



John Rose and Abigail Gallivan

## Introduction

High-quality training and supervision for staff working with clients with challenging behavior is considered to be a vital requirement in services for people with intellectual disabilities. Training can include a range of longer-term professional courses that lead to specific qualifications in a range of professions including medicine, psychology, social work, nursing, occupational therapy, and speech and language therapy. However, this chapter will focus on the brief training that is provided mainly for direct care staff who are working in residential and community services for people with intellectual disabilities. In particular, we will focus on training relating to reducing the challenging behaviors expressed by people with intellectual disability.

Challenging behavior has been defined as “culturally abnormal behaviors of such an intensity, frequency of duration that the safety of the person or others is likely to be placed in serious jeopardy, *or* behavior which is seriously likely to

limit use of, or result in the person being denied access to, ordinary community facilities” (Emerson, 1995), estimates of the percentage of people in intellectual disability services who have challenging behavior varies considerably however, Emerson et al. (2001) suggest 10–15%. Challenging behavior may be the result of mental health issues or a wide variety of other causes in people with intellectual disabilities. It is therefore important for staff to have a good knowledge of managing both challenging behavior and mental health issues in this population.

Providing effective services for those with complex needs including challenging behavior is especially demanding for care staff (Campbell, 2011) and difficulties in doing so are a contributing factor to work place stress, a major problem in services for people with intellectual disabilities in the UK (e.g., Jenkins, Rose, & Lovell, 1997; Rose, Mills, Silva, & Thompson, 2013). Staff stress can lead to poorer quality interactions with clients (Rose, Jones, & Fletcher, 1998a, 1998b), lowered job satisfaction, burnout, and higher sickness rates (Rose, 1995). Failures to provide staff with the relevant skills, knowledge and motivation in dealing with challenging behavior is costly for the wellbeing of clients and staff alike (McKenzie, Paxton, Patrick, Matheson, & Murray, 2000), yet a gap has been noted between what is known to work in reducing challenging behavior and what staff do in practice (Campbell, 2011). This indicates the need for a

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J. Rose (✉)  
Centre for Applied Psychology, School of  
Psychology, The University of Birmingham,  
Edgbaston, Birmingham, UK  
e-mail: [j.l.rose@bham.ac.uk](mailto:j.l.rose@bham.ac.uk)

A. Gallivan  
Forward Thinking Birmingham, Finch Road Primary  
Care Centre, Lozells, Birmingham, UK

comprehensive training approach to ensure that all staff are updated with the approaches and techniques they require to work effectively and safely.

The implementation of knowledge acquired through training requires appropriate continued support as an important element to maintain effective services. This includes a range of staff supports such as ensuring staff have the right values base, knowledge and risk management skills and a space to reflect on their work through supervision (e.g., Rose & Burns, 2011). The leadership of staff is also important to ensure that these systems are maintained and practice leadership will also be considered (e.g., Deveau & McGill, 2014).

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### Short Training Courses for Direct Care Staff

There is a widespread belief in the benefits of staff training for improving staff performance (Campbell, 2007), and as a result staff training has been used to educate and support staff who work with people with intellectual disabilities across a broad range of areas. For example, the literature has highlighted the benefits of training for staff in working with clients who have experienced sexual abuse (Hames, 1996), in increasing self determination (Wong & Wong, 2008), enhancing interactions with clients (Finn & Sturme, 2009; van der Meer et al., 2017), communicating about death and dying (Tuffrey-Wijne, Rose, Grant, & Wijne, 2017), working with people who have dysphagia (Chadwick et al., 2014), working with older people (Webber, Bowers, & Bigby, 2016), and raising awareness of mental health problems among staff (Costello, Bouras, & Davis, 2007; Rose, Rose, & Kent, 2012).

Over recent years, there have been significant developments in approaches to training staff who are working with clients with intellectual disabilities who exhibit challenging behavior. Previously, training focused on the management of challenging behavior (Grey, Hastings, & McClean, 2007), particularly on behavioral and

physical interventions. One criticism of this approach was that it could increase the use of aversive methods with a group of people who were unable to consent, and that techniques could be implemented without a proper understanding of the function of a person's challenging behavior (Berryman, Evans, & Kalbag, 1994). Ethical and legal concerns have also been expressed about pain-compliance methods which have been used (Allen & Tynan, 2000). Alongside these concerns it has become evident that simply attending to the process of skill acquisition of clients is often unlikely to be sufficient to change the general approach and performance of staff in the workplace (Wong & Wong, 2008).

