Mental Health Assessment and Intervention for People With Complex Communication Needs Associated With Developmental Disabilities

Mark Di Marco* and Teresa Iacono†
*Scope, Melbourne; †Center for Developmental Disability Health Victoria, Monash University, and Communication Resource Center, Scope, Melbourne, Vic., Australia

Abstract This paper addresses the issues of assessment and psychological interventions of mental health in people with complex communication needs of people with intellectual disability and/or cerebral palsy. The literature indicates that research data have been lacking in this area, with a dearth of appropriate assessment tools and information on how to adapt evidence-based psychological interventions for this group. Existing psychological intervention research has been characterized by case studies and quasi-experimental designs with adults with mild intellectual disability who possess relatively good communication skills. In addition, there have been a few experimental studies with a focus on anger management with this group. In light of the lack of an empirical base, clinical practice for people with complex communication needs must draw on the evidence base for the general population, and adaptations of key elements of psychological therapies. Given the paucity of research addressing the mental health issues of people with complex communication needs, there is a need for the development of mental health assessment tools that enable clinicians to directly obtain information from the individual and for building the evidence base for counseling people with complex communication needs.

Keywords: assessment, complex communication needs, counseling, intellectual disability, intervention, mental health needs

INTRODUCTION

People with complex communication difficulties are unable to use speech to meet their daily communication needs. “Complex communication needs,” also referred to as severe communication impairment (Bloomberg & Johnson, 1990), is a term associated with problems experienced by people with both developmental and acquired disabilities, and may result from either permanent or temporary conditions (Beukelman & Mirenda, 2005). According to a recent demographic study, one in 500 individuals in Victoria, Australia, have complex communication needs arising from various types of disabilities (Perry, Reilly, Cotton, Bloomberg, & Johnson, 2004).¹

People with complex communication needs rely on or could benefit from augmentative and alternative communication (AAC) systems, which include signs and aids, such as communication boards and books, and electronic speech generating devices (Beukelman & Mirenda, 2005). The type of AAC system an individual uses is determined by an array of factors, on which maybe the degree of physical impairment, which may preclude use of signs, but not individualized gesture. AAC systems can be used to generate unlimited messages, such as through the use of a spelling board or text-to-speech on a speech-generating device. The ability to generate unlimited messages depends on literacy skills. For individuals with poor or no reading ability, either because of limited learning opportunities or as a result of cognitive limitations, AAC systems are used to generate limited message sets using vocabulary chosen to meet daily needs and those specific to situations.

Our focus in this paper is on the mental health issues of people with cerebral palsy and/or intellectual disability who also have complex communication needs. Information about the extent of the mental health problems of these groups is limited, despite indications of their being at particular risk of further impairment. In addition, people with these developmental disabilities are often excluded from mental health services as a result of problems associated with using diagnostic tools and intervention strategies that have been designed for people who use speech, as well as service providers’ attitudes toward and skill limitations in working with this group.

Our aim in this paper is to determine the extent to which practice in the provision of mental health services to people who rely on AAC as a result of intellectual disability and/or cerebral palsy can be guided by the literature. To this end, we reviewed the literature addressing the extent of mental health problems, and assessment and intervention issues for people with complex communication needs associated with these developmental disabilities. These two groups represent both distinct and overlapping characteristics, as well as issues that contribute to the failure to have their mental health needs met. Developmental disabilities, in general, arise as a result of congenital neurologically based dysfunctions (Lennox & Diggens, 1999). In addition, intellectual disability and cerebral palsy are associated with lifelong difficulties, but the skills affected will be dependent to some extent on the degree of intellectual and/or physical impairment. In assessing cognitive abilities in people with cerebral palsy, it is difficult to ascertain the extent to which performance is affected by cognitive impairment, other associated disabilities (e.g., hearing impairment), and/or reduced learning opportunities (Hardy, 1983). Taking into account the difficulties of assessment, it has been estimated that up to 65% of individuals with cerebral palsy have an intellectual disability (Stanley, Blair, & Alberman, 2000).

In terms of the literature base, attention has been given to the incidence of mental health problems, assessment, and intervention for people with intellectual disability, usually without concomitant cerebral palsy. In contrast, there is a paucity of research addressing these issues for people with cerebral palsy. As a result, we reviewed the literature for these two groups separately to guide recommendations for practice for people with complex communication needs associated with these developmental disabilities, in general.

