Behavioural and Cognitive Psychotherapy, 2008, 36, 723–733
Printed in the United Kingdom doi:10.1017/S1352465808004906

CLIENT GROUP APPLICATIONS

CBT for People with Intellectual Disabilities: Emerging Evidence, Cognitive Ability and IQ Effects

John L. Taylor

Northumbria University and Northumberland, Tyne and Wear NHS Trust, UK

William R. Lindsay

NHS Tayside, The Sate Hospital, Carstairs and University of Abertay Dundee, UK

Paul Willner

Abertawe Bro Morgannwg University NHS Trust and Swansea University, UK

Abstract. Historically people with intellectual disabilities have not been offered or received cognitive behavioural interventions that have been shown to be effective for mental health and emotional problems experienced by those without such disabilities. This is despite many people with intellectual disabilities having life experiences that potentially result in them having an increased risk to such problems. This paper discusses whether such therapeutic disdain is justified based on the evidence that is available and emerging concerning the application of cognitive behavioural interventions for this population. Issues concerning access to services, the ability of people with intellectual disabilities to engage in and benefit from the cognitive components of CBT, and the effect of cognitive abilities and IQ level on treatment effectiveness are explored in relation to this question.

Keywords: CBT, intellectual disabilities, cognitive abilities, IQ.

Mental health problems in people with intellectual disabilities

People with intellectual disabilities are likely to experience a range of circumstances and life events associated with an increased risk of developing mental health problems (Brown,

Reprint requests to John L. Taylor, Northumbria University, Coach Lane Campus-East, Benton, Newcastle upon Tyne NE7 7XA, UK. E-mail: john2.taylor@northumbria.ac.uk

2000). These include: unemployment, poverty, a lack of meaningful friendships, intimate relationships and social support networks, stressful family circumstances, and traumatizing abuse (Deb, Thomas and Bright, 2001; Emerson, Hatton, Felce and Murphy, 2001; Hastings, Hatton, Taylor and Maddison, 2004). In addition, people with intellectual disabilities may have fewer psychological resources available to cope effectively with stressful events, as well as poorer cognitive abilities, including memory, problem-solving and planning skills (van den Hout, Arntz and Merckelbach, 2000).

Studies of mental health problems amongst people with intellectual disabilities report large variations in prevalence depending on the methodology used, such as the use of case note reviews versus clinical evaluation, the nature and type of diagnostic assessment used, the location of the study sample (e.g. in-patient vs. generic community services), and the inclusion of challenging behaviour as a mental health problem or not (see Hatton, 2002; Kerker, Owens, Zigler and Horwitz, 2004 for brief reviews).

Studies of general populations of people with intellectual disabilities using screening instruments to identify cases report rates of mental health problems (excluding challenging behaviour) ranging between 20% and 39% (Hatton and Taylor, 2005). This compares with approximate rates of between 16% and 25% for similar mental health problems in the general population (Goldberg and Huxley, 1980; Meltzer, Gill, Petticrew and Hinds, 1995). Although the overall rates of mental health problems among people with intellectual disabilities have been shown to be similar to those found in general populations of people without intellectual disabilities in some studies (e.g. Deb et al., 2001), the profiles for different types of disorders appear to differ. In particular, the finding that rates for psychosis is higher amongst people with intellectual disabilities is consistent across studies (Deb et al., 2001; Kerker et al., 2004; Taylor, Hatton, Dixon and Douglas, 2004a).

Access to effective therapeutic interventions

Identifying the mental health needs of people with intellectual disabilities

Case recognition is a crucial step in meeting the mental health needs of people with intellectual disabilities (Moss et al., 1998). However, many people with intellectual disabilities have mental health problems that are not detected and so remain untreated. There are a number of reasons for this. First, services for people with intellectual disabilities and those for people with mental health problems are often separate and have distinct cultures leading to gaps in provision for people with intellectual disabilities who also have mental health problems (Hatton and Taylor, 2005). Second, the assessment measures available to detect mental health problems amongst people with intellectual disabilities are not well developed and often lack reliability and validity (Deb et al., 2001). Third, "diagnostic overshadowing" may occur (Reiss, Levitan and Szyszko, 1982), where carers and professionals misattribute signs of a mental health problem, such as social withdrawal, to an aspect of a person's intellectual disabilities, for example poor social skills. Finally, staff supporting clients with intellectual disabilities are likely to use a challenging behaviour rather than a mental health conceptual framework to understand problematic behaviours (Hatton and Taylor, 2005), and although it is likely that there are overlaps in terms of causes and maintaining factors, the relationship between mental health problems and challenging behaviour in people with intellectual disabilities is unclear (Emerson, Moss and Kiernan, 1999).