Over recent years there has been a much stronger emphasis in the development of training approaches on working within a broader organizational and interpersonal system to support people with Intellectual Disabilities with Challenging Behavior and Mental Health issues. These are organized within a number of frameworks; in a recent systematic review Cox, Dube, and Temple (2015) characterized them as: Positive Behavioral Support, Active Support, crisis prevention and response training (with a focus on Physical interventions), and communication training. However, the variety of possible frameworks can be extended by a variety of short-term training sessions that focus particularly on developing values and attitudes.

Positive behavior support is a set of research-based strategies used to increase quality of life and decrease challenging behavior by teaching new skills and making changes in a person's environment which combines values, theory and evidence-base and process (Gore et al., 2013). Active Support embraces Positive Behavioral Support with an emphasis on a range of approaches that enable people with intellectual disabilities to take part in a broad range of activities that have meaning to them so that ultimately they can exercise more control over their lives and become more independent and live as valued members of the community. As a result Active support has a focus developing staff skills in promoting engagement and developing service capacity to provide opportunities for people with

intellectual disabilities and tends to take a whole systems approach with training integrated on a regular basis for staff (Koritsas, Iacono, Hamilton, & Leighton, 2008).

Ensuring that staff have an awareness of a broader context such as advocated in the Active Support approach has implications for training staff and more recent staff training has necessarily included a more extensive range of components. These include training in established behavioral methods but also training with a stronger emphasis on values and perceptions (e.g., Rose, Gallivan, Wright, & Blake, 2014). Other staff training has developed a focus on attributions, particularly the understanding of the cognitions, the emotional understanding of staff and how these are integral to the setting conditions for staff responses to challenging behavior (Grey et al., 2007). It is useful to consider how effective a more diverse approach to training has been, especially given the breadth of training now available as a result of a broader organizational focus. Due to the increased range of factors considered to influence challenging behavior many training studies focus on a broad range of outcomes so may be referred to on a number of occasions. As a result of these complexities we have chosen a different way to consider evaluations of training as: Crisis prevention and intervention; Increasing knowledge; Changing attributions; Emotional Intelligence; Communication and values based approaches and Environmental approaches. Throughout the chapter we will select examples of illustrative studies and the impact they have had in order to orient the reader to some of the main issues.

### **Crisis Prevention and Response Training**

A number of studies have examined the effects of training on the quality of staff physical interventions in response to challenging behavior (e.g., Allen & Tynan, 2000; Baker and Bissmire (2000); Van Oorsouw, Embregts, Bosman, & Jahoda, 2010). The argument for focusing on developing staff ability to undertake physical interventions is

to reduce the likelihood of injury for clients and staff because if staff do not feel safe, they will be unlikely to implement other behavioral or communicative strategies effectively (Allen, 1999).

One example of this approach to training is provided by Van Oorsouw et al. (2010) who adopted a quasi-experimental control group design consisting of two experimental groups and two control groups to investigate the impact of a 5-day training program for staff working with clients who exhibit challenging behavior. The training took place 1 day a week for 5 weeks and consisted of 25½ h of teaching on the causes of challenging behavior, early signs of escalation, and caring for colleagues involved in incidents and 7½ h teaching on physical intervention skills. An exclusion criterion was used to ensure that none of the staff had participated in any comparable training for at least 2 years and groups were matched in terms of their professional role, the severity of challenging behavior of the people they worked with and gender. Staff in the control group received the training once the study was completed. Following the training, a significant improvement was found in the levels of knowledge of staff and in the quality of their physical interventions.

Demonstrations of physical intervention techniques were videoed and analyzed using a standardized observation manual developed by the authors. In addition, knowledge and physical intervention scores remained significantly higher at 5-month follow-up in the intervention group than pre-training scores. No significant differences were found in the control group between pre- and post-training. However, staff knowledge and physical intervention scores at follow-up in the intervention group were significantly lower than immediately after training. This suggests that maintenance of high levels of knowledge and physical interventions may require additional input and regular refresher training.

McDonnell (1997) evaluated a 3-day course which aimed to develop a number of skills including skills in defusing situations and restraint, increasing understanding of challenging behavior, and increasing the confidence of care staff. At the end of the course all participants also demon-

strated competence in physical restraint skills, they also showed a significant increase in self-confidence (measured by the Managing Challenging Behavior Confidence Scale), but no significant difference in knowledge (measured by the Violence Incident Knowledge Test). These results are of interest but as with all of the evaluations in this area they need to be treated with some caution as the design of the research could have been more robust, for example, in this case, as in others, participants were not randomly allocated to conditions and the numbers involved were small (22 participants). While it is important to ensure that staff are confident and have the ability to physically manage challenging behavior, it is perhaps a more essential skill to focus on preventing challenging behavior.