EXTENT OF MENTAL HEALTH PROBLEMS

Intellectual Disabilities

Figures on the extent of mental health problems in people with intellectual disabilities vary dramatically. Borthwick-Duffy (1994), for example, cited prevalence rates ranging from 10% to 39% across studies using different diagnostic criteria. Deb, Thomas, and Bright (2001) argued that in addition to differences in diagnostic criteria, varied prevalence rates of dual diagnosis (i.e., of psychiatric conditions in people with intellectual disability) were attributable to a number of factors. Samples have often been biased toward people living in institutions. Linaker and Nitter (1990), for example, reported that 91% of 168 people with mild to profound levels of intellectual disability living in an institution in the UK met criteria for psychiatric illness using DSM-III criteria. On the other hand, Bouras and Drummond (1992) found a lower rate of 41% among adults living in the community in the UK. Variations also appear to result from differences in assessment strategies, which often rely on screening questionnaires (e.g., Borthwick-Duffy, 1994; Moss et al., 2000) rather than direct interview because of the characteristic communication problems of people with severe to profound levels of intellectual disability (Mirenda, Iacono, & Williams, 1990). In addition, some studies have included behavior disorders either as a mental health disorder (Mohr, Tonge, & Einfeld, 2005) or as behavioral determinants of various psychiatric disorders (e.g., Bouras & Drummond, 1992; Davis, Judd, & Herrman, 1997).

In an attempt to overcome many of the problems identified in previous studies, such as biased samples, Deb et al. (2001) investigated the extent of mental health problems in 101 adults living in the community. Relying on direct interview and excluding behavior disorders, they obtained rates that were similar to that of the general population (14.4%), although rates for schizophrenia and phobic disorders were significantly higher. Their overall rate, however, may be an underestimation because by including only people with sufficient communication skills in an interview, those with severe and profound intellectual disability may have been excluded. In addition, excluding behavior disorders also excludes those individuals for whom problem behaviors are the presenting symptoms of psychiatric disorders (Bouras & Drummond, 1992; Emerson, 2001).

Despite the methodological problems and differences across prevalence studies, a high incidence of mental health problems in people with intellectual disability is apparent. Research has demonstrated that they probably experience the full range of psychological disorders (Borthwick-Duffy, 1994; Lowry, 1998). Despite concerns raised by Deb et al. (2001) of the potential for sampling bias in prevalence studies because of a focus on institutional or clinical populations, there is strong evidence of higher rates of psychological and emotional difficulties than in the general population (Bouras & Drummond, 1992; Lowry, 1998; Matson, Kazdin, & Senatore, 1984). Matson et al. (1984), for example, argued that mental health problems may be four to five times the rate of the general population for people with intellectual disability. Lowry (1998), on the basis of a review of four large prevalence studies (three conducted in the USA and one in Germany) estimated that one in 10 people with an intellectual disability may suffer from depression.

According to Nezu and Nezu (1994), the high incidence of mental health problems in this group is the result of a number of vulnerabilities. Factors that put them at risk include their high rates of physical illnesses, many of which go undiagnosed and untreated (Beange, McElduff, & Baker, 1995), the presence of brain abnormalities, poor social and coping skills, limited social supports (Davis et al., 1997; Nezu & Nezu, 1994), limited opportunities for self-determination (Stanciliffe, 1997), stigma, and their vulnerability to being victims of sexual abuse (Marchetti & McCarthney, 1990; Turk & Brown, 1993) and other crimes. Despite these vulnerabilities, few mental health practitioners or other professionals have explored the potential for mental health problems in this group because of a tendency to blame all symptoms on the intellectual disability itself (i.e., diagnostic overshadowing) or a belief that they are immune from psychiatric illness (Borthwick-Duffy, 1994; Deb et al., 2001; Nezu & Nezu, 1994).
Another problem has been behavioral overshadowing, whereby behavior problems are seen only as being triggered and maintained by the environment rather than potentially being associated with a mental health issue (Lowry, 1998), with the result that behavioral approaches are favored over psychological ones (Thompson Prout & Nowak-Drabik, 2003).

Cerebral Palsy

There are only a few studies on the extent of mental health problems in people with cerebral palsy. An unpublished Australian study by Jenkins and Gulbenkoglu (1998) was based on an audit of adult clients of a psychological service for people with physical and multiple disabilities. Jenkins and Gulbenkoglu found that of 268 clients, 11% had a psychiatric diagnosis, but only 4% were receiving services. In addition, they found that depression was the most frequent disorder, occurring in 40% of those with a psychiatric diagnosis. More recently, in a similar audit of client files, Hagialiassis et al. (2005a) found that 11% of 390 individuals had psychiatric diagnosis, a figure that was less than the 18% found by the Australian Bureau of Statistics (1998) for the general population.