Therapeutic disdain for people with intellectual disabilities

Despite the vulnerability of people with intellectual disabilities to mental health problems, historically there has been a general lack of interest in or regard for the needs of this client group (Stenfert Kroese, 1998). In the past, therapists have been reluctant to offer individual psychotherapy to these clients because this would require them to develop close working relationships with people perceived to be unattractive because of their disability (Bender, 1993), which makes the therapeutic endeavour more demanding and the achievement of quick treatment gains more difficult. In addition, people with intellectual disabilities may not be considered to have the cognitive abilities required to understand or benefit from CBT. The suggestion that mature and complete cognitive capacity is necessary for good outcomes in CBT is however debatable. There is no evidence in the intellectual disabilities field that deficits in particular cognitive abilities result in poorer outcomes, and studies involving children show that it is not necessary to have mature adult cognitive apparatus to benefit from CBT (Durlak, Fuhrman and Lampman, 1991; Sukhodolsky, Kassinove and Gorman, 2004). On the other hand, Safran, Segal, Vallis, Shaw and Samstag (1993) suggested a range of cognitive abilities that should be considered when assessing the suitability of adults without disabilities for CBT.

There are some indications that the use of cognitive-behavioural approaches with people with intellectual disabilities is becoming more widely accepted. In a survey of the use of psychotherapy, around a third of British psychologists who responded reported using these approaches frequently (Nagel and Leiper, 1999). An edited book on CBT for people with learning disabilities (Stenfert Kroese, Dagnan and Loumidis, 1997) and a recent special issue of the *Journal of Applied Research in Intellectual Disabilities* devoted to CBT (Willner and Hatton, 2006) point to increasing interest in the use of these therapeutic approaches with clients with intellectual disabilities, in the UK at least. However, a lack of enthusiasm for offering psychological therapies to those with intellectual disabilities experiencing mental health problems is not confined to history in some quarters. *Mental Retardation,* a premier US journal, recently published a paper entitled "Against psychotherapy for people who have mental retardation" (Sturmey, 2005), which concluded that the evidence is not available to support the use of psychotherapy, including CBT, with people with intellectual disabilities. Somewhat surprisingly, Sturmey's conclusion was based on his critique of Prout and Nowak-Drabik's (2003) meta-analysis of studies conducted over a 30-year period that found evidence for the effectiveness and benefit of "behaviourally oriented" psychotherapies (excluding behaviour modification) for people with intellectual disabilities (p. 88).

So, given the debate based on what might be conceptual, geographical and cultural differences in views concerning the practice of psychotherapy with these clients, what is the evidence to support the use of CBT-based interventions for mental health and emotional problems experienced by people with intellectual disabilities?

A summary of the evidence for CBT for people with intellectual disabilities

In addition to Prout and Nowak-Drabik's (2003) meta-analysis of the effectiveness of psychotherapy for people with intellectual disabilities that included 92 studies conducted between 1968 and 1998, there have been several reviews, critiques and commentaries that have considered the application of CBT to people with intellectual disabilities who have mental health and emotional problems in recent years.

Hatton (2002) reviewed psychosocial interventions for adults with intellectual disabilities and a range of mental health problems. A number of the studies reviewed involved CBT interventions. Although the evidence to support the efficacy of these approaches was found to be severely limited, Hatton concluded that these treatments, appropriately modified, may be a feasible intervention option for people with mild intellectual disabilities experiencing a range of mental health problems.

Similarly, Lindsay (1999) showed that although the procedures need to be adapted and simplified, people with intellectual disabilities and a variety of mental health problems can benefit from interventions that retain all the key elements of cognitive therapy.

In a commentary on the research supporting CBT and psychodynamic psychotherapy for people with intellectual disabilities, Beail (2003) described a number of studies that support the effectiveness of CBT for people with intellectual disabilities. Beail pointed out that almost all of the CBT studies were focused on the cognitive skills deficits associated with mental health and emotional problems. There was virtually no evidence available to support the use of interventions involving the modification of distorted cognitions and schema underpinning the problems experienced by this client group.