### Increasing Knowledge

Most of the recent approaches to reducing challenging behavior include a preventative element and an element of developing knowledge of challenging behavior. While Allen and Tynan (2000) included physical skills in their training they also had a preventative and knowledge acquisition focus. They utilized a mixed design to compare a training program in which there were two groups of staff, one who had previously received the training ( $n = 51$ ) and another who had not ( $n = 58$ ). Training was carried out using the "Management of Aggression Training Program." The main emphasis of this program was the development of preventative approaches to challenging behavior through antecedent or ecological change (altering aspects of the environment that may trigger challenging behavior). It consisted of an introductory theory day followed by 1–2 days of physical intervention practice according to need. Staff who had previously undertaken training were identified from attendance lists at previous training sessions and compared to an "untrained" staff group with no previous record of training. Following training, a significant improvement was found in the levels of knowledge and confidence in the previously "untrained group" (who were now trained). However, staff

with experience of training in the previously "trained group" also achieved significantly higher scores on knowledge and confidence compared to the "untrained" group scores post-training. It is possible that preexisting differences found between the groups (including length of service and nature of challenging behavior experienced by the staff) may have accounted for this variation. Matching participants in the two groups in this study would have addressed this issue and further increased the validity of the findings.

McKenzie, Sharp, Paxton, and Murray (2002), McKenzie et al. (2000), Kalsy, Heath, Adams, and Oliver (2007), and Gentry, Icton, and Milne (2001) examined the effects of brief training on enhancing staff knowledge. The basic content of training included sections on the causes of challenging behavior, signs of escalation, and preventative strategies. All of these studies assessed 1-day training apart from Gentry et al. (2001) who evaluated a 3-day program.

McKenzie et al. (2000) investigated the impact of training on the knowledge of staff relating to challenging behavior. The study consisted of a training group and a control group who did not receive the training. Knowledge was measured with a questionnaire concerning the criteria for a learning disability, defining and managing challenging behavior and duty of care. Following the training, significant increases were found in the knowledge of the trained group in relation to defining a learning disability, duty of care and defining challenging behavior but not the management of challenging behavior. The authors suggest that this may be because staff who participated in the training felt the production of behavioral guidelines and functional analysis were outside the remit of their work. Follow-up data demonstrated that their overall knowledge scores remained significantly higher at 6 and 12 months after the intervention. The control group showed no similar increase in knowledge. This study was later replicated with 36 staff with similar results (McKenzie et al., 2002).

Gentry et al. (2001) investigated a 3 day "Interactive Staff Training" (IST) on levels of staff knowledge. The IST approach was developed by Corrigan and McCracken (1997) originally

for use in psychiatric settings; the training also included elements directed at awareness of organizational and motivational barriers to the implementation of new knowledge and skills. Key features of the IST approach were to train staff as a whole group (including managers) who worked together, obtaining administrative support for changes, assessing staff needs prior to training, and forming a committee responsible for decision-making regarding the organization of the training. In addition to the topics typically covered, the training also included sessions on the organizational barriers to implementing strategies and practical implications of management guidelines. Significant improvements in staff knowledge were found following training, although no follow-up was conducted in this study.

Kalsy et al. (2007) examined if a 4-h workshop could improve the knowledge of staff who worked with clients with Down syndrome, dementia and challenging behavior. The intervention consisted of teaching on the disease course of dementia, health problems, behavioral descriptors, assessment, and intervention options. Significant increases in knowledge were found following the training, though the measure related to aging and intellectual disabilities not specifically to challenging behavior. Overall, results suggest that short programs can increase knowledge; however, there are some inconsistencies as to how much and which elements of knowledge are retained.

## Changing Attributions

There is an increasing recognition that addressing the way that staff understand challenging behavior can have a significant effect on how staff behave towards clients (Ager & O'May, 2001; Rose, 2011). Weiner's (1980, 1993) work provides a basis for understanding the impact of attributions, suggesting that if care staff attributed greater personal control over their actions to a client they were less sympathetic and less likely to help them than if they attributed the causes of the challenging behavior to be due to factors which were outside of the client's personal con-

trol (Rose, 2011). Research has supported the role of controllability attributions in mediating helping behavior (Dagnan, Trower, & Smith, 1998; Hill & Dagnan, 2002), suggesting that staff who hold negative perceptions are more likely to confront clients (Jahoda & Wanless, 2005), which can be unhelpful and that controllability attributions can be altered.

Williams, Dagnan, Rodgers, and McDowell (2012) reviewed the evidence for changes in carers attributions towards the behavior of people with intellectual disabilities as a consequence of training in challenging behavior. Eleven papers were reviewed that generally used a behavioral framework for staff training. While none explicitly set out to change attributions 8 of the 11 papers they reviewed reported changes in attributions. This implies that changes in attributions can occur even though these are not identified as a focus for training.

