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Turning disabilities into abilities. Promoting self-management in people with intellectual disabilities

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Chapter 4

Training staff to promote self-management in people with intellectual disabilities

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Abstract

Background: People with intellectual disabilities have increasing difficulties managing their daily affairs. This study examined the effectiveness of a staff training, which teaches staff to promote self-management in people with intellectual disabilities.

Method: Effectiveness was assessed with questionnaires addressing clients' ($n = 26$) independence and self-reliance, support needs, and challenging behaviour, using a pre-posttest control group design. Additionally, focus groups were conducted with trained staff members 6 months after the training.

Results: In the long term, the intervention group showed a significant increase in independence and self-reliance, in contrast to the comparison group. No effect was found on support needs and challenging behaviour. Trained staff members reported limited benefits of the training, but had noticed changes in their attitude and method of working afterwards.

Conclusions: Further self-management research is required to investigate how independence and self-reliance can be promoted more effectively in this population. Future trainings should carefully consider their content, format, and implementation.

Keywords: independence, intellectual disabilities, self-management, self-reliance, staff training, support need.

Introduction

People with intellectual disabilities (ID) commonly have difficulties managing their own affairs [5, 52]. This can pertain to many aspects of daily living, from taking care of their personal hygiene and their household, to dealing with social interactions and employment [22, 24, 52]. Therefore, people with ID often have to rely on others [6, 7]. This does not only pose everyday challenges for these individuals, but also for their families and health care providers.

While there is a growing view that people with ID should participate as fully as other members of society [11, 18, 113], our society is also becoming more complex. Social developments, such as higher demands at work and the digitalisation of our society, are considered a main explanation for the increasing difficulty of people with ID to function independently [11]. Partially as a result of these developments, the demand for care for people with ID has grown considerably over the past few years in several north western European countries [11]. Possibly related to this, the costs for the care for people with ID have greatly increased as well [20] and support staff experience increasing difficulties to meet the care needs of their clients [19]. As different countries have different, and sometimes restricted, budgets and care systems, this could mean that people with ID do not always have sufficient access to the increasing amount of care they need. Altogether, this requires support staff to focus on promoting self-management in people with ID, in order to make them more independent and self-reliant [11, 114].

Broadly, self-management refers to a variety of activities that are related to deliberately changing or maintaining behaviours in order to achieve self-selected outcomes [25]. It can be seen as an overarching term, related to concepts such as self-determination, autonomy, independence, and self-reliance. Self-determination and autonomy are centred around having personal control over making choices and decisions in order to lead one's life according to one's own preferences, free from external influences [e.g., 28, 115]. Independence and self-reliance involve abilities to take actions to manage one's own affairs and to provide for oneself, thereby relying on one's own efforts, resources, judgement, and abilities, without requiring help and support from others. Self-management thus includes the former, making self-selected choices, and the latter, having the capacities to shape one's own behaviour in order to achieve the personally desired outcomes.

Previous research on self-management in people with ID has focused mainly on specific behaviours or domains. For instance, various studies have concentrated on health behaviour [e.g., 6, 8, 13, 33], work-related activities [56, 57], challenging behaviour [e.g., 116, 117-119], self-instruction [e.g., 24, 99], and the use of technology [23, 39]. What is valuable for people with ID in terms of self-management is that they learn to do more by themselves, thereby becoming more independent and self-reliant. This is important, as this could enhance their overall quality of life and their participation and inclusion as equal and valued co-citizens [4, 5], which could lead to reductions in behavioural problems [53]. Furthermore, it could decrease their demand for professional care and the burden that is experienced by family members [7, 50].

So far, little self-management research has been directed at improving overall independence and self-reliance in people with ID. However, several studies have focused on teaching individual skills to people with ID that would lead to improvements in these domains, such as teaching safety skills [104, 120, 121], food preparation [122, 123], and setting the table [71, 103]. A few intervention studies from the field of occupational therapy have also been conducted, which focused on (instrumental) activities of daily living [72, 83, 124]. Although they showed some promising results, limitations such as a small sample size and a limited number of trained activities impede the generalisability of the findings. Whether these approaches would also be effective and applicable to promoting overall independence and self-reliance has not been investigated.

