

**PUBLISHED ARTICLE:**

**Campbell, M. (2010) Workforce development and challenging behaviour:  
Training staff to treat, to manage or to cope? *Journal of Intellectual  
Disabilities*, 14, 3, 185-196.**

Dr Martin Campbell, BA, PhD  
Senior Lecturer, School of Psychology, University of St. Andrews, St Andrews KY16 9JP, UK  
Tel: +44 (0)1334 462084 Fax: +44 (0)1334 463042 Email: [mc1@st-andrews.ac.uk](mailto:mc1@st-andrews.ac.uk)

Key words: challenging behaviour, workforce development, staff training

## **Abstract**

Staff working directly with adults challenging behaviours in learning disability services need to be very good at what they do. They also need to want to do the job. A theory-practice gap exists, however, between what is known about effective, evidence-based approaches and whether and how these are used in person-centred, community services. Many front line staff working with people with the most serious challenging behaviours do not have the skills to implement programmes to change behaviour. This discussion paper reviews workforce development in the context of clinical and service guidelines and asks whether the legitimate purview of frontline staff is a balance of treating challenging behaviour, managing it or to simply coping with it on a daily basis, whilst maintaining the best quality of life possible for service users.

## **Introduction**

The health, social services and voluntary sector workforce is in a period of transition. There are new workforce development strategies and workforce development frameworks in the UK, with the aspiration of producing a competent, confident workforce delivering high quality, person-centred, community based services. Worryingly, this same state of transition has existed for the past ten years.

For example, in England, Wales and Northern Ireland the Learning Disabilities Accreditation Framework (LDAF) has recently been revised, and new awards will be known as Learning Disability Qualifications (LDQs). The current National Qualifications Framework (NQF) will be replaced by the Qualifications and Credit Framework (QCF). Similar updates are being made in Scotland through the Scottish Social Services Council, to standardise minimum required qualifications at Scottish Vocational Qualifications Level III (SVQ) and the Registered Manager (Adults) award NVQ/SVQ4 4 (RMA).

All these efforts to improve workforce development nationally have the same enduring catalyst; most staff working with people with learning disabilities do not have qualifications related to their jobs. This figure is as high as 75% of them, according to Dept. of Health (2009). Such high proportions of untrained staff makes it difficult for services to maintain acceptable standards, and to meet the needs of vulnerable adults.

Staff “*are guided by the law and by professional guidelines*” (BPS/RCP/RCSLT 2007, pg 9). The British Psychological Society (BPS), the Royal College of Psychiatrists (RCP) and the Royal College of Speech and Language Therapists (RCSLT) jointly produced clinical and service guidelines for the treatment and management of people with learning disabilities and challenging behaviour across different care settings: ‘*Challenging Behaviour - A Unified Approach*’ (BPS/RCP/RCSLT 2007). The guidelines reviewed the effectiveness of social, behavioural, cognitive and psychopharmacological interventions, used in conjunction with multi-element approaches such as positive behavioural support (PBS) (Koegel, Koegel & Dunlap 1996; Carr et al 1999; BPS 2004). They emphasised the importance of long term, person centred care, in line with the change in services during the last decade.

Community services for people with learning disabilities and challenging behaviour are guided, through policy, training and cascading of information, to implement recommendations such as those made by BPS/RCP/RCSLT (2007). Similarly, this good practice is disseminated through the community learning disability teams, although it is acknowledged that there is a lack of specific efficacy of the assertive outreach teams (Oliver et al. 2005) and a need for more research into the effectiveness of specialist and community teams more generally (Grey, Hastings & McLean 2007; Slevin et al. 2008).

Emerson’s functional definition of challenging behaviour (Emerson 1995) has recently been updated in the BPS/RCP/RCSLT (2007) guidelines:

*“behaviour...of such an intensity, frequency or duration as to threaten the quality of life and/or the physical safety of the individual or others and is likely to lead to responses that are restrictive, aversive or result in exclusion.”* and the vulnerability of people with challenging behaviour is also emphasised in

the title: “*Clinical and service guidelines for supporting people with learning disabilities who are at risk of receiving abusive or restrictive practices*” (BPS/RCP/RCSLT 2007, pg 14)

For untrained staff, arguably the most difficult task is how to maintain a balance between empathy and professional distance, whilst avoiding either burn out or “ennui” (Broks 2003). Front line staff are tasked with “dealing” with or “tackling” challenging behaviour, and this task has a number of interpretations. The qualifications, training, salaries and the motivation of staff varies, as does the legitimate purview of those staff, i.e. what different service employers see as the main remit of staff, and what staff themselves see as their own professional responsibilities, and limits of those responsibilities, in relation to people with challenging behaviour.