Studies have used a variety of means to assess whether staff appraisal of challenging behavior can be altered by training interventions. Berryman et al. (1994) was one of the first studies to address staff attributions of challenging behavior and move beyond a traditional operant behavioral approach. They evaluated the effects of two types of 1-day training. One group received training in traditional behavior management while a second group received training in understanding behavior in relation to a person's past experiences and social context, including teaching on functional alternatives in communication and improving quality of life. The results indicated that staff in the latter group reported a significant increase in attributions for the cause of the challenging behavior as due to external reasons such as escape-avoidance processes and tangible reinforcement and a significant reduction in the selection of categories of internal attributions such as the clients' emotions and low self-esteem as causes of challenging behavior (measured by the Causal Attributions for Challenging Behavior Scale). This change was significantly different from the group who were provided with the traditional behavioral management intervention, who tended to attribute clients' challenging behavior as a direct result of internal processes within the

client such as emotions. The differences between groups were maintained at 9-month follow-up suggesting that staff who received the training focusing on client experiences continued to consider more external reasons for the cause of challenging behavior. This result suggests that staff who received the training focusing on past experiences of clients would be more likely to help and support their clients through their challenging behavior (Rose, 2011).

The study also assessed how the training influenced the development of behavioral plans by staff. Significant differences were found between the two groups, with no significant changes over time found in the intervention plans of staff in the traditional behavior management intervention whereas the group who focused on past experiences demonstrated a greater emphasis on helping clients to achieve new skills and a greater emphasis on functional analysis in their plans. These changes are likely to have a beneficial impact on client outcomes.

Significant changes in attributions after training were also found by Kalsy et al. (2007) who also investigated changes in attributions in addition to knowledge following a 4-h training session. The Controllability Beliefs Scale (Dagnan, Grant, & McDonnell, 2004) was used to assess how much control care staff believed clients with Down syndrome and dementia had over their challenging behavior. Following the training, staff reported significantly lower controllability attribution scores for their clients, suggesting that significantly less control was attributed to clients over their challenging behavior. Again, this result would suggest that staff are more likely to try and understand the reasons for the challenging behavior they are managing with and to use more constructive approaches to management.

Studies of attributional change have not always found consistent effects. Tierney, Quilan, and Hastings (2007) assessed changes in attributions, emotional reactions, and feelings of self-efficacy of staff after attending a 3-day training on understanding challenging behavior. The training included teaching on behavioral and functional assessment, using a "Positive Behavioral Support Plan," coping with stress and provided techniques from the "Non Violent Crisis Intervention Training

Programme." The program centered on crisis development and appropriate interventions during and following challenging behavior. Attributions were measured by the Challenging Behavior Attributions Scale (Hastings, 1997), emotional reactions by the Emotional Reactions to Challenging Behavior Scale (Mitchell & Hastings, 1998), and self-efficacy by a 5-item Likert scale. Following training, there were no significant changes in either attributions or emotional reaction scores but a significant increase was found in staff ratings of self-efficacy. Tierney et al. (2007) had wanted to establish whether a "typical staff training approach" (i.e., fairly standard material being covered, e.g., causes of challenging behavior, functional analysis, importance of communication, precipitating factors to challenging behavior) could lead to cognitive and emotional changes in staff. Their findings suggest that a "typical" training is likely to be sufficient to improve staff feelings of self-efficacy but is insufficient to alter their cognitions or negative emotional reactions to challenging behavior and that or more targeted approach may be needed which specifically includes information on values and the specific causes of challenging behavior.

Dowey, Toogood, Hastings, and Nash (2007) investigated whether a 1-day workshop could alter staff causal explanations of challenging behavior. The workshop was presented as a pre-training for later skills based training. Lectures, vignettes, and role-play exercises were used to teach staff about the causes of challenging behavior, including the role of the environment in shaping behaviors and aspects of Applied Behavioral Analysis. The training also included a lecture on quality of life issues such as choice, respect, community presence, and participation. Changes in attributions were measured using a modified subscale of the Self-Injury Behavioral Understanding Questionnaire (Oliver, Hall, Hales, & Head, 1996). This required participants to read 11 scenarios and select from four possible causal explanations for the challenging behavior that reflected behaviorally correct, behaviorally incorrect, internal emotional or internal organic explanations. Following training, there was a significant increase in the use of behavioral explanations compared to explanations relating to the

emotional or organic state of the client. However, the increase in behavioral explanations consisted of a significant increase in both behaviorally correct and behaviorally incorrect explanations. This study implies that training can change causal thinking about challenging behavior and that staff may have gained a general understanding that challenging behavior can be related to environmental and situational reasons but 1 day may not have allowed enough time for staff to develop their thinking to answer the questions correctly.