There is also a lack of research focusing on how support staff can be trained to improve their clients' level of independence and self-reliance. If support staff stimulate clients to do things themselves, instead of taking over, this could reduce clients' dependency, passivity, and 'learned helplessness' [5], regardless of whether someone has a mild or severe ID [23]. Several studies have investigated person-centred active support, an approach directed at active engagement and participation in meaningful activities [e.g., 125, 126, 127]. Although this approach could enhance the ability of people with ID to manage (parts of) tasks independently, it is not its primary aim. What staff can do to effectively target overall independence and self-reliance has not been studied. In general, research on staff training in the field of ID has put forward the importance of practice leadership. Good practice leadership can lead to better implementation of a staff training, as a practice leader enables, encourages, coaches, and reviews staff in order to ensure good support [128]. Coaching was also found to be important in a meta-analysis by Van Oorsouw et al. [110]. They found that the most effective way to change

client behaviour through staff training was by adding coaching-on-the-job and verbal feedback to classroom trainings. With adding an on-the-job component, it becomes more likely that performance of target skills acquired during a training will generalise to the regular work situation [129]. Whether practice leadership and coaching-on-the-job are also essential for training staff to promote self-management is yet unknown.

The current study is the first to evaluate the effectiveness of a staff training aimed at promoting overall self-management of people with ID. The methodology of the training is called 'On Your Own Two Feet' [130] and is based on the method of Feuerstein [131] and the 'Own Initiative Model' [132]. Inspired by Seligman's positive psychology [133], staff are taught to focus on clients' abilities, instead of disabilities, and on expanding these abilities. By letting clients perform tasks that are within their zone of proximal development, staff facilitate their learning process [134]. According to the methodology, staff need to encourage clients to think and handle things themselves. This approach thus targets clients' general problem solving skills by teaching them to find the answers to their own questions, which could also help them become more independent and self-reliant [99, 101]. The idea is that teaching such a pivotal skill as general problem solving is more efficient than teaching someone a specific skill, since it could generalise more easily to untrained skills [24].

The primary aim of the current study was to investigate whether the staff training 'On Your Own Two Feet' [130], which promotes self-management, was effective in increasing the level of independence and self-reliance of people with ID and whether it would decrease the amount of required support. It was also hypothesised that the training would reduce the occurrence of behavioural problems. The secondary aim of the study was to explore the opinions of trained staff members regarding the effectiveness of the training.

Method

Procedure

The Medical Ethics Committee of the Leiden University Medical Center evaluated the study protocol and declared that no formal medical ethical approval nor written informed consent was required, because the study did not fall under the Medical Research Involving Human Subjects Act. All participating people with ID, their legal representatives and support staff were informed about the study beforehand. People with ID and their legal

representatives were informed by letter and were invited to an information meeting. Staff were informed during team meetings. They were notified that all data would be handled confidentially and anonymously for the purpose of a scientific study and publication. They were given the opportunity to ask questions for further clarification. People with ID or their legal representatives could decline participation. If someone would have objected to participation, the person in question would have been excluded from the study. However, no one declined. As this study was conducted in collaboration with Raamwerk, a health care organisation in Noordwijkerhout, the Netherlands, data collection took place at this location. Preceding the training sessions (T0), questionnaires about the participating people with ID were filled in. This was repeated 3 (T1) and 6 months (T2) after the training.

In addition, 6 months after the training, focus groups were held with trained staff members to evaluate the training and to see whether they had experienced any changes in the past half year. Trained staff members were informed about the focus groups during their team meeting and were asked to participate on a voluntary basis. They were told beforehand that the data from the focus groups would be handled confidentially and anonymously, and that it would be used for the publication of a scientific study. Participation occurred during work hours.