### **Behaviour that endures.**

There is evidence cited in the BPS/RCP/RCSLT guidelines and elsewhere (e.g. Macleod et al. 2002; Mansell, McGill & Emerson 2001; Thompson & Reid 2002; Dept of Health 2007) clearly demonstrating that challenging behaviour may be a lifelong problem for many people and there needs to be a greater emphasis on *lifelong* service planning; once patterns of challenging behaviour have been established it is very difficult to bring about enduring change without sustained specialist interventions.

The BPS/RCP/RCSLT guidelines make reference to “capable environments” and “placement competence” in reference to settings that can best encourage positive interactions and bring about a reduction in challenging behaviour. However “placement competence” is dependent, in turn, on relevant training and “practice leadership” (Mansell, 1996) which may be lacking in some service environments “*poorly organised and unable to respond well to the needs of the person.*” (BPS/RCP/RCSLT 2007, pg 44).

Providing effective services for people with more complex needs, including those with challenging behaviour is especially demanding for individual staff. Challenging behaviour can be particularly enduring. For example, in a 26 year follow up study of 100 people with severe and profound learning disabilities moving out of hospital, Thompson & Reid (2002) found that, “*Behavioural symptomology is remarkably persistent*”. Most of the behaviours measured, using psychiatrist and carer ratings, changed little, and stereotypy, overactivity and “emotional abnormalities” were especially persistent. Macleod et al. (2002) reported an overall decrease in adaptive behaviours and increases in communicative and challenging behaviours over a 3-year period. Similarly Robertson et al. (2005) reported that changes in reported and observed challenging behaviour in community-based supported accommodation over a 10-month period were slight.

A relatively small number of individuals with learning disabilities and challenging behaviour present major clinical, practice and resource issues for services in the UK (Dept of Health 1992; Qureshi 1994; Scottish Executive 2000, 2006; Perera et al 2009). Estimates of the prevalence of severe challenging behaviour in people who have a learning disability are plentiful in the literature, and vary considerably. Different studies have produced figures between 5.7%-20% (Qureshi 1994; Emerson et al. 2001; Department of Health 2007; Whitaker & Read 2006). The figures are partly dependent on the definition of challenging behaviour used (Emerson et al. 1997; Emerson 1998), with higher prevalence reported when broader definitions are used (O’Brien 2003). A review by Lowe et al. (2007) on current prevalence rates amongst children, young people and adults reported 4.5% people per 10,000 population were rated as “seriously challenging”, i.e. “*present a significant challenge*” (Department of Health 1992, 2007). This figure is consistent with previous estimates. The Lowe et al. (2007) study also identified substantial numbers of people reported as presenting lower degrees of severity of challenging behaviour, which the authors claim emphasises the need for enhanced understanding and skills among care staff. In the UK, the number of people with the most severe disabilities and challenging behaviour is increasing (McGrother et al. 2001). Estimates of prevalence can also change however, according to how well services meet people’s needs over a given time period. Dept. of Health (2007) suggested that whilst a

smaller number of individuals with profound and multiple disabilities will present a consistent challenge, and will rise from around 78 per 250,000 in 2009 to 105 per 250,000 in 2026 for a typical region (Mansell 2010), a larger number of people with mild learning disabilities will move into and out of the prevalence figures, depending on the services received.

### **Theory-practice gap**

A wide range of community-based services are needed for adults with challenging behaviour. Within the range of services available however, there are large variations in the minimum, maximum and average spend per person in different areas across the country (Forsyth & Winterbottom 2002; Campbell 2007c). The quality of, and access to services varies across statutory, voluntary and private organisations. Fragmentation and poorly coordinated services, and the lack of strategic investment in training are not uncommon, especially in smaller services (Mansell 1994). In the current economic climate (2010) these variations is unlikely to change significantly.

