system, the second and the third author observed 20% of the video recordings of interaction between support staff and people with an ID (n = 447). These video fragments were selected at random and scored independently. In line with Custers et al. (2011), scores differing one point were considered to be in agreement. That is, for example, a score of 2 by the second author and a score of 3 by the third author were considered to be in agreement. In 91% of the cases the observers reached an agreement, suggesting a high inter-observer reliability.

Results

Firstly, in order to evaluate the effect of the training on staff behaviour, three mean scores for each video recording (one for each scale, i.e., autonomy, relatedness, and competence) were calculated by summing the scores of the fragments and diving the total scores by the number of fragments. This resulted in three mean scores for each support staff member on each measurement (pre-test and post-test). In order to test to what extent the training improved the support provided by staff regarding the needs for autonomy, relatedness, and competence of people with an ID during daily interactions, 2 (condition: experimental vs. control) × 3 (scales: autonomy, relatedness, and competence) × 2 (measurement: pre-test and post-test) analysis of variance was performed on the mean scores of the participants. Scales and measurements were treated as within-subject factors and condition as a between-subject factor. Figure 1 shows the mean scores for each scale in both conditions on pre-test and post-test.

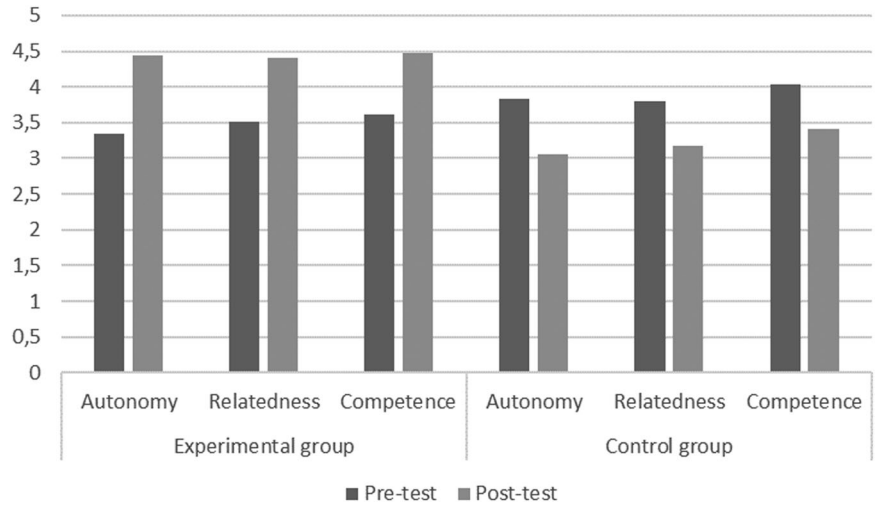

Figure 1. Pre-test and post-test scores on the scales of autonomy, relatedness, and competence for the experimental group and the control group.

Neither the third-order interaction effect between condition, scales, and measurement ($F(2, 26) = 2.21$, $p = 0.13$), nor the second-order interaction effect between scales and condition ($F(2, 26) = 0.77$, $p = 0.48$) and between scales and measurement ($F(2, 26) = 0.09$, $p = 0.92$) were significant. Because of the significant interaction effect between condition and measurement ($F(1, 27) = 31.11$, $p < 0.001$), separate analyses for the experimental and control groups were justified. Subsequently, a 3 (scale) × 2 (measurement) repeated measures analysis of variance was performed on the mean scores.

For the experimental group, the interaction between scale and measurement was not significant ($F(2, 15) = 2.18$, $p = 0.15$). In addition, the main effect of scales was not significant ($F(2, 15) = 1.37$, $p = 0.28$), whereas the main effect of measurement was ($F(1, 16) = 22.48$, $p < 0.001$). Hence, the scores with respect to the support provided by staff regarding autonomy, relatedness, and competence on the post-test were significantly higher than on the pre-test.

In the control condition, although no significant interaction effect was found ($F(2, 10) = 0.54$, $p = 0.60$), the main effects for measurement ($F(1, 11) = 11.45$, $p = 0.006$) and scale ($F(2, 10) = 15.56$, $p = 0.001$) were significant. The main effect of measurement revealed significant lower scores on the post-test than on the pre-test. In addition, given the significant main effect for scale, *post hoc* Bonferroni corrected pairwise comparisons were conducted. These pairwise comparisons indicated that scores on the competence scale were significantly higher than scores on the relatedness scale ($p = 0.05$) and the autonomous scale ($p = 0.001$). This suggests that support staff showed higher levels of support regarding competence of clients (e.g., praising clients and stimulating clients to perform an activity) than support of relatedness (e.g., responding adequately to emotional cues of clients and showing interest and affection towards clients) and autonomy (e.g., treating the client as an autonomous individual with their own wishes and beliefs). The difference between relatedness and autonomy was not significant ($p = 1.00$).

Discussion

The aim of the current study was to evaluate to what extent a training program focusing on EI and interactional patterns of support staff working with people with an ID and challenging behaviour improves the support provided regarding the needs for autonomy, relatedness, and competence of people with an ID during daily interactions. The results showed that the experimental group had significantly higher scores on the post-test compared to the pre-test. This suggests that the training program positively affected the support with regard to clients' needs for autonomy, relatedness, and competence, and hence, fostered an autonomy supportive environment.