Staff training

In total, 28 staff members (11 men and 17 women) received the training in promoting self-management. They worked either as support staff in group homes ($n = 17$) or day care services ($n = 10$), or as a remedial educationalist ($n = 1$). Their ages ranged from 23.24 to 59.24 years (mean [M] age = 33.26; standard deviation [SD] = 9.47), the years of work experience with people with ID varied from 2 to 20 years ($M = 9.45$; $SD = 4.29$). They were divided into three groups that received the training on three different occasions. The training was provided by professional trainers who were instructed by the developers of the training and who all had experience in the field of ID.

The training that was provided is called 'On Your Own Two Feet' ('Op Eigen Benen' in Dutch) and is developed and described in greater detail by Scholten and Schuurman (2008). During the 2 consecutive days of the classroom training, lasting about 12 hours in total, staff are provided with a theoretical framework of the methodology and participate in exercises and role-play to practice different techniques. They start with evaluating and discussing their current attitudes and ways of providing support when working with

people with ID, by means of a self-report questionnaire. Next, the philosophy behind the methodology is explained, which is based on the method of Feuerstein [131], the 'Own Initiative Model' [132], positive psychology [133], and the zone of proximal development [134]. The ideology concerns looking at people with ID as unique individuals and having a positive attitude towards them by focusing on each person's strengths, capacities, abilities to learn, and way of learning. This is illustrated by an exercise to show that each individual has his or her own talents and that an individual approach is therefore necessary. In another exercise, staff are trained to rephrase difficult behaviours in a positive way.

The role of staff also forms an important part of the training. Staff are taught to adopt the role of a coach or a mediator, who encourages people with ID to think, find out, and do things for themselves, instead of taking over or telling them what to do. It is explained how they can promote self-management in their clients, which is practised with a role-playing exercise on coaching people towards the proper execution of a task by asking them questions, while not giving away the answers. Staff are also taught to build on an individual's existing strengths, interests, knowledge, and abilities to stimulate learning and development. This can be achieved by letting clients perform tasks for which they still need some assistance and letting them discover themselves how to execute something. This is also practised with various exercises that teach staff how to connect to another person's knowledge, skills, and style of learning in order to adapt their way of coaching. Attention is also paid to the importance of fostering self-worth and building an equal, trusting, and respectful relationship with clients. Toward the end of the training, the changes in the attitude and role of staff throughout various phases of learning are also addressed. Where providing safety and trust are important in the initial stage of learning, as clients progress, it becomes more important for staff to step back and provide room for their clients to experiment. Finally, it is discussed that it is important to support the transfer of learnt skills to daily life and to include the social network of clients.

Primary research question

Participants

Raamwerk selected three group homes for people with ID whose support staff would receive the training in promoting self-management. The participants of the intervention group were thus selected by means of purposive sampling. This intervention group

consisted of 15 people with ID. Between T1 and T2, three of these people moved away and therefore dropped out of the study. The comparison group was put together by two remedial educationalists of Raamwerk, who selected people with ID that were as comparable as possible to the intervention group with respect to the level of the ID, age, and gender. This group consisted of 11 people with ID, living in four different group homes whose support staff were not trained. Descriptive statistics of the participants are presented in Table 1. Diagnostic information was obtained from their electronic client records.

Table 1 Descriptive statistics of participant groups

	Intervention group (n = 15)	Comparison group (n = 11)
Male, <i>n</i> (%)	8 (53.3)	8 (72.7)
Age in years, <i>M</i> (<i>SD</i>)	31.1 (9.9)	35.8 (11.1)
Level of ID, <i>n</i>		
Borderline	1	2
Mild	11	6
Moderate	2	3
Severe	1	
Full Scale IQ, <i>M</i> (<i>SD</i>)	61.3 (8.5)	61.6 (11.3)
Psychiatric comorbidity, <i>n</i>		
Autism spectrum disorder	6	2
Other	6	5

Measurements

Independence and self-reliance

The Social Functioning Scale for the Mentally Retarded [SFMSR; 135] was used, which consists of 31 items addressing several components of independent functioning and self-reliance at home and in social situations (e.g., getting dressed, setting the table, cleaning up, language expression). Items can be rated on four levels, objectively reflecting what a participant currently does by himself, with higher scores indicating better functioning. The raw total scores were used for the analyses, which could range from 0 to 124. The questionnaire was filled in by the client's personal tutor, together with either the remedial educationalist or another staff member who frequently worked with the participant at home or at day care. The questionnaire is widely used in Dutch health care organisations

for people with ID. The psychometric properties of the questionnaire regarding both the reliability and construct and criterion validity have been found to be good [136].