A theory-practice gap exists between what is known about effective approaches to challenging behaviour and what practitioners actually do on a day-to-day basis. This gap has been attributed to number of factors including:

- a lack of organisational structure (Baum & Lyngaard 2006)
- inadequate training (Mansell 1996; Jones et al. 2001; Allen et al. 2005; Campbell 2007a)
- a lack of basic knowledge (Hastings 1996)
- absence of adequate performance management systems for the implementation of behavioural interventions (Reid et al. 2005),
- “*informal induction into the canteen culture or human service settings*” (Emerson 1995, pg 152)

- a conflict between short term reactive strategies and long term pro-active strategies; “*interventions which deal with the short-term crisis but leave the underlying problems untouched*” (BPS/RCP/RCSLT 2007, p.41; Hastings 1997; Beadle-Brown et al. 2006)

All of the factors above may preclude the dissemination of evidence-based guidelines to these staff, or the implementation of those guidelines. The BPS/RCP/RCSLT guidelines identify an additional reason for such a theory-practice gap; a deep seated difference in expectations:

[There is] “*a mismatch between the expectations of professional staff and of staff providing direct support to individuals in community settings; the latter saying that professionals do not understand the constraints under which they work and produce advice that they cannot implement. Clinicians report that staff are unable to carry out necessary assessments and interventions.*” BPS/RCP/RCSLT 2007, pg 10)

One example of this is positive behaviour support (PBS), which has a strong evidence base for effectiveness, reducing challenging behaviour in between one-half and two-thirds of cases, according to one major review (Carr et al 1999). The effective dissemination of this intervention, advocated by Emerson (2001) has been largely limited to overstretched specialist team models, rather than mainstream staff.

One of the main aims of the BPS/RCP/RCSLT guidelines was to update the definition of challenging behaviour, as a way of changing the commonly held staff view that challenging behaviour was located *within* the individual (Dagnan & Cairns 2005). This cognitive representation of challenging behaviour led, it is argued, to the belief that, “*the problem lies in the person and that they can be cured, usually somewhere else.*” (BPS/RCP/RCSLT 2007, pg 44; Campbell 2007b). For people with the most severe challenging behaviour, the majority of interactions are with paid staff and carers. Understanding that the challenging behaviour is a social construct and a product of social and material interactions has significant implications for staff training and staff responsibility. Recognising that for the majority of

challenging behaviours, the behaviours of other people are the main antecedents and consequences is uncomfortable for many staff. It is an acknowledgement that their own behaviour is a crucial determinant in the overall success of services in reducing and preventing challenging behaviour. It also raises the question of the legitimate purview of front line staff; should training prepare such staff to treat or to manage challenging behaviour, or simply to cope with it on a daily basis whilst maintaining the best quality of life possible for service users?

Research suggests that staff who are professionally qualified have a greater understanding of the evidence-based recommendations, such as those contained in the BPS/RCP/RCSLT guidelines, and consequently may be more likely to identify and recommend them as effective strategies (Oliver et al. 1996; Hastings, Remington & Hopper 1995). The reasons for this are not established, but it may be that qualified staff think and question themselves more before they act and are also more aware of the consequences of their actions. The same research also suggests that experience alone is not a predictor of staff members being able to identify effective interventions.

### **The role of training**

In contrast to the evidence base for effective interventions in challenging behaviour, the evidence base for the effectiveness and outcomes of staff training in relation to challenging behaviour is weak, and after many years there is still conflicting evidence. For example, in one study McGill, Bradshaw & Hughes (2007) demonstrated that training *can* have a measurable and positive effect on the way staff thought about challenging behaviour. In the same year, however, research by Lowe et al. (2007) found that staff training had little effect on changing staff attributions about challenging behaviour in the longer term. There is also little empirical support for a relationship between staff beliefs and their behaviour in relation to challenging behaviours (Grey, Hastings & McLean 2007).

There are a few examples of front line staff successfully *implementing* effective programmes following training (e.g. Shore et al. 1995; McClean et al. 2005; van Oorsouw et al 2010) but these remain the exception rather than the rule in reported studies. Few studies on effective interventions include a consideration of the longer-term role of training for care staff beyond the lifetime of the study, and the few that do follow up assessments find deterioration of knowledge and skills.