It is difficult to determine the extent to which these studies reflect the true rate of mental health problems in people with cerebral palsy, particularly in the absence of published comparable data. Hagialiassis et al. (2005a) argued that their figures were likely to be underestimates given the difficulties of assessing people with complex communication needs and associated problems of late detection, behavioral overshadowing, and the belief that they are immune to mental health disorders. What is known, however, is that people with cerebral palsy share many of the vulnerabilities of people with other disabilities, including those with only intellectual disability. People with cerebral palsy, for example, have a high incidence of physical health problems (e.g., Strauss, Cable, & Shavelle, 1999; Turk, Geremski, Rosenbaum, & Weber, 1997), which, as with mental health problems, go undetected because of diagnostic overshadowing (e.g., Iacono & Davis, 2003). In addition, they have difficulties forming intimate relationships because of limited opportunities and attitudes of families and significant others (Hurley & Sovner, 1987). People with cerebral palsy are often victims of abuse. Nelson Bryen, Carey, and Frantz (2003), for example, in a USA survey of 40 people who used AAC, most of whom had cerebral palsy or other physical disability, found that 45% had experienced abuse or been the victims of crime. The effects of such victimization in terms of mental health problem expression have not been explored, however. In terms of socioemotional development, Smith (2005) argued that adolescents with physical disabilities who use AAC face particular challenges in establishing their personal identities and in meeting educational demands. According to Smith, such stresses result in difficulties in maintaining stability in emotional health, with particular susceptibility to depression and mood disorders.

MENTAL HEALTH ASSESSMENTS

A problem that has contributed to the lack of mental health interventions for people with developmental disability has been a lack of appropriate assessment tools. For people without disability, diagnosis of mental health problems is reliant on clinical interviews, during which the person describes thoughts and feelings. Assessments that also rely on self-report have been designed for people with mild intellectual disability who have sufficient communication skills to enable their participation in an interview. Examples of these assessments are the Psychological Assessment Schedule for Adults with Developmental Disabilities (PAS-ADD; Moss et al., 1993) and the Psychopathology Instrument for Mentally Retarded Adults (Kazdin, Matson, & Senatore, 1983). For people who are unable to self-report, there has been a reliance on proxy reports. As an example, a checklist version of the PAS-ADD allows a carer to report on behaviors observed in the individual (Moss et al., 2000; Sturmey et al., 2005).

Limitations of assessments that rely on proxy reports include poor reliability (Mohr et al., 2005) and a reliance on observable behaviors, which may or may not be symptoms of psychiatric disorders (e.g., Deb et al., 2001; Lowry & Sovner, 1992; Moss et al., 2000). There has been no attempt to address communication needs, including modifications for people who use AAC. One notable exception, however, has been the use of an AAC system, known as Talking Mats, to assess sexual knowledge and attitudes of a woman with intellectual disability who made sexual abuse allegations (Bell & Cameron, 2003). This tool was not used, however, as an assessment of mental health, but rather to explore the person's concerns, which were evidently resulting in depression. There has also been an absence of research into appropriate assessments for people with complex communication needs associated with physical disability.

People with the cognitive skills to self-report may be limited less by the lack of available appropriate assessment tools and more by a clinician's failure to understand how use of an AAC system or the person's physical impairment impacts on the conversational interaction, and the clinician–patient relationship (Iacono & Johnson, 2004). Use of even complex electronic communication aids, such as speech-generating devices, results in communication that is much slower than typical conversations, which is reported to range between 150 and 250 words per minute (Goldman-Eisler, 1986). According to Beukelman and Milenda (2005), people who use AAC achieve much slower rates, ranging from as few as two to only 15 words per minute. The speed of conversation depends on many factors, including the capabilities, proficiency, and preferences of the person using the communication system. Some people may type every letter in a message rather than use abbreviations or macros that have been programmed into a system to increase speed; the method used may be associated with ability to remember the abbreviations or preferences. (See Higginbotham & Wilkins, 1999, for examples of differences in strategies and systems used, depending on preferences across situations.)
Such slow rates of communication, in addition to disruptions to typical nonverbal signals caused by the nature of the disability and the need to break eye contact in order to compose a message (Iacono & Johnson, 2004), result in the reliance on the speaking partner to take on a different role than that usually experienced in a conversation; usually one in which they assist the person using AAC to co-construct a message (Higginbotham & Wilkins, 1999). In particular, a speaking partner needs to be mindful of allowing the person using AAC the time to formulate messages without disruption, to recognize signals indicating that the person wants to take a turn in the conversation, to know how to move from open-ended to closed questions without dominating the conversation, and how to be active in message co-construction. The ability to participate in such conversations requires training for both parties (e.g., Buzolich & Lunger, 1995; Higginbotham & Wilkins, 1999). How the features of conversations involving AAC impact on the therapist–clinician relationship within a consultation has not been addressed in the research literature.