Support needs

To evaluate the support needs of the participating people with ID, the Dutch version of the Supports Intensity Scale [SIS; 137] was used. The SIS was only filled in at T0 and T2, since we only expected an effect on support needs in the long term. The SIS is a semi-structured interview that assesses the intensity of support that an individual with ID requires to successfully perform several activities. Section 1 of the SIS includes 49 activities that are grouped into six domains; home living, community living, lifelong learning, employment, health and safety, and social activities. Section 2 consists of eight items that address protection and advocacy. For the analyses, the sum of the raw total score of Sections 1 and 2 was used, which could range from 0 to 655. The SIS was administered by a trained interviewer who obtained the required information from two respondents who knew the person with ID well. This always included the client's personal tutor, together with either the remedial educationalist or another staff member who frequently worked with the client at home or at day care. Respondents had to answer whether their client would require support when having to successfully perform a certain activity, and if so, how frequent, how long, and what kind of support would be needed. The more support is needed, the higher the score on the SIS. Several studies have demonstrated the reliability and validity of the SIS [138].

Behavioural problems

The Dutch version of the Developmental Behaviour Checklist [DBC; 139] was filled in by the client's personal tutor to assess the occurrence of emotional and behavioural problems. These concerned disruptive/antisocial, self-absorbed, communication, anxiety, and social problems. In this questionnaire, 95 items are rated on a 3-point scale, indicating the frequency of occurrence of a particular type of behaviour (0 = not at all, 1 = a little or sometimes, and 2 = clearly, often). The raw total score was used for the analyses, with higher scores reflecting more behavioural problems. This score could range from 0 to 190. Although the questionnaire is aimed at minors with ID, it has been used in previous research on adults with ID [140]. Both the reliability and construct validity of the questionnaire were rated as satisfactory [141-143].

Statistical analysis

A pre-test/post-test follow-up control group design was used to study whether the staff training in promoting self-management had an effect on the level of independence and self-reliance, the support needs, and the occurrence of behavioural problems of people with ID. The data was analysed with IBM Statistical Package for the Social Sciences version 23.0. Descriptive statistics were used to summarise the characteristics of the groups at baseline. The groups were compared by means of an independent samples *t*-test and Chi-squared tests. The total scores of the questionnaires used for the analyses were normally distributed (z-scores of skewness and kurtosis < 3.0) per measurement per group, except for the scores of the comparison group on the DBC at T₀ and for the scores of the intervention group on the DBC at T₂. There was one outlier (> 3 SD) in the data of the DBC. Analyses were performed with and without this outlier.

Longitudinal multilevel analyses were conducted to examine the differences between the groups in the scores on the three different questionnaires. This type of analysis accounts for missing data. We included a random intercept and the fixed factor of group. In addition, for the analysis of the SFSMR and the DBC, two dummy variables for time were created (Time 1 and Time 2), representing the short term (T₁ versus T₀) and long term (T₂ versus T₀), respectively. Only for these two questionnaires, to analyse the short- and long-term effects of the staff training, the interaction terms (i.e., cross-products) between group and each of the two dummy variables for time were included. For the SIS, only one post-test was available, therefore the two dummy variables for time were not used, but merely the fixed factor of time and the interaction between group and time.

Given the small sample size, non-parametric Mann-Whitney tests were conducted as well on the difference scores between T₁ and T₀ (only for the SFSMR and DBC) and T₂ and T₀, in order to check whether the results from the longitudinal multilevel analyses could be confirmed.