McKenzie et al. (2002) also measured attributions in addition to knowledge, but only in a small subgroup of participants ( $n = 14$ ). Attributions were measured using two methods. The first was a bipolar scale based on four attributional dimensions suggested by Munton, Silvester, Stratton, and Hanks (1999) which were internal-external, controllable-uncontrollable, stable-unstable, and global-specific. The second was open ended questions about the causes of challenging behavior, which were scored using Bromley and Emerson's (1995) categories which included a wide range of possible causes such as internal psychological state, environment, stimulation, communication, medical, mental illness, or escape (McKenzie et al., 2002). Practice was assessed in a 4-h assessment of a series of tasks set in relation to a selected client in accordance with the Periodic Service Review (PSR, La Vigna, Willis, Shaull, Abedi, & Sweitzer, 1994). Examples of PSR tasks included the accurate recording of a client's behavior, reactive strategies and treatments selected, and the appropriate use of reinforcement. This was done immediately after the training and at 8 weeks follow-up; however, no significant changes were found in staff ratings on attributional dimensions but a significant decrease was found in the selection of the category of "communication deficit" at follow-up compared to pre-training. This suggests that some attributions may have been changing. Significant changes were also found in staff practice following training. The authors concluded that attributional change does not play a key role in changing staff practice however, the numbers of staff involved were small and the design weak as there was no comparison group.

Rose et al. (2014) provided a 1-day training which focused on developing a positive attitude and understanding challenging behavior as an alternative means of communication. This was embedded within a PBS approach where staff attributions and attitudes were measured at four time points, 1 week prior to training, immediately before and after training, and after 2 months follow-up. Following training, significant changes in staff attributions and attitudes were recorded, after the training, staff judged challenging behavior to be less under clients' personal control than they had been prior to the training. The changes in attributions were consistent with findings by Berryman et al. (1994), Kalsy et al. (2007), and Dowey et al. (2007). In accordance with Weiner's model (Weiner, 1980, 1993), these findings should lead to a corresponding increase in the helping behavior of staff towards the clients they work with. Following training, staff also demonstrated significantly more positive attitudes towards working with people with intellectual disabilities and challenging behavior and staff retained a more positive attitude at 2 months follow-up.

This training was designed as a base for educating front-line staff on the principles of PBS and resulted in a positive impact on staff attributions and attitudes.

Enabling staff to develop the right attitude in working with clients with an intellectual disability and challenging behavior was considered fundamental to this training, and as a result there was an emphasis on attitude change.

## Emotional Intelligence

Emotional Intelligence has been defined as "an array of emotional, personal and social abilities and skills that influence an individual's ability to cope effectively with environmental demands and pressures" (Bar-On & Parker, 2000, p. 1108). This has led to a number of training interventions that aim to develop emotional intelligence along with improvements in interactions between staff and people with intellectual disabilities that are designed to reduce challenging behavior (e.g., Embregts, Zijlmans, Gerits, & Bosman, 2017;

Zijlmans, Embregts, Gerits, Bosman, & Derksen, 2011; Zijlmans, Embregts, Gerits, Bosman, & Derksen, 2015).

Emotional Intelligence has been suggested as a focus for training after studies have found a link between staff emotions and the challenging behavior of people they care for. Wanless and Jahoda (2002) compared different methods of examining emotional and cognitive responses of staff who frequently worked with aggressive clients. They examined responses to descriptive vignettes and real incidents of aggression previously experienced by staff and found that staff experienced more negative emotions when recalling real incidents of aggression when compared to vignettes. Staff perceptions of their aggressive clients were often linked to their cognitive and emotional responses to the aggression they had experienced previously. Mills and Rose (2011) also found that negative emotions mediate the relationship between challenging behavior and burnout in staff. It has also been suggested that adaptive success by staff in working with people who have challenging behavior is determined by their emotional intelligence (Gerits, Derksen, & Verbruggen, 2004).

Zijlmans et al. (2015) focused on the effectiveness of staff training aimed at staff emotional intelligence and staff interactions with clients. The effects of the training on emotional intelligence, coping style, and emotions of support staff were investigated. Two-hundred and fourteen support staff working in residential settings for individuals with ID and challenging behavior were split into an experimental group of 76 staff and 138 staff in two control groups. Questionnaires addressing emotional intelligence, coping, and emotions assessed effectiveness. The emotional intelligence of the experimental group changed significantly more than the two control groups. The results with regard to task oriented coping and emotions were mixed. Follow-up data suggested that the improvements within the experimental group were present 4 months after the training concluded, suggesting the intervention was effective in improving emotional intelligence of support staff.