The Royal College of Psychiatrists (2004) carried out a limited review of the evidence for the effectiveness of psychological treatments with people with intellectual disabilities. It was suggested that the lack of good quality research evidence to support the use of psychological therapies with this population is, in part, due to intellectual disability having been used routinely as an exclusion criterion from efficacy research. The report concluded that the available, albeit limited, evidence for the effectiveness of psychotherapeutic approaches, including CBT, with these clients is promising.

Sturmey (2004) selectively reviewed and critiqued cognitive therapy for people with intellectual disabilities with anger, depression and sex offending problems. Sturmey concluded that the evidence to support CBT approaches is weak when compared to the extensive evidence base for behavioural interventions based on an applied behavioural analysis paradigm.

In a critical review of psychotherapeutic interventions for people with intellectual disabilities, Willner (2005) found that CBT interventions utilising cognitive skills training (e.g. self-management, self-monitoring, self instructional-training) show promise. However, approaches focusing on cognitive distortions were considered to have only a very limited evidence base. Willner concluded that there is some evidence that psychological therapies (chiefly CBT) can benefit people with intellectual disabilities with emotional problems for which there is no realistic alternative.

In summary, the evidence for the effectiveness of CBT for people with intellectual disabilities remains sparse, with a reasonable number of case studies and case series reports indicating that these approaches show promise in the effective treatment of mental health problems experienced by people in this population. More recently the evidence base has been augmented with the publication of eight studies describing controlled trials comparing CBT for anger control problems with wait-list control conditions (see Willner, 2007 for a review). All of these studies reported significant improvements on outcome measures for those in treatment conditions that were maintained at 3 to 12-month follow-up. Now supplemented by one controlled study of CBT for depression that yielded very positive outcomes (McCabe, McGillivray and Newton, 2006) anger research provides the strongest evidence that CBT can be effective with people with intellectual disabilities. In clinical terms this is important because of the prevalence of anger and its close association with aggression in this population,

as well as its consequences for people in terms of institutionalization and (over) prescription of behaviour control drugs (Taylor and Novaco, 2005). In research terms these developments are also important to our understanding of the application of CBT to people with intellectuals disabilities, as attentional biases and cognitive distortions associated with threat perception, as well as memory biases for distressing experiences, are intrinsic to anger problems and thus to their effective treatment (Taylor, Novaco, Gillmer and Robertson, 2004b).

Cognitive ability and IQ effects

It has been suggested that "readiness" for treatment is an important issue in the effectiveness of CBT (e.g. Howells and Day, 2003). Willner (2006) discussed in detail the factors that can affect the willingness of clients with intellectual disabilities to engage effectively in CBT. These include the client's motivation to participate, which might be associated with a range of issues, including their confidence in doing emotionally and intellectually challenging psychological work; their sense of self-efficacy and self-determination; the extent to which a referral for CBT is voluntary or coerced; the skills and attitudes of the therapist in adapting the therapy to make it more accessible; and the level of support or hindrance provided by the person's carers and support systems. These factors can affect any client's willingness to engage in CBT, as can a person's ability in terms of the skills and understanding that is required for this form of therapy. However, given that people with intellectual disabilities are more likely than those without disabilities to have cognitive impairments that might hinder their ability to engage in and benefit from CBT, the linked issues of cognitive ability and level of intellectual functioning are explored in more depth in the following sections.

Cognitive ability and CBT

In relation to cognitive therapy, Kendall (1985) distinguished between a *cognitive distortion* model as the basis of traditional CBT (e.g. Beck, 1976), which aims to identify and correct distortions in the content of thoughts, assumptions and beliefs; and a *cognitive deficit* model as the basis of self-management interventions (e.g. self-instructional training; Meichenbaum, 1977) that focus on deficiencies in the processes by which information is acquired and processed.