Secondary research question

Focus groups

To further evaluate the staff training in promoting self-management, two focus groups were held with trained staff members of Raamwerk 6 months after the training. Unlike individual interviews and surveys, focus groups use group interaction to generate a better

understanding of not only *what* people think, but also *how* they think and *why* they think that way. It is a particularly useful method for exploring people's knowledge, attitude, and experiences, and for gaining insight into behaviour, organisational issues, and needs [107, 144]. One focus group was with support staff working in the group homes that were part of the training ($n = 6$; 1 man and 5 women; M age = 36.29 ± 12.51 SD). The other focus group was held with trained staff members working in day care services ($n = 7$; 5 men and 2 women; M age = 33.60 ± 9.33 SD). The addressed topics included what they had learnt from the training and whether they had noticed any changes afterwards in knowledge, attitude, skills, and method of working of themselves and their team members. If so, they were asked what might have caused these changes. Moreover, they were asked whether they missed anything within the training. The focus groups were chaired by an independent moderator with experience in the field of ID. The primary researcher (first author) observed both meetings and took notes, but did not actively participate in the discussions. The focus groups were audio-recorded with the participants' consent and were transcribed verbatim.

Qualitative analysis

For the secondary research question, a qualitative analysis was performed to study the opinions of trained staff members regarding the effectiveness of the staff training in promoting self-management. Analysis of the data took a general inductive approach [108], using ATLAS.ti 7.5.6 software. The four questions addressed in the focus groups served as a framework for the analysis. Two coders independently listened to the recordings, while reading and coding the transcripts. Discrepancies between coding were discussed until consensus was reached. In case of a remaining disagreement, a senior researcher was asked to make a final decision. The definitive codes were analysed and categories were inductively identified based on how extensively codes were discussed.

Results

Baseline characteristics

The intervention group and the comparison group had a similar gender balance and did not differ in age. The level of severity of the ID, IQ, and the presence of comorbid psychiatric diagnoses also did not differ significantly between the groups. Baseline scores on all three questionnaires were not significantly different either. Overall descriptive statistics for both groups per questionnaire per measurement point are presented in Table 2.

Table 2 Descriptive statistics for total raw scores on the questionnaires for participant groups

	Intervention group			Comparison group		
	To (n = 15)	T1 (n = 15)	T2 (n = 12)	To (n = 11)	T1 (n = 11)	T2 (n = 11)
SFSMR ¹ , <i>M</i> (<i>SD</i>)	105.7 (11.6)	109.1 (9.3)	108.5 (10.1)	112.1 (9.9)	111.9 (11.1)	111.0 (11.9)
SIS ² Section 1+2, <i>M</i> (<i>SD</i>)	284.9 (82.9)		295.2 (63.8)	303.7 (96.7)	-	291.9 (95.2)
DBC ³ , <i>M</i> (<i>SD</i>)	33.2 (15.6)	34.3 (9.5)	33.0 (11.8)	33.3 (27.0)	35.9 (27.4)	36.8 (24.0)

¹Social Functioning Scale for the Mentally Retarded

²Supports Intensity Scale

³Developmental Behaviour Checklist

Effect of the training on independence and self-reliance

Table 3 presents the results of the longitudinal multilevel analysis. There was a significant interaction effect of Group by Time 2. In the long term (T2 versus T0), the intervention group showed a significant increase in the score on the SFSMR, in contrast to the comparison group.

Table 3 Results of the longitudinal multilevel analysis of the Social Functioning Scale for the Mentally Retarded

	Coefficient (b)	SE	<i>t</i>	<i>F</i>	<i>p</i> -Value	95% Confidence interval	
Intercept	112.09	3.13	35.84	1284.61	.00	105.73	118.46
Group	-6.42	4.12	-1.56	2.43	.13	-14.81	1.96
Time 1 (short-term versus baseline)	-0.18	1.86	-0.10	0.01	.92	-3.91	3.55
Time 2 (long-term versus baseline)	-1.09	1.86	-0.59	0.35	.56	-4.82	2.64
Group * Time 1	3.58	2.44	1.47	2.15	.15	-1.33	8.49
Group * Time 2	6.74	2.54	2.66	7.08	.01*	1.65	11.84

* $p < .05$

Effect of the training on support needs

The results of the longitudinal multilevel analysis of the SIS indicated that there was no Group by Time effect, indicating that the support needs of the intervention group did not significantly differ (from T0 to T2) compared to the comparison group (Table 4).