Other studies have sought to establish changes in staff explanations of, or reactions to challenging behaviour, (Bailey et al. 2006; Dowey et al. 2007; McGill, Bradshaw & Hughes 2007; Tierney, Quinlan & Hastings 2007) and there is an acknowledged need for more research into how these changes translate to practice, especially when the practice is typically in high risk, emotionally charged situations (van Oorsouw et al 2010).

Regarding priorities for staff training, the BPS/RCP/RCSLT 2007 guidelines identify a clear set of the competencies required. These are not new. They are very similar to priorities identified in the BPS 2004 guidelines '*Clinical Practice Guidelines - psychological interventions for severely challenging behaviours shown by people with learning disabilities*' and, indeed, in most good practice guidelines for training over the last 20 years (Hastings and Remington 1993; Hastings 1996; Scotti et al. 1999; Grey, Hastings & McLean 2007). Do the most effective known interventions fail because staff are not willing, or are not able to implement them (Hastings & Remington 1993) as suggested by Foxx (1996), or are there other reasons?

### **The legitimate purview of staff**

There is confusion about what is expected of front line staff and, crucially, what those staff themselves see as their primary role at any given time. If staff are to competently *treat* challenging behaviour, thereby reducing the probability of future challenging behaviour, specific and verifiable training is needed, which includes carrying out functional analyses, implementing and monitoring quite complex treatment plans consistently over a long period of time. If on the other hand staff are to *manage*

challenging behaviour, a quite different training emphasis is needed, focusing on how to reduce or stop challenging behaviour when it happens and minimize harm, *without* an expectation that this intervention will make future occurrences less likely.

The motivation, confidence and ultimately the performance of staff can be seriously effected in services where staff believe that they are *treating* challenging behaviour when, in fact, the interventions being promoted and used are suited only to short term *management*. In this scenario the behaviours will persist and frontline staff will quickly become disillusioned.

Staff members consistently report that they do not receive specific training for working with people with a learning disability and challenging behaviour, and that any training they do receive is not suitable (e.g. Dept of Health 2007; Mansell 1996; McVilly 1997). Even for staff with a professional qualification, the skills needed to intervene successfully in challenging behaviour are rarely present at the point of qualification, regardless of professional background. There is a need for clarity in the aims of training to explain and balance of treatment and management of challenging behaviour, and perhaps to acknowledge that at times unqualified or untrained staff may be asked simply to “cope” with the enduring nature of challenging behaviour whilst maintaining highest possible quality standards of service, care and life. This should be acknowledged more in induction training. Appropriately skilled, trained and qualified staff working with people with learning disabilities and challenging behaviour should remain the aspiration, but the reality of how to cope with challenging behaviour, professionally and personally, should be acknowledged and more openly discussed when formulating the next round of workforce development plans.

### **Future studies**

Future studies might look at the degree of congruence between the BPS/RCP/RCSLT guidelines and the views expressed by psychologists and psychiatrists working in services to people with learning disabilities and challenging behaviour.

Follow up studies might also investigate at:

- How the BPS/RCP/RCSLT guidelines can be made more “*alive, active and responsive*” (BPS/RCP/RCSLT 2007, pg 8) and so disseminated more widely amongst services.
- The popularity and use of other, non-recommended strategies which have “*questionable efficacy*.” (Robertson et al. 2005).
- Finally, are service commissioners promoting “capable environments” or cheap environments? To what extent is the use of evidence-based interventions limited by cost, at the stages of commissioning a service, hiring and training staff?

## **Conclusion**

In conclusion, there are differences between recognised evidence-based approaches and what happens in interactions between front line staff and services users. Therapeutic interventions to treat and manage challenging behaviour are only truly effective when the belief schema and the skills of the staff member match his/her actions in relation to services users (Grey, Hastings & McLean 2007; Ager and O’May 2001; Campbell 2008). Although staff explanations for challenging behaviour can be changed through even brief training, further workplace research is needed to establish if such changes bring about enduring change in practice (Dowey et al. 2007; Grey 2007; McGill, Bradshaw & Hughes 2007) “*after the circus has left town*” (Ager 1991) as well as any change in knowledge or in how staff conceptualise their role in therapeutic interventions. Additionally there is a need to agree robust measures of outcome in this area, in order to establish which training interventions merit the considerable cost in time and money currently being spent by employers.