INTERVENTION

Terminology

Psychological interventions for mental health needs are often referred to as either counseling or psychotherapy. Some authors have made a clear distinction between the terms, arguing that counseling is usually of shorter duration, involves less personal change in the client, and usually focuses on specific issues in comparison with psychotherapy, which is conducted over a longer duration and focused around a change in personality (Tyler, 1953). Clarkson (1994) argued that perhaps counseling is about evolutionary change while psychotherapy is about revolutionary change. Many authors have viewed the terms as interchangeable, seeing no difference between them (Patterson, 1974; Truax & Carkhuff, 1967). Both terms are used in the current paper to reflect their usage in source documents.

The Evidence Base for Counseling

Intellectual disability. There is an absence in the published literature of research into the effectiveness of counseling for people with complex communication needs associated with intellectual disability. The literature is also silent about how counseling may need to be modified for people who use AAC to support limited receptive and expressive communication, as is typical for people with moderate to severe levels of intellectual disability (Martinsen & von Tetzchner, 1996).

In light of the absence of research addressing interventions for people with complex communication needs, information may best be gleaned from research involving people with intellectual disability with sufficient communication skills to enable participation in spoken conversations. Despite an established need for counseling and psychotherapy for people with intellectual disability (Hatton, 2002; Hurley, Tomasulo, & Pfadt, 1998; Nezu & Nezu, 1994), it has been difficult to generalize from findings demonstrating the efficacy of counseling interventions for people without disability. Willner (2005), in a recent review of the evidence for people with intellectual disability, found that although there was a large body of literature, it was largely methodologically flawed. He identified only two randomized controlled trials (RCTs). Similarly, Thompson Prout and Nowak-Drabik (2003) could identify only nine of 92 studies conducted over a 30-year period (1968–1998) that could be included in a metaanalysis to determine the effectiveness of psychotherapy for people with intellectual disability. Even the nine studies failed to provide strong evidence because of the range of designs and outcomes, many of which related poorly to the intervention.

Demonstrating treatment effectiveness. Although the research into counseling therapies for people with intellectual disability has been limited, which exists dates back to 1936 (Chidester & Menninger, 1936) and 56 authors contributed to a book on this topic in 1957 (Stacey & DeMartino, 1957). Early reports focused on general program descriptions and some case studies. Michael-Smith, Gottsegen, and Gottsegen (1955), for example, provided a description of a general counseling program for adults with intellectual disability (the level was not specified) aged 18 years–27 years. Positive outcomes were reported anecdotally.

The progression of research from anecdotal to more rigorous investigations is evident in the research, as summarized in Table 1. These studies are organized according to methodologies employed, moving from case studies in which some attempt to document outcomes has been reported to experimental studies that allow outcomes to be attributed to the interventions employed. Inspection of Table 1 indicates that the early literature was characterized, not only by anecdotal reports, but also by a number of case studies. These case studies were of groups of individuals, ranging from five (Rudolf, 1955) to 30 (Baran, 1970) who received various forms of psychotherapy, but details of the interventions are lacking. Most individuals in these early studies for whom IQ data were provided fell into the mild range of intellectual disability (see Table 1). An exception is a report by Vail (1955) of individuals with reported IQs ranging from severe intellectual disability to normal IQ; however, this report was a description of why these individuals failed to make progress despite 54 h of nondirective group therapy, rather than of successful outcomes.