Table 4 Results of the longitudinal multilevel analysis of the Supports Intensity Scale

	Coefficient (b)	SE	<i>t</i>	<i>F</i>	<i>p</i> -Value	95% Confidence interval	
Intercept	303.73	25.33	11.99	143.74	.00	252.00	355.45
Group	-18.86	33.35	-0.57	0.32	.58	-86.96	49.24
Time	-11.82	15.91	-0.74	0.55	.47	-44.79	21.16
Group * Time	-1.27	21.92	-0.06	0.00	.95	-46.66	44.12

Effect of the training on behavioural problems

The longitudinal multilevel analysis of the DBC did not show a Group by Time effect, which means that there were no significant differences in the occurrence of behavioural problems, neither in the short nor in the long term. The results that are reported (Table 5) are from the analysis with the outlier included, since there were no differences in terms of statistical significance between the outcomes of the analyses with and without the outlier.

Table 5 Results of the longitudinal multilevel analysis of the Developmental Behaviour Checklist

	Coefficient (b)	SE	<i>t</i>	<i>F</i>	<i>p</i> -Value	95% Confidence interval	
Intercept	33.34	5.70	5.85	34.18	.00	21.88	44.79
Group	-0.10	7.51	-0.01	0.00	.99	-15.19	14.98
Time 1 (short-term versus baseline)	2.53	5.56	0.46	0.21	.65	-8.65	13.71
Time 2 (long-term versus baseline)	3.43	5.56	0.62	0.38	.54	-7.76	14.61
Group * Time 1	-1.45	7.33	-0.20	0.04	.84	-16.17	13.27
Group * Time 2	-6.33	7.58	-0.84	0.70	.41	-21.56	8.90

Non-parametric tests

In addition to the longitudinal multilevel analyses, non-parametric Mann-Whitney tests were performed to see whether the abovementioned results could be confirmed. Again, only the difference score on the SFSMR between T2 and T0 differed significantly between the groups, $U = 9.00$, $p < .01$. The difference scores on the DBC, the SIS, and the SFSMR between T1 and T0 were not significantly different between the groups (all p -values $> .05$).

Focus groups

The content of the focus group discussions was mostly comparable between the focus group with staff working in group homes and the focus group with staff working in day

care services. Table 6 summarises the identified categories and lists several illustrative quotes. Overall, according to the trained staff members, the training provided them with little new information. What they had learnt however was (how) to ask their clients more questions. Although the various teams did not make any new agreements on how to guide their clients after the training, they had noticed several changes since then, especially within the group homes. Some staff members attributed these changes to the training, whereas others did not. Changes included a difference in their attitude towards clients and an increased awareness that they should not take over from them but instead focus on what their clients are able to do themselves. Furthermore, many noticed an alteration in their method of working. They listened more carefully to their clients, instead of (automatically) thinking on their behalf. They did not take over tasks from them as much as they used to and they more often dared to let go and let the clients take charge. When asked whether they missed anything within the staff training, additional coaching-on-the-job was mentioned, next to learning new techniques and learning how to apply the training to their own daily practice at work, for example by discussing and practising with their own case studies.

Table 6 Overview of categories and illustrative quotes from the focus groups

What have you learnt from the training?		
Category	Subcategory	Quotes
Not much new knowledge	Little new knowledge	<i>There was little new knowledge obtained.</i>
	Confirmation	<i>To me it was more a confirmation. What was said in the training, yes, that is how we work as well.</i>
Skills	General	<i>Yes, skills have grown, in my opinion.</i>
	Asking questions	<i>With regard to skills, we have learnt questioning techniques.</i>
Have you noticed any changes after the training in knowledge, attitude, skills, method of working?		
Category	Subcategory	Quotes
Awareness	General	<i>I tend to take things over a lot from clients, but I am now more aware that I should do that less frequently.</i>
		<i>We are now more aware that clients can do much more themselves.</i>
Attitude	Focus on abilities	<i>I now focus more on clients' possibilities to develop, which makes my job more fun.</i>