Embregts et al. (2017) extended this work on training to evaluate the effects on emotional intelligence and support staffs' awareness of the impact on their behavior based on interactional patterns. The support provided for staff focused on the needs for autonomy, relatedness, and competence. This intervention was a pre-post test control group design ( $N = 29$ ), with 17 support staff in the experimental group. The training program initially focused on the concept of emotional intelligence and its significance for caring and teamwork over the first 2 days. Support staff also received feedback on their scores on the Bar-On Emotional Quotient-inventory (EQ-i) (Derksen, Jeuken, & Klein Herenbrink, 1998). This approach was used to formulate goals that were translated into individual developmental plans such as aiming to work in a more structured way or to improve an ability to understand the emotional needs of specific clients. Support staff were asked to work on plans individually with feedback and support from the trainers. Support staff were asked to make video recordings of themselves interacting with clients. These videos were reviewed by support staff and trainers together and linked to the training protocols which aimed to increase desirable behaviors related to emotional intelligence and their chosen specific goals. Trainers followed specific protocols for the description of responses such as contingent praise, and corrective comments to ensure consistency across sessions. On completion of training support staff received feedback on their new EI profiles, based on a newly administered EQ-i. Staff were also asked to make new video recordings of them interacting with their clients for a further evaluation. For both groups of staff video recordings of interactions with residents were analyzed. Interactional patterns in the videos suggested that the training had had a positive impact on the support that staff gave to residents in developing their autonomy, relatedness, and competence. These results suggest that training with a focus on emotional intelligence can improve staff interactions with residents and results are similar to more general stress management training with staff which has been shown to both reduce stress in staff and increase the amount



of assistance staff provide to residents (Gardner, Rose, Tyler, & Cushway, 2005; Rose et al., 1998a). However, whether these results are achieved by increasing emotional intelligence or through some other means needs further scrutiny as other research suggests that emotional intelligence is not clearly linked to staff outcomes such as burnout and stress (Shead, Scott, & Rose, 2016).

### **Communication and Values Based Approaches**

Some programs have targeted different elements of staff behavior with a view to change attributions of staff. Smidt, Balandin, Reed, and Sigafos (2007) found that after the implementation of four, two and a half hour training sessions using a “MOSIAC” package (Model of Interaction for the Analysis of Interaction and Communication), there were some initial increases in the use of augmentative communication skills by staff ( $n = 18$ ) and some small changes in attributions (measured by the CHABA). However, this was only maintained at follow-up (6 month and 12 month) by one organization out of three who participated. There was also little impact on challenging behavior recorded by staff which was ascertained through an audit of clients’ incident forms.

The brief training described by Rose et al. (2014) which had a focus on attributional change also had an emphasis on encouraging staff to think about how they themselves would feel and respond in a situation where they were unable to communicate with a view to helping staff understand why challenging behavior might occur. This approach may have contributed to a change in attitudes and attributions by increasing staffs’ understanding and empathy towards people with intellectual disabilities and challenging behavior.

### **Environmental Approaches**

An alternative focus for staff training is provided by nidotherapy which attempts to reduce chal-

lenging behavior by changing the living environment to create a better fit between the person, their environment and society and in so doing reduce the frequency of challenging behaviors expressed by clients. Nidotherapy attempts to treat the problems of challenging behavior not by treating the behavior directly, but by changing the environment to create a better fit between the person and their environment (Tyrer, Sensky, & Mitchard, 2003). Nidotherapy has been applied to different chronic mental health problems (Tyrer, Kramo, Milošeska, & Seivewright, 2007), often when other interventions have failed. In a recent study (Tyrer et al., 2017), nidotherapy was introduced to staff by providing a series of structured staff training sessions to all staff involved in the direct care of clients over a period of 6 months. The four components of training include: (1) nidotherapy—person-environment understanding; (2) environmental analysis; (3) creation of a new environmental pathway (nidopathway); and (4) monitoring of the pathway. These training sessions were delivered to staff over a 6-month period. These training sessions are delivered with discussion in relation to actual episodes of challenging behavior that occur within the environment. In a randomized control trial staff in twenty homes either received training in nidotherapy or the enhanced care program approach (ECPA), the latter approach involved structured assessment of the person with challenging behavior, the development of individual goals, and monitoring of those goals. The duration of training provided was equivalent within each arm of the trial. A number of measures of challenging behavior were used to record incidents over the course of the trial. A total of 200 residents entered the trial, 115 allocated to the ECPA arm and 85 to the nidotherapy. No statistically significant reductions in challenging behavior were demonstrated over the trial in either group, but in the last 7 months, those allocated to nidotherapy had a 33% reduction in Modified Overt Aggression Scale scores and a 43% reduction in Problem Behavior Check List scores compared with much smaller reductions for the ECPA group. The changes on the MOAS were close to statistical

significance over the last 7 months of the trial. This suggests that a nidotherapy approach may be worth exploring further as the delay in possible effect seems consistent with an intervention provided through staff in relation to environmental change where a delay in implementation and effect would seem likely.