As highlighted by Beail (2003) and Willner (2005) amongst others, in the intellectual disability field little attention has been given to the effectiveness of cognitive distortion based interventions that aim to elicit negative automatic thoughts, identify themes in such thoughts, and help clients to modify thinking related to dysfunctional attitudes and beliefs. This is despite the evidence that such approaches can be highly effective for a range of mental health problems experienced by those without intellectual disabilities. Given that more than 80% of people with intellectual disabilities have *mild* intellectual disability (American Psychiatric Association, 1994), it is likely that the evidence pertaining to those without intellectual disabilities might apply also to the majority of those with intellectual disabilities. This is potentially important as one proposed advantage of cognitive therapy based on Beck's (1976) approach, which aims to modify distorted evaluative beliefs, is that it promotes portable internalized control that facilitates generalizability across settings and situations (Taylor, 2005). Cognitive deficit based self-management approaches (e.g. self-monitoring, self-instructional training) to ameliorating cognitive deficits are the most common type of cognitive interventions used with

people with intellectual disabilities, but these approaches have been criticized for their lack generalizability across skills and settings, and their dependence on external cues (e.g. Willner, 2005).

One reason for the limited evidence to support the effectiveness of interventions aimed at identifying and modifying cognitive distortions is that many interventions for people with intellectual disabilities labelled as CBT have failed to incorporate these treatment components, and have instead focused on cognitive deficit based approaches to developing clients' skills in self-monitoring and self-instruction (Taylor, 2002; Beail, 2003). However, this picture is changing slowly. Lindsay (1999) reported on successful outcomes of CBT interventions for people referred for a range of clinical problems including anxiety, depression and anger that explicitly incorporated work on the content of cognitions underpinning and maintaining their emotional difficulties. Using imagery rehearsal therapy, a technique that deals with dream imagery in the same way as cognitive distortions, Willner (2004) and Stenfert Kroese and Thomas (2006) successfully treated a man and two women respectively who were experiencing post-abuse nightmares. Haddock, Lobban, Hatton and Carson (2004) reported a case series of five people with mild intellectual disabilities and psychosis who improved on measures of psychotic symptoms and behaviour following a cognitive-behavioural intervention adapted from an established therapy that included a cognitive restructuring component.

In addition to these case study and case series reports that did not involve control conditions, there have now been a number of controlled studies of cognitive behavioural anger interventions that have explicitly incorporated cognitive content and restructuring treatment components. A group anger management intervention resulted in significant improvements over the control condition in a community setting (Willner, Jones, Tams and Green, 2002); and significant improvements relative to control groups on reliable anger measures following individual cognitive-behavioural treatment were described in a series of concatenated studies involving detained men with mild-borderline intellectual disabilities and significant histories of aggression (Taylor, Novaco, Gillmer and Thorne, 2002; Taylor, Novaco, Guinan and Street, 2004c; Taylor, Novaco, Gillmer, Robertson and Thorne, 2005).

Another reason for the limited evidence for interventions for people with intellectual disabilities aimed at modifying cognitive distortions is the complexity of these techniques and the presumed difficulties that these clients have in understanding, assimilating, recalling and using these approaches (Whitaker, 2001). However, Novaco and Taylor (2006) and Taylor et al. (2004b) have provided detailed clinical case study material showing that people with mild and borderline intellectual disabilities can successfully engage in the exploration of maladaptive automatic thoughts and can generate and weigh the value of more helpful alternatives in the context of individual cognitive-behavioural anger treatment. Further, experimental evidence has been provided to demonstrate that people with mild intellectual disabilities can recognize emotions (Joyce, Globe and Moody, 2006; Oathamshaw and Haddock, 2006; Sams, Collins and Reynolds, 2006), label emotions (Joyce et al., 2006), discriminate between thoughts, feelings and behaviours (Sams et al., 2006), and link events and emotions (Dagnan, Chadwick and Proudlove, 2000; Joyce et al., 2006; Oathamshaw and Haddock, 2006). However, in three studies all using the same experimental procedure it was found that the majority of study participants were unable to successfully complete an experimental test of their ability to understand the mediating role of cognitions, particularly when the complexity of the task was increased (Dagnan et al., 2000; Joyce et al., 2006; Oathamshaw and Haddock, 2006). A general finding across all the studies investigating the cognitive skills of people

with intellectual disabilities was that performance on the experimental cognitive tasks was positively associated with receptive vocabulary.