The BPS/RCP/RCSLT guidelines are intended for psychologists and psychiatrists. The guidelines were not written for front line care staff working with people with learning disabilities and challenging behaviour. It is perhaps not surprising then that a theory-practice gap exists between such guidelines and what happens in day-to-day services. The BPS/RCP/RCSLT guidelines are not intended as a panacea, but they are currently the most up-to-date set of guidelines on “what works” in improving the quality of life for people with challenging behaviour and others around them. There is considerable evidence of the enduring nature of some challenging behaviour. Support is needed for front line staff to set realistic parameters for treating and managing challenging behaviours, and acknowledgment that there *will* be times when staff are doing neither.

There also remains the “elephant in the room” of staff training: is it possible for most unqualified care staff to acquire the range of complex skills necessary to implement effective interventions? This is particularly relevant in settings where staff are working alone, or where there is little specialist support readily available (Campbell 2007a), which is typical of small scale models of service. Similarly, as “self-directed” services become more widespread it is not clear whether there will be enough staff with the right motivation, values, attitudes and skills to meet the demand (Mansell 2010) and this potential shortage should also be factored into workforce development and service planning.

WORDS 3255

## References

1. Ager, A. (1991). Effecting sustainable change in client behaviour: The role of the behavioural analysis of service environments. In B. Remington (Ed.), *The challenge of severe mental handicap: A behaviour analytic approach* (343-368). Chichester: Wiley.

2. Ager, A. and O'May, F. (2001) Issues in the definition and implementation of "best practice" for staff delivery of interventions for challenging behaviour. *Journal of Intellectual and Developmental Disability*, Vol.26 (3), 243-256.
3. Allen, D., James, W., Evans, J., Hawkins, S. & Jenkins, R. (2005) Positive Behavioural Support: Definition, Current Status and Future Directions (2005) *Tizard Review*, 10, 2, 4-11.
4. Baum, S. & Lyngaard, H. (2006) *Intellectual Disabilities – A Systemic Approach*. Karnac, London.
5. Beadle-Brown, J., Mansell, J.L., Whelton, B., Hutchinson, A. & Skidmore, C.(2006) People with learning disabilities in 'out-of-area' residential placements: 2. Reasons for and effects of placement. *Journal of Intellectual Disability Research*, 50, 845–856.
6. British Psychological Society (2004) *Clinical Practice Guidelines - psychological interventions for severely challenging behaviours shown by people with learning disabilities*. British Psychological Society, Leicester.
7. British Psychological Society / Royal College of Psychiatrists/ Royal College of Speech and Language Therapists (2007) *Challenging Behaviour: A Unified Approach*. British Psychological Society/Royal College of Psychiatrists, London.
8. Broks, P. (2003) *Into The Silent Land*, Atlantic Books, London.
9. Campbell, M. (2007a) Staff training and challenging behaviour: Who needs it? *Journal of Intellectual Disabilities*, 11, 2, 143-156.
10. Campbell, M. (2007b) Cognitive Representation of challenging behaviour among staff working with adults with learning disabilities. *Psychology, Health and Medicine*, 12, 1, 1-14.
11. Campbell, M. (2007c) The importance of good quality services for the people with complex health needs. *British Journal of Learning Disabilities*, 36, 32-37
12. Campbell, M. (2008) The Impact of Training on Cognitive Representation of Challenging Behaviour in Staff Working with Adults with Learning Disabilities. *Journal of Applied Research in Intellectual Disabilities* 21, 6, 561-574.