Table 6 Continued

Have you noticed any changes after the training in knowledge, attitude, skills, method of working?		
Category	Subcategory	Quotes
Method of working	Client in control	<i>In our group home, we should sit with our feet up more often, give some guidance, and do nothing more. Just follow them with your hands behind your back. If I look back 6 to 12 months to see whether this has happened, then, yes. Now you can, so to speak, really sit with your feet up on the table and say "Go ahead, what would you do?" We let the client take control more often than before. We dare to let go more often.</i>
Method of working	Client in control	<i>Less automatic thinking, but listening more to the client, what he wants.</i>
	Taking over	<i>More letting go, letting them think for themselves more, letting them do things themselves more.</i>
Little changes	General	<i>We already did a lot of those things.</i>
	Team agreements	<i>In our group home, little changed. After the training, there was no meeting on how to implement this within the team and in our way of guiding clients.</i>
What might have caused these changes?		
Category	Subcategory	Quotes
Training	Training effect	<i>The awareness has increased because of the training.</i>
	No training effect	<i>I do not think these changes are caused by the training.</i>
Have you missed anything within the training?		
Category	Subcategory	Quotes
Application	Daily practice	<i>Putting it into practice was not discussed that much.</i>
Own case studies	General	<i>It [the training] was more with the use of pictures and case studies, but it is different when you focus on your own client: "I am running into these difficulties with this client, how can we approach that?" ... Everyone from the other group homes can learn from that as well. That is an easier way to help each other and give each other advice than with a picture.</i>
		<i>Shadow me for a day, a couple of hours, and observe how I am doing within my group home.</i>
Coaching-on-the-job	General	<i>Shadow me for a day, a couple of hours, and observe how I am doing within my group home.</i>
Techniques	Communication	<i>Yes, conversational techniques. How are you going to motivate clients that find it difficult to devise themselves how to do something, to still find this out themselves?</i>

Discussion

The aim of this study was to evaluate a training for support staff, which teaches them how to promote self-management in people with ID. Apart from improvements in independence and self-reliance, it was hypothesised that the staff training would lead to reductions in support needs and behavioural problems of people with ID. The main

finding of this study was that even though no differences between the intervention and comparison group were found in support needs and behavioural problems, the intervention group showed more improvement in independence and self-reliance in the long term. However, this latter effect was small and thus overall, it can be concluded that the results only provide limited evidence for the effectiveness of the staff training. Although various previous studies have found more convincing evidence for the effectiveness of self-management interventions, caution is still in order, for example because of their even smaller sample sizes and the lack of a comparison group [57, 103, 104]. The heterogeneity of the studies' specific goals, designs, and outcome measures also impedes a proper comparison of the interventions and their impact [12]. However, important factors for an effective intervention seem to be that it can be adapted to the individual user and the specific context [6, 8, 57], and that not only people with ID are involved, but also those who care for them [6, 8, 33]. Although both were the case in the intervention that we evaluated, its effect was still small.

In the focus groups, trained staff members also reported that the staff training had limited benefits. It mainly confirmed their knowledge and method of working. Nevertheless, after the training, some staff members had noticed positive alterations in their attitude towards clients and in their method of working. However, these were possibly too subtle to induce significant changes in their clients' level of functioning. Concerning the content of the training, support staff stated that they would have liked to learn more about things they did not know yet and could therefore develop during the training, such as new techniques for guiding their clients. They also would have liked to focus more on the application of the training's methodology to their own daily practice.