Effect of IQ on treatment effectiveness

An issue closely associated with the question of the cognitive ability and skills of people with intellectual disabilities to successfully engage in treatment aimed at modifying maladaptive cognitions is the impact of general intellectual functioning (IQ) on treatment effectiveness. Willner et al. (2002) found in a small study ($n = 7$) of cognitive-behavioural anger treatment involving community participants with mild intellectual disabilities that improvements on a composite measure of client and carer ratings were significantly and positively associated with verbal IQ. Linear regression analysis indicated that participants with a verbal IQ of 50 or lower would show no improvements following therapy. In a larger study, Rose, Loftus, Flint and Carey (2005) investigated factors associated with the efficacy of cognitive-behavioural group intervention for anger with 50 people with intellectual disabilities in community settings. In a regression analysis they found that participants with greater verbal ability, as measured on a test of receptive vocabulary, tended to show greater improvements on an anger inventory immediately following completion of treatment. However, this effect was not maintained at 3 to 6-month follow-up.

In a study of individual cognitive-behavioural anger treatment involving men with mild-borderline IQ and forensic histories, Taylor et al. (2005) examined the relationship between IQ and treatment responsiveness. Treatment completers were partitioned by median split of 69 on full scale IQ. Pre- to post-treatment anger change (improvement) scores were not significantly different for those in the higher and lower IQ groups. From pre-treatment to 4-month follow-up there was a significant difference on a measure of anger reactivity, with a greater improvement occurring in the lower IQ group. Means for other anger change scores also showed greater improvement in the lower IQ group, but these were not significant.

The same pattern of change score differences was found by Taylor (2007) in an evaluation of 50 men and women with forensic histories who had received cognitive-behavioural anger treatment as part of a clinical programme delivered in routine clinical practice. That is, those in the lower IQ group (median split at full scale IQ = 70) did not differ significantly from those in the higher IQ group on pre- to post-treatment anger change scores, but they showed greater improvement from pre-treatment to follow-up.

The inconsistency in the Willner et al. (2002) and Rose et al. (2005) study findings that low verbal IQ is associated with poorer treatment outcome, and the results obtained by Taylor et al. (2005) and Taylor (2007) that did not find this relationship, may reflect the more intensive (twice weekly sessions) and individual nature of the treatment provided in the latter two studies. This treatment format may have been better able to overcome the intellectual limitations of the patients than the group delivered weekly therapy sessions provided in the former studies. It is possible also that the Taylor et al. (2005) and Taylor (2007) studies involved more intellectually able participants than the other studies, which could explain the different findings concerning verbal ability and treatment outcome. Whatever the reasons, it would seem that verbal ability or IQ on their own cannot be used to predict individual clients' responses to CBT in a reliable way. Clients' level of intellectual functioning, along with their specific cognitive abilities and skills deficits, need to be assessed carefully along with their levels of motivation, confidence

and support, to formulate what is required of the therapist in modifying the intervention to make it responsive to the individual needs and learning style of each client (Lynch, 2004; Willner, 2006).

Conclusions

People with intellectual disabilities experiencing mental health and emotional problems have in the past been excluded from research programmes looking at the effectiveness and efficacy of cognitive and behavioural psychotherapies, national service frameworks and evidence based guidelines. Is this historical exclusion, along with the therapeutic disdain on the part of therapists for these clients – Bender's so called "unoffered chair" (1993, p. 7) – still justified? Probably not; at least not for people in the mild-borderline ranges of intellectual functioning.

There are some encouraging signs that practitioners are beginning to offer CBT interventions routinely to people with intellectual disabilities who are experiencing emotional problems. And, while the evidence base is small, it is building slowly and it suggests that the majority of people with intellectual disabilities (that is, those in the mild range) have the ability to engage in and benefit from cognitive behavioural interventions, particularly self-management approaches based on a cognitive deficit model, for a range of emotional problems. Larger and better-designed clinical trials using more ecologically valid outcome measures are required to investigate whether the results obtained to date are robust, can be maintained over time, and are generalizable across settings.