13. Carr, E.G., Horner, R.H., Turnbull, A.P., McLaughlin, D.M., McAtee, M.L., Smith, C.E., Ryan, K.A., Ruef, M.D., & Doolabh, A. (1999). *Positive behavior support for people with developmental disabilities: A research synthesis*. Washington, DC: American Association on Mental Retardation
14. Dagnan, D. & Cairns, M. (2005). Staff judgements of responsibility for the challenging behaviour of adults with intellectual disabilities. *Journal of Intellectual Disability Research*, 49, 1, 95-101.
15. Department of Health (1992) *Services for People with Learning Disabilities and Challenging Behaviour or Mental Health Needs*. Chairman Prof. Jim Mansell. (The 'Mansell Report'), London HMSO.
16. Department of Health (2007) *Services for People with Learning Disabilities and Challenging Behaviour or Mental Health Needs: Report of a project group* (revised edition). Chair: Professor J.L. Mansell. Dept of Health, London.
17. Emerson E. (1998) Working with people with challenging behaviour. In E.Emerson, C. Hatton, J. Bromley & A. Caine (eds.). *Clinical Psychology in People with Intellectual Disabilities*. Wiley, Chichester.
18. Emerson E. (2001) *Challenging Behaviour: Analysis and Intervention in People with Learning Disabilities. 2nd Edition*. Cambridge Press, Cambridge.
19. Emerson, E. (1995) *Challenging Behaviour: Analysis and Intervention for People With Intellectual Disabilities 2<sup>nd</sup> Edition*. Cambridge University Press, Cambridge.
20. Emerson, E., Alborz, A., Reeves, D., Mason, H., Swarbrick, R., Kiernan, C., & Mason, L. (1997). *The HARC Challenging Behaviour Project. Report II: the prevalence of challenging behaviour*. Hester Adrian Research Centre, University of Manchester.
21. Emerson, E., Kiernan, C., Alborz, A., Reeves, D., Mason, H, Swarbrick, R., Mason, L. & Hatton, C. (2001) The prevalence of challenging behaviours: A total population study. *Research in Developmental Disabilities*, 22(1), 77-93.
22. Grey I. M., Hastings R. P. & McClean B. (2007) Staff training and challenging behaviour. *Journal of Applied Research in Intellectual Disabilities* 20, Editorial 1–5.

23. Forsyth, B. & Winterbottom, P. (2002) Beds, budgets and burdens: learning disability expenditure v. workload across English health authorities. *The British Journal of Psychiatry* 181, 200-207.
24. Hastings, R. (1997) Staff Beliefs About the Challenging Behaviours of Children and Adults with Mental Retardation. *Clinical Psychology Review*, 17 (7), 775-790
25. Hastings, R.P. & Remington, B. (1993) "Is there anything on....Why 'good' behavioural programmes fail?": A brief review. *Clinical Psychology Forum*, 55, 9-11.
26. Hastings, R.P. (1996) Staff training and management in services to people with learning disabilities: An annotated bibliography. *British Journal of Clinical Psychology*, 35, 3, 480-482.
27. Hastings, R.P., Remington, B. & Hopper, G.M. (1995) Experienced and inexperienced health care workers' beliefs about challenging behaviours. *Journal of Intellectual Disability Research* 39, 474-483.
28. Jones, E., Felce, D., Lowe, K., Bowley, C., Pagler, J., Strong, G., Gallagher, B., Roper, A. & Kurowska, K. (2001). Evaluation of the dissemination of Active Support training and training trainers. *Journal of Applied Research in Intellectual Disabilities*, 14, (2) 79-99.
29. Koegel, L. K., Koegel, R. L., and Dunlap, G. (1996). Positive behavioral support: Including people with difficult behavior in the community. Brookes, Baltimore.
30. Lowe, K., Jones, E., Allen, D., Davies, D., James, W., Doyle, T., Andrew, J., Kaye, N., Jones, S., Brophy, S. & Moore, K. (2007). Staff Training in Positive Behaviour Support: Impact on Attitudes and Knowledge. *Journal of Applied Research in Intellectual Disabilities*, 20(1): 30-40.
31. Macleod, F. J.; Morrison, F., Swanston, M. & Lindsay, W. (2002) Effects of relocation on the communication and challenging behaviours of four people with severe learning disabilities. *British Journal of Learning Disabilities*. 30(1) 32-37.
32. Mansell, J. (1994) The Prospect for Change: A Keynote Review. Introduction. *British Journal of Learning Disabilities*, 22, 2-5.