Interestingly, the control group showed a decrease in performance on the post-test compared to the pre-test, whereas it would have been expected that their performance stayed at an approximately similar level on both pre-test and post-test. This finding might suggest that the factors (i.e., autonomy, relatedness, and competence) are unstable. However, a study of Custers et al. (2011) demonstrated that need support differed widely between three observations of the same resident (with three different caregivers), whereas the variation within caregivers was much smaller (i.e., more stable over time).

This finding does not indicate instability, though more research is required to firmly draw this conclusion. Another possible explanation might be the fact that support staff in the control group were aware of their colleagues being involved in a training program and that they (i.e., support staff in the control group) were not. This could have impacted on their level of engagement. Moreover, based on anecdotic information, support staff in the experimental group indicated that they were very enthusiastic about the training program, and although they were instructed not to discuss the content of this program with support staff in the control group, their excitement was clear. As a result, support staff in the control group might feel excluded (i.e., they wanted to participate in the training program themselves) and hence, became demotivated for work resulting in less engagement in the video recording at the post-test.

As interpersonal relationships between support staff and people with an ID are important predictors of the wellbeing of people with an ID (Schalock, 2004), the current study focused on their daily interactions. As Deci (2004) claimed that the basic psychological needs for autonomy, relatedness, and competence play an important role when it comes to increasing the well-being of people with an ID, we focused on clients' satisfaction of these needs by support staff. The claim by Deci was recently supported by Frielink et al. (in press) through demonstrating the significant associations between an autonomy supportive environment, the needs for autonomy, relatedness, and competence, and well-being among people with a mild to borderline ID.

Therefore, in the current study, interactions between support staff and people with an ID were operationalised in terms of support of fulfilment of the three basic needs outlined in SDT (Custers et al., 2011; Ryan & Deci, 2001). The results demonstrated that support staff who participated in the training program showed increased levels of recognition of adequate responses to emotional signals of their client (relatedness). Additionally, these support staff treated their clients more as self-dependent individuals and more often respected their opinions and wishes (autonomy). Finally, after the training program, support staff showed higher levels of support of competence, they praised their clients more often and stimulated clients more to perform activities and tasks on their own (competence).

Fostering an autonomy supportive environment is imperative as it is strongly associated with the satisfaction of the needs for autonomy, relatedness, and competence, and with well-being. Hence, support staff should minimise control and pressure to impose their own agenda while eliciting the client's perspective, providing choices, supporting self-initiatives, and offering pertinent information. Building a trusting relationship between support staff and people with an ID is imperative and support staff can be trained in this respect using several methods such as the training program examined in this study (Zijlmans et al., 2011). Connecting to the requests, needs and wishes of people with an ID is a vital element of this training. In this respect, it is important to mention that, while encouraging autonomy, the need for support and the susceptibility of people with an ID should not be disregarded (Embregts, 2011). The conclusions drawn here fit with a client-centred and professional loving care approach in which a caring and involved support staff attitude is key to good quality support (Birks & Watt, 2007; Hermsen, Embregts, Hendriks, & Frielink, 2014).

Limitations

Although the results of the present study are promising, the findings should be interpreted cautiously given several limitations of the study. Firstly, the sample size used in this study was small and for some support staff there were only few video fragments to score (depending on the duration of their video recordings), which might mean that possible variability of or changes in staff behaviour were missed. Secondly, it is not inconceivable that the effect of support staff training is greater for staff working within teams in which more staff members participated in the training. Thirdly, to overcome a reduced engagement of the control group they might be offered the training program after the completion of the study. Although the training program was available after completing the study via the official training institute for post-master degrees in mental health care in the southern part of the Netherlands (RINO Zuid), staff members were not automatically informed about this possibility before starting the study. Fourthly, one of the researchers coding the video recordings was not blind to the allocation of support staff to the experimental and control groups. This might have had a major impact on the results. However, this bias was limited by the fact that for most of the video recordings, both researchers coding the video recordings did not know whether the video recording appertained to the pre-test or the post-test. Fifthly, although the coding system used for the video analysis has a good inter-observer reliability, this reliability was not assessed by independent raters. Due to a detailed description of the coding system, the authors tried to limit the subjectivity. Sixthly, due to the criteria selecting appropriate material, the video recordings suitable for analysis were considerably reduced. It should be noted that the video recordings were merely excluded based on the quality of the video

recordings themselves. Hence, it is likely that the selected video recordings are a reliable representation of actual behaviour observed. Lastly, no measures regarding clients' wellbeing were administered. Including such measures in future research would enable us to further examine the reliability and validity of the coding system.

Conclusion

The results of the current study provide initial indications that a training program focusing on EI and interactional patterns positively affects the support provided by staff with regard to clients' needs for autonomy, relatedness, and competence. This is an important and valuable outcome, as most EI studies focus on insights and understanding of oneself, whereas this study focuses on the behaviour of staff during daily interactions. Future research is needed in this respect, to further explore the relationship between EI and staff outcomes (Shead et al., 2016). To extend the results of this first study, future research should include larger sample sizes, adopt a more longitudinal approach to include variation within need fulfilment, and take into account both staff and client variables. Additionally, this study is a first step in adapting an instrument based on SDT to the support for individuals with an ID. Future research should continue this process in order to refine and test the theory and its applicability for this specific group.

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