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## Methodological Issues

The Tyrer et al. (2017) study of nidotherapy was one of the most methodologically robust of those reported as it was a cluster randomized control trial with blinding between the two intervention groups; however, it was the exception and there were a range of methodological weaknesses identified with many of the other studies reported here. In general, there was a lack of clear reporting with regard to the populations from which the samples were recruited, the numbers of staff prepared to participate compared to the numbers of staff invited to training or the numbers of participants lost to follow-up. In many studies there was also an absence of blinding procedures, some studies did not collect follow-up data and there was no consideration of factors that could confound the results, e.g., whether staff had recently attended other relevant behavior training. Another internal validity issue frequently identified was the accuracy of the main outcome measures used. For example, the measure used in Gentry et al.'s (2001) study that detected highly significant increases in staff knowledge scores was an "ad hoc" measure with no detail about its structure, development, reliability, or validity. Psychometric properties are also not reported for the 20-item knowledge quiz used in the study by Kalsy et al. (2007). McKenzie et al. (2002) employed a self-assessment visual analogue scale on which staff were required to rate how much they believed their knowledge of challenging behavior had changed following training. Therefore, subjective perceptions about improvements in knowledge, not actual changes, were obtained.

While there appeared to be a greater use of standardized tools for the measurement of attributions, there are still some issues. Tierney et al.

(2007) found no changes in staff attributions following a 3-day workshop. They used the CHABA (Hastings, 1997) to measure attributions and the authors themselves highlight the low levels of internal consistency of the CHABA on several sub scales which may lead to these results being questioned. Another issue was that post-training scores were only gathered after 3 months and so their conclusion that training did not significantly change staff attributions may be inaccurate, as a better design incorporating both immediate and follow-up data collection may have shown that changes in attribution scores occurred but were not maintained at follow-up. McDonnell (1997) found that a large number of staff attributed their increase in confidence to the role-play exercises but there are also concerns about the generalizability of changes in staff attributions translating to a positive impact on working directly with clients.

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## The Impact of Short Staff Training

Despite concerns about the methodology of many of the studies, the evidence suggests that brief training has a role to play in increasing staff knowledge, for example, knowledge on intellectual disabilities, challenging behavior, and proactive and reactive strategies. The effectiveness of training of staff is consistent, at least with regard to immediate impact. The evidence also suggests that training can change staff attributions relating to challenging behavior in that following training, staff generally give more consideration to reasons external to the person (i.e., environmental or situational) as causes of challenging behavior with less focus on internal state. The literature also implies that training can improve staff confidence, emotional intelligence, the quality of physical intervention techniques and some other aspects of staff practice such as the development and implementation of behavioral guidelines. Increasing staff knowledge may alter the way staff approach clients, which could reduce the chances of incidents occurring (Van Oorsouw et al., 2010). It is recognized that in care services there are often poor levels of knowledge but all

staff require the necessary knowledge to work with people with challenging behavior (Ball, Bush, & Emerson, 2004). As a result it seems important that all staff should have access to at least basic training to help them gain an appreciation of challenging behavior.

There is some indication from the studies discussed here that a “typical training approach” of a single day is sufficient to change levels of knowledge but may be insufficient to change staff attributions or emotional reactions, even where training is 3 days long rather than a single day. A more targeted approach which addresses values and beliefs of staff may be required for changes in these variables. The evidence for changing staff behavior is even weaker; however, some studies are starting to encompass measures of behavior change indicating some positive changes are possible (e.g., Embregts et al., 2017).

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## The Maintenance of the Impact of Training

The evidence suggests that there is a role for staff training and that it is important to train staff so that they can support individuals with intellectual disability and challenging behavior effectively. This leads to the implication that services need to ensure that all staff can become trained, understand what they are told and are able to apply what they have learnt consistently and over time. At present, much training is not mandatory particularly in relation to challenging behavior and there is a need for services to address training needs.