33. Mansell, J. (1996) Issues in community services in Britain. In *Deinstitutionalization and Community Living: Intellectual Disability Services in Britain, Scandinavia and the USA* (eds. J. Mansell & K. Ericsson), 49–63. Chapman & Hall.
34. Mansell, J., J., McGill, P. & Emerson, E. (2001) Development and evaluation of innovative residential services for people with severe intellectual disability and serious challenging behaviour. In *International Review of Research in Mental Retardation* (ed. L. M. Glidden), 245–298. Academic Press.
35. Mansell, J. (2010) Raising our sights: services for adults with profound intellectual and multiple disabilities. Tizard Centre, University of Kent.
36. McGill, P., Bradshaw, J. & Hughes, A. (2007). Impact of Extended Education/Training in Positive Behaviour Support on Staff Knowledge, Causal Attributions and Emotional Responses. *Journal of Applied Research in Intellectual Disabilities*, 20(1), 41-51.
37. McGrother C., Thorp C., Taub N. and Machado O. (2001) Prevalence, disability and need in adults with severe learning disability. *Tizard Learning Disability Review*, 6, 4-13.
38. McVilly, K. (1997). Residential Staff: How They View Their Training and Professional Support. *British Journal of Learning Disabilities*, 25: 18-25.
39. O'Brien G. (2003) The classification of problem behaviour in diagnostic criteria for psychiatric disorders for use with adults with learning disabilities/mental retardation. *Journal of Intellectual Disability Research* 47 (Suppl. 1), 32–7.
40. Oliver, P. C., Piachaud, J., Tyrer, P., Regan, A., Dack, M., Alexander, R., Bakala, A., Cooray, S., Done, D. J. & Rao, B. (2005) Randomized controlled trial of assertive community treatment in intellectual disability: the TACTILD study. *Journal of Intellectual Disability Research*: 49, 7, 507-15.
41. Perera, C., Douds, F., Simpson, N. & Campbell, M. (2009) Survey of LD Inpatient Services in Scotland. *Journal of Intellectual Disabilities*. 13, 2, 161-171.
42. Qureshi, H. (1994) The size of the problem. In E.Emerson, P. McGill & J. Mansell (eds.) *Severe Learning Disabilities and Challenging Behaviours: Designing high quality services*. London: Chapman and Hall, 17-36.

43. Reid D. H., Parsons M. B., Lattimore L. (2005) Improving staff performance through clinician application of outcome management. *Research in Developmental Disabilities*, 26, 101–116.
44. Robertson, J., Emerson, E., Pinkney, L., Caesar, E., Felce, D., Meek, A., Carr, D., Lowe, K., Knapp, M., Hallam, A. (2005) Treatment and management of challenging behaviours in congregate and noncongregate community-based supported accommodation. *Journal of Intellectual Disability Research*, 49 (1), 63-72.
45. Scotti, J. R., Evans I. M., Meyer L. H. & Walker P. (1999) A meta-analysis of intervention research with problem behaviour: treatment validity and standards of practice. *American Journal on Mental Retardation* 93, 233–56.
46. Scottish Executive (2000) *The same as you?: A review of services for people with learning disabilities*. Scottish Executive, Edinburgh.
47. Scottish Executive (2006) *Improving the Quality of Life for People with Learning Disabilities*. Joint Improvement Team, Scottish Executive, Edinburgh.
48. Shore, B. A., Iwata, B. A., Vollmer, T. R., Lerman, D. C. & Zarcone, J. R. (1995) Pyramidal staff training in the extension of treatment for severe behavior disorders.. *Journal of Applied Behavior Analysis* 28, 323–332
49. Slevin, E., Truesdale-Kennedy, M., McConkey, R., Barr, O. & Taggart, L. (2008) Community learning disability teams: developments, composition and good practice. A review of the literature *Journal of Intellectual Disabilities*, 12, 1, 59-79.
50. Thompson, C.L. & Reid, A. (2002) Behavioural symptoms among people with severe and profound intellectual disabilities: A 26-year follow-up study. *British Journal of Psychiatry*, 181(1), 67-71.
51. van Oorsouw, W.M.J., Embregts, P. J. C. M., Bosman, A. M. T. & Jahoda. A. (2010) Training Staff to Manage Challenging Behaviour. *Journal of Applied Research in Intellectual Disabilities*, 23, 192–196.

52. Whitaker, S. & Read, S. (2006) The Prevalence of Psychiatric Disorders among People with Intellectual Disabilities: An Analysis of the Literature. *Journal of Applied Research in Intellectual Disabilities*, 19, 330-345.
53. Whittington, A. & Burns, J (2005) The dilemmas of residential care staff working with the challenging behaviour of people with learning disabilities. *British Journal of Clinical Psychology*, 44 (1), 59-76 (18).