Clients with mild intellectual disabilities have been shown to have the skills considered necessary for the cognitive component of CBT, including emotional labelling and recognition and, to a significantly lesser extent, understanding of the mediating role of cognitions. These skills appear to decline as verbal ability (receptive vocabulary) decreases, but it is not clear whether this is real phenomenon or a function of the complexity of the experimental tasks presented to study participants. There is a danger in extrapolating from failure on experimental cognitive tasks to an inability to engage with cognitive components of CBT in a therapeutic context. For example, clinical research on anger control problems has indicated that clients' responsiveness to CBT that includes cognitive appraisal and restructuring components is not related to clients' IQ level in a linear way. Willner and Goodey (2006) describe how CBT can be modified in practice for a client with a range of significant cognitive skills deficits so that it is still effective in targeting the cognitive distortions that are central to her presenting problem.

Thus, more clinical research and research-based practice are needed. It cannot be justified to deny potentially helpful treatments based on the cognitive distortion model to people with intellectual disabilities on the basis of poor declarative knowledge in artificial test situations that might not translate into procedural knowledge in the therapy situation. This is particularly important in relation to the treatment of internalizing disorders experienced by these clients (e.g. anxiety, depression, anger) in which perceptual schemas, attentional biases and entrenched beliefs are central, and there are few if any viable alternatives.

References

American Psychiatric Association (1994). *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.). Washington, DC: Author.

Beail, N. (2003). What works for people with mental retardation? Critical commentary on cognitive-behavioural and psychodynamic psychotherapy research. *Mental Retardation, 41*, 468–472.

Beck, A. T. (1976). *Cognitive Therapy and the Emotional Disorders*. New York: International Universities Press.

Bender, M. (1993). The unoffered chair: the history of therapeutic disdain towards people with a learning difficulty. *Clinical Psychology Forum, 54*, 7–12.

Brown, G. W. (2000). Medical sociology and issues of aetiology. In M. G. Gelder, J. L. Lopez-Ibor Jr. and N. C. Andreasen (Eds.), *New Oxford Textbook of Psychiatry*. Oxford: Oxford University Press.

Dagnan, D., Chadwick, P. and Proudlove, J. (2000). Towards and assessment of suitability of people with mental retardation for cognitive therapy. *Cognitive Therapy and Research, 24*, 627–636.

Deb, S., Thomas, M. and Bright, C. (2001). Mental disorder in adults with intellectual disability. I: prevalence of functional psychiatric illness among a community-based population aged between 16 and 64 years. *Journal of Intellectual Disability Research, 45*, 495–505.

Durlak, J., Fuhrman, T. and Lampman, C. (1991). Effectiveness of cognitive-behavior therapy for maladapting children. *Psychological Bulletin, 110*, 204–214.

Emerson, E., Hatton, C., Felce, D. and Murphy, G. (2001). *Learning Disabilities: the fundamental facts*. London: Foundation for People with Learning Disabilities.

Emerson, E., Moss, S. and Kiernan, C. (1999). The relationship between challenging behaviour and psychiatric disorders in people with severe developmental disabilities. In N. Bouras (Ed.), *Psychiatric and Behavioural Disorders in Developmental Disabilities and Mental Retardation* (pp. 38–48). Cambridge: Cambridge University Press.

Goldberg, D. and Huxley, P. (1980). *Mental Illness in the Community: the pathway to psychiatric care*. London: Tavistock.

Haddock, G., Lobban, F., Hatton, C. and Carson, R. (2004). Cognitive-behaviour therapy for people with psychosis and mild intellectual disabilities: a case series. *Clinical Psychology and Psychotherapy, 11*, 282–298.

Hatton, C. (2002). Psychosocial interventions for adults with intellectual disabilities and mental health problems. *Journal of Mental Health, 11*, 357–373.

Hatton, C. and Taylor, J. L. (2005). Promoting healthy lifestyles: mental health and illness. In G. Grant, P. Goward, M. Richardson and P. Ramcharan (Eds.), *Learning Disability: a life cycle approach to valuing people* (pp. 559–603). Maidenhead: Open University Press.

Hastings, R. P., Hatton, C., Taylor, J. L. and Maddison, C. (2004). Life events and psychiatric symptoms in adults with intellectual disabilities. *Journal of Intellectual Disability Research, 48*, 42–46.

Howells, K. and Day, A. (2003). Readiness for anger management: clinical and theoretical issues. *Clinical Psychology Review, 23*, 319–337.

Joyce, T., Globe, A. and Moody, C. (2006). Assessment of the component skills for cognitive therapy in adults with intellectual disabilities. *Journal of Applied Research in Intellectual Disabilities, 19*, 17–23.