It would be beneficial for any organizational strategy to include a system which ensured that staff are regularly updated and those who require further training are identified. In the study by Berryman et al. (1994) changes in attributions were maintained at 9-month follow-up and the authors describe the use of biweekly supervision as a methodology for reinforcing the training intervention. This also implies that the role of supervision as part of an overall strategy to maintain improved staff performance may be important. It has been recognized that there is variation

in what staff and employers deem to be the remit and responsibilities of their jobs (Campbell, 2011). For a multifaceted strategy to work, value must be placed on staff development by all involved. Recognizing the impact of organizational barriers on new learning, Gentry et al. (2001) and Dowe et al. (2007) used approaches that addressed aspects of organizational culture. Individualizing training for a team may improve the likelihood of training having an impact, by increasing the contextual fit between the taught ideas and their acceptability (Grey et al., 2007).

Rose and Burns (2011) and Rose, Harris, and Burns (2010) suggested a framework for staff support which provides a range of potential areas to support staff and prevent staff burnout. This framework includes staff support interventions that can be introduced proactively such as supervision and risk assessment but also reactive strategies such as appropriate physical skills training and responsive elements such as incident analysis and behavioral skills training. A modified version of this framework is provided in Fig. 10.1 which reframes many elements which were elements of a support framework in terms of training interventions and ongoing management functions that are likely to ensure that the benefits of training are maintained and applied effectively on a regular basis. This revised framework suggests a range of discrete areas of training that can be provided to staff over time dependent upon their needs and a range of organizational methodologies that can be used to maintain these skills. Some of these areas could be seen as universally applied to all staff such as ensuring that they are able to demonstrate appropriate attitudes and values. For example, all staff are likely to be involved with incidents of challenging behavior as a result they need to be able to record incidents accurately and in a way that can be understood by others. However, staff may not be required to formulate the reason for the challenging behavior as other staff such as psychologists or behavioral specialists may be available to support them to understand what is going on and develop collaborative formulations. Supervision and regular monitoring of performance by management would be an essential part of the development and monitoring

<b>Proactive Training</b>	<b>Reactive Training</b>	<b>Responsive Training</b>
<ul style="list-style-type: none"> <li>• Person centered values and attitudes training</li> <li>• Increasing knowledge</li> <li>• Training on the communicative aspects of challenging behavior</li> <li>• Training on attributions of challenging behavior</li> <li>• Training on emotional intelligence</li> <li>• Training on Risk assessment/risk management culture</li> </ul>	<ul style="list-style-type: none"> <li>• Appropriate physical skills training</li> </ul>	<ul style="list-style-type: none"> <li>• Nidotherapy</li> <li>• Behavioral skills training.</li> <li>• Incident analysis</li> <li>• Formulation</li> </ul>
<b>Proactive Support</b>	<b>Reactive Support</b>	<b>Responsive Support</b>
<ul style="list-style-type: none"> <li>• Reflective practice groups</li> <li>• Supervision</li> <li>• Stress management processes</li> </ul>	<ul style="list-style-type: none"> <li>• Post incident support</li> </ul>	<ul style="list-style-type: none"> <li>• Individual support (formal and informal)</li> <li>• Psychological support</li> </ul>

**Fig. 10.1** A training and support framework (Adapted from Rose & Burns, 2011)

of staff performance to ensure that staff are interpreting and implementing their training effectively.

Models exist for the implementation of training focused framework described here, particularly, Positive Behavioral Support and Active Support; however, by reviewing the individual elements of training it may be possible to consider which elements are required in any particular environment and as a result target training interventions more precisely to the needs of the people with intellectual disability, thus focusing effort and resources more effectively.

The development of focus in training interventions has synergy with the idea of practice leadership in intellectual disability settings. In a qualitative study, interviewing managers of staffed group homes, Deveau and McGill (2014) identified monitoring staff performance, support-

ing new ways of working, shaping staff performance, influence of external agencies, and importance of participants’ personal values and experiences as a set of themes for defining practice leadership. These themes resonate with the suggestions for implementing staff training interventions and further work by Deveau and McGill (2016) and Deveau (2016) suggests that effective practice leadership is associated with greater job satisfaction and positive experiences for staff.

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## Conclusions

Training for direct care staff is one important element of providing effective support to people with intellectual disabilities with challenging behavior. The evidence base suggests that short training courses can be effective; however, there

is considerable variation in the results of evaluations and that a number of factors need to be considered to ensure training success and particularly in relation to any gains made by training. The evidence for any change in the behavior of staff and people with intellectual disabilities as a result of training also remains relatively poor with few studies examining these outcomes. However, it is clear that to provide effective and appropriate training to staff in direct care roles who work with people with challenging behavior requires considerable thought and organization which needs to be maintained in relation to the changing needs of the people with intellectual disabilities that they serve.

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