The above-mentioned findings from the focus groups could suggest that the training did not yet sufficiently clarify how the staff members could have promoted self-management in their own clients. This might explain why afterwards, none of the teams made new agreements on how to guide their clients based on the methodology that was taught. It seems that the actual implementation of good support staff practices in the field of ID is a difficult task, as was also seen in previous research [128]. A barrier to the implementation also possibly concerns insufficient encouragement from within the organisation to practice the methodology [38]. If a practice leader would have been appointed, this person could have organised, encouraged, supervised, and coached the trained staff to put the methodology of the training into practice. This could have improved the implementation

of the training, the quality of staff practice, and therefore the outcomes for the people with ID who were supported by the trained staff members [128].

Apart from an inadequate implementation, the format of the training also shows room for improvement. Because our study took place in a naturalistic setting, at the time, it was only feasible to provide a classroom training, whereas previous research has found that coaching is an important addition to this. This was confirmed by several staff members who stated in the focus groups that they would have liked additional coaching. Classroom training therefore seems to be insufficient for teaching staff to guide their clients towards greater self-management.

Apart from aspects related to the training, another explanation for the limited effects could pertain to the fact that people with ID need more time to develop their self-management skills, given their overall learning deficit [9]. Therefore, it may well take more than 6 months before significant improvements in independence and self-reliance, support needs, and behaviour can be observed. Furthermore, the questionnaires that were used in this study might not be sensitive enough to measure change in our population. On the DBC [139], participants showed relatively low scores overall. As was mentioned, this questionnaire is aimed at minors with ID, which may explain why many of the behaviours that were addressed were uncommon in our adult participants. Conversely, there was a ceiling effect on the SFSMR [135], already at baseline. Therefore, for many participants, there was little room for improvement in scores, whereas in real life much progress in independence and self-reliance was possible. It should also be noted that the significant difference between the groups on this outcome measure could also be related to the fact that the scores of the comparison group slightly decreased over time, especially in the long term. Therefore, this significant result should be interpreted with caution. Furthermore, contrary to what would be expected, the intervention group had higher support needs in the long term, whereas the comparison group showed a decrease in support needs. These results were, however, not significantly different.

Besides the use of questionnaires that seem inadequate for our population, other limitations of the study include the small sample size and the fact that our follow-up measurements only lasted until 6 months after the training. In addition, quality of life was not assessed in this study, although this would have been a valuable outcome measure, as people can experience a higher quality of life when self-management is promoted [4]. Furthermore, there was a non-random allocation of the homes to either

the intervention or comparison group and participants could not be matched, given the diversity and complexity of their problems. Although there were no significant differences between the groups on several background characteristics, slight differences between the groups may still have influenced the results. Also, while there were no dropouts in the comparison group, there were three in the intervention group, who were all relatively well functioning people with ID.

Despite its limitations, this study could still offer a valuable contribution to the field of ID. Apart from being a mixed-methods study, it is to our best knowledge also the first to evaluate the effectiveness of a staff training aimed at promoting overall self-management in people with ID. Thus, the study could serve as a starting point for the further development and evaluation of similar kind of trainings. When designing these trainings, the content and setup should be carefully considered, as well as the implementation and application into daily practice. Organising good practice leadership and coaching-on-the-job appear to be important factors to consider in this context. In future research, it would also be of interest to study the effects on different subgroups of people with ID, as well as the cost-effectiveness. Apart from selecting measurement instruments that are more appropriate for this population, such as the SF5MR for a higher level [145], or the Adult Behavior Checklist [146], it is also worthwhile to consider self-reports. This could be achieved by including people with ID when filling in questionnaires or by interviewing them to hear their perspectives and experiences. Studying whether any improvements in quality of life occur, would be of interest as well. Furthermore, to avoid bias of trained staff members, investigating (changes in) client and staff behaviour by using a more direct and objective measure (e.g., through observations) would be a valuable addition to the more subjective experiences as collected through questionnaires and focus groups.

In conclusion, this study found limited evidence for the effectiveness of a staff training that promotes self-management in people with ID. Further research is required on how this can be achieved more effectively. Although the limitations should be kept in mind, this study could serve as a basis for the further development and evaluation of similar kind of trainings. In order to be more effective, the training's content, format, and implementation should be carefully considered, for example by paying more attention to its application into daily practice and including coaching-on-the-job.

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