Kendall, P. C. (1985). Toward a cognitive-behavioral model of child psychopathology and a critique of related interventions. *Journal of Abnormal and Child Psychology, 13*, 357–372.

Kerker, B. D, Owens, P. L., Zigler, E. and Horwitz, S. M. (2004). Mental health disorders among individuals with mental retardation: challenges to accurate prevalence estimates. *Public Health Reports, 119*, 409–417.

Lindsay, W. R. (1999). Cognitive therapy. *The Psychologist, 12*, 238–241.

Lynch, C. (2004). Psychotherapy for persons with mental retardation. *Mental Retardation, 42*, 399–405.

McCabe, M. P., McGillivray, J. A. and Newton, D. C. (2006). Effectiveness of treatment programmes for depression among adults with mild/moderate intellectual disability. *Journal of Intellectual Disability Research, 50*, 239–247.

Meichenbaum, D. (1977). *Cognitive Behaviour Modification: an integrative account.* New York: Plenum.

Meltzer, H., Gill, B., Petticrew, M. and Hinds, K. (1995). *The Prevalence of Psychiatric Morbidity among Adults Living in Private Households: OPCS survey of psychiatric morbidity in Great Britain, report 1*. London: HMSO.

Moss, S., Prosser, H., Costello, H., Simpson, N., Patel, P., Rowe, S., Turner, S. and Hatton, C. (1998). Reliability and validity of the PAS-ADD Checklist for detecting psychiatric disorders in adults with intellectual disability. *Journal of Intellectual Disability Research, 42*, 173–183.

Nagel, B. and Leiper, R. (1999). A national survey of psychotherapy with people with learning disabilities. *Clinical Psychology Forum, 129*, 14–18.

Novaco, R. W. and Taylor, J. L. (2006). Cognitive-behavioural anger treatment. In M. McNulty and A. Carr (Eds.), *Handbook of Adult Clinical Psychology: an evidence based practice approach* (pp. 978–1009). London: Routledge.

Oathamshaw, S. and Haddock, G. (2006). Do people with intellectual disabilities and psychosis have the cognitive skills required to undertake cognitive behavioural therapy? *Journal of Applied Research in Intellectual Disabilities, 19*, 35–46.

Prout, R. and Nowak-Drabik, K. M. (2003). Psychotherapy with persons who have mental retardation: an evaluation of effectiveness. *American Journal on Mental Retardation, 108*, 82–93.

Reiss, S., Levitan, G. and Szyszko, J. (1982). Emotional disturbance and mental retardation: diagnostic overshadowing. *American Journal of Mental Deficiency, 86*, 567–574.

Rose, J., Loftus, M., Flint, B. and Carey, L. (2005). Factors associated with the efficacy of a group intervention for anger in people with intellectual disabilities. *British Journal of Clinical Psychology, 44*, 305–317.

Royal College of Psychiatrists (2004). *Psychotherapy and Learning Disability*. Council Report CR116. London: Royal College of Psychiatrists.

Safran, J. D., Segal, Z. V., Vallis, T. M., Shaw, B. F. and Samstag, L. W. (1993). Assessing patient suitability for short-term cognitive therapy with an interpersonal focus. *Cognitive Therapy and Research, 17*, 23–28.

Sams, K., Collins, S. and Reynolds, S. (2006). Cognitive therapy abilities in people with learning disabilities. *Journal of Applied Research in Intellectual Disabilities, 19*, 25–33.

Sukhodolsky, D. G., Kassinove, H. and Gorman, B. S. (2004). Cognitive-behavioral therapy for anger in children and adolescents: a meta-analysis. *Aggression and Violent Behavior, 9*, 247–269.

Stenfert Kroese, B. (1998). Cognitive-behavioural therapy for people with learning disabilities. *Behavioural and Cognitive Psychotherapy, 26*, 315–322.

Stenfert Kroese, B., Dagnan, D. and Loumidis, K. (Eds.) (1997). *Cognitive-Behaviour Therapy for People with Learning Disabilities*. London: Routledge.

Stenfert Kroese, B. and Thomas, G. (2006). Treating chronic nightmares of sexual assault survivors with an intellectual disability: two descriptive case studies. *Journal of Applied Research in Intellectual Disabilities, 19*, 75–80.

Sturmey, P. (2004). Cognitive therapy with people with intellectual disabilities: a selective review and critique. *Clinical Psychology and Psychotherapy, 11*, 222–232.

Sturmey, P. (2005). Against psychotherapy with people who have mental retardation. *Mental Retardation, 43*, 55–57.

Taylor, J. L. (2002). A review of assessment and treatment of anger and aggression in offenders with intellectual disability. *Journal of Intellectual Disability Research, 46* (Suppl. 1), 57–73.

Taylor, J. L. (2005). In support of psychotherapy for people who have mental retardation. *Mental Retardation, 43*, 450–453.

Taylor, J. L. (2007). *Cognitive Ability, Skills and Remediation in CBT for People with Intellectual Disabilities*. Paper presented at the BABCP 35th Annual Conference, Sussex University, Brighton, September.

Taylor, J. L., Hatton, C., Dixon, L. and Douglas, C. (2004a). Screening for psychiatric symptoms: PAS-ADD checklist norms for adults with intellectual disabilities. *Journal of Intellectual Disability Research, 48*, 37–41.

Taylor, J. L. and Novaco, R. W. (2005). *Anger Treatment for People with Developmental Disabilities: a theory, evidence and manual based approach*. Chichester: Wiley.

Taylor, J. L., Novaco, R. W., Gillmer, B. G. and Robertson, A. (2004b). Treatment of anger and aggression. In W. R. Lindsay, J. L. Taylor and P. Sturmey. (Eds.), *Offenders with Developmental Disabilities* (pp. 201–219). Chichester: Wiley.

Taylor, J. L., Novaco, R. W., Gillmer, B. T., Robertson, A. and Thorne, I. (2005). Individual cognitive-behavioural anger treatment for people with mild-borderline intellectual disabilities and histories of aggression: a controlled trial. *British Journal of Clinical Psychology, 44*, 367–382.

Taylor, J. L., Novaco, R. W., Gillmer, B. and Thorne, I. (2002). Cognitive-behavioural treatment of anger intensity among offenders with intellectual disabilities. *Journal of Applied Research in Intellectual Disabilities, 15*, 151–165.

Taylor, J. L., Novaco, R. W., Guinan, C. and Street, N. (2004c). Development of an imaginal provocation test to evaluate treatment for anger problems in people with intellectual disabilities. *Clinical Psychology and Psychotherapy, 11*, 233–246.

van den Hout, M., Arntz, A. and Merckelbach, H. (2000). Contributions of psychology to the understanding of psychiatric disorders. In M. G. Gelder, J. L. Lopez-Ibor Jr. and N. C. Andreasen. (Eds.), *New Oxford Textbook of Psychiatry* (pp. 277–292). Oxford: Oxford University Press.

Willner, P. (2004). Brief cognitive therapy of nightmares and post-traumatic ruminations in a man with learning disabilities. *British Journal of Clinical Psychology, 43*, 459–464.

Willner, P. (2005). Readiness for cognitive therapy in people with intellectual disabilities. *Journal of Applied Research in Intellectual Disabilities, 19*, 5–16.

Willner, P. (2006). The effectiveness of psychotherapeutic interventions for people with learning disabilities: a critical overview. *Journal of Intellectual Disability Research, 49*, 73–85.

Willner, P. (2007). Cognitive behaviour therapy for people with learning disabilities: focus on anger. *Advances in Mental Health and Learning Disabilities, 1*, 14–21.

Willner, P. and Goodey, R. (2006). Interaction of cognitive distortions and cognitive deficits in the formulation and treatment of obsessive-compulsive behaviours in a woman with an intellectual disability. *Journal of Applied Research in Intellectual Disabilities, 19*, 67–73.

Willner, P. and Hatton, C. (Eds.) (2006). Special issue: cognitive behavioural therapy. *Journal of Applied Research in Intellectual Disabilities, 19*, 1–129.

Willner, P., Jones, J., Tams, R. and Green, G. (2002). A randomised controlled trial of the efficacy of a cognitive-behavioural anger management group for clients with learning disabilities. *Journal of Applied Research in Intellectual Disabilities, 15*, 224–235.

Whitaker, S. (2001). Anger control for people with learning disabilities: a critical review. *Behavioural and Cognitive Psychotherapy, 29*, 277–293.