Case studies continued to be reported to demonstrate the effects of psychotherapy in more recent literature, as summarized in Table 1. These studies have focused mostly on the use of cognitive–behavioral therapy (CBT) with people with intellectual disability and demonstrate that CBT can be used with this group with some modification (e.g., Black & Novaco, 1993). Unlike earlier studies, these detailed case descriptions have provided data...
<table>
<thead>
<tr>
<th>Author and year</th>
<th>Aims</th>
<th>Participant details</th>
<th>Method</th>
<th>Therapy approach</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case studies</td>
<td>Analysis of the reasons for failure of nondirective group therapy.</td>
<td>n = 21 males. Aged 12–17 years. IQ = 35–72 (Binet; two participants were in the normal range).</td>
<td>Follow-up review 12 months after termination of treatment.</td>
<td>Nondirective analytical group therapy over 54 hourly sessions.</td>
<td>Failure noted by acting out, including destruction of property, reduced attendance, decline in communication.</td>
</tr>
<tr>
<td>Vail (1955)</td>
<td>Description of therapy and outcomes.</td>
<td>n = 5 female. Aged 20–34 years. IQ = 69–97 (testing). Demonstrated persistent behavior problems.</td>
<td>General outcomes for each participant, although use of the Porteus Maze test reported as a test of ability to learn by experience.</td>
<td>Short-term psychotherapy over periods over a few weeks to 3 months—but no detail provided.</td>
<td>Reported improvements based on discharge from hospital, getting married, and having children.</td>
</tr>
<tr>
<td>Rudolf (1955)</td>
<td>Description of therapy and outcomes.</td>
<td>n = 17 (sex not specified). Aged 12–19 years. IQ = 50–70 (source not stated). All had behavioral problems.</td>
<td>Descriptive. General outcomes described for participants, overall.</td>
<td>Aspects of group psychotherapy in 45-min sessions (frequency not indicated) over 18 months.</td>
<td>Mild to moderate improvement for 12 participants, as determined by better appearance, expressions of well-being, better classroom and work performance, better institutional adjustment according to participant and carer reports.</td>
</tr>
<tr>
<td>Miezio (1967)</td>
<td>Description of therapy and outcomes.</td>
<td>n = 30 females. Aged 18–42 years. All with behavioral problems, most with neurotic symptoms, four with psychotic symptoms. IQ = mild-moderate ID.</td>
<td>Descriptive. Outcome measure = rating scale completed by cottage personnel and work supervisors.</td>
<td>Group psychotherapy.</td>
<td>Satisfactory or remarkable improvement for 21–29 participants across various categories (appearance, behavior, responsibility, task effectiveness, cooperation with one another and employees).</td>
</tr>
<tr>
<td>Baran (1970)</td>
<td>Describe therapy program and outcomes.</td>
<td>n = 2 (1 male, 1 female). Aged 28, 20 years. IQ = 67, 65 (tested).</td>
<td>Outcome measure—Zung Depression and Anxiety Scales, plus self-monitoring on analog scale at pre-, posttreatment, 4-month follow-up.</td>
<td>CBT simplified.</td>
<td>Reduction in scores on both Zung inventories and self-monitoring using analog scales.</td>
</tr>
<tr>
<td>Lindsay et al. (1993)</td>
<td>Describe the outcomes of CBT adapted for use by people with ID.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Author and Year</td>
<td>Aims</td>
<td>Participant details</td>
<td>Method</td>
<td>Therapy approach</td>
<td>Outcomes</td>
</tr>
<tr>
<td>----------------</td>
<td>------</td>
<td>----------------------</td>
<td>--------</td>
<td>-----------------</td>
<td>----------</td>
</tr>
<tr>
<td>Black and Novaco (1993)</td>
<td>Examine whether treatment efficacy of CBT extends to people with ID.</td>
<td>$n = 1$ male. Aged 47 years. IQ = mild ID (10-year age equivalence of BPVT).</td>
<td>Measures = Novaco Provocation Inventory, Problem-Solving Assessment, Self-Esteem Inventory (participant reports using a semi-structured interview); daily ward behavior ratings, weekly ratings of social behavior (clinical staff ratings, incident book, discussions with staff).</td>
<td>CBT based on Novaco (1983). Four sessions for cognitive preparation; 10 sessions each for arousal reduction and copy strategy subphases. 40-min sessions. 21-week follow-up session.</td>
<td>Weekly data reveal overall reduction in staff ratings of socially inappropriate responses to anger arousal and ratings across four behavioral attributes; but increase in participant's self-report of anger.</td>
</tr>
<tr>
<td>Rose (1996)</td>
<td>Determine the effectiveness of anger management program with participants with severe disabilities.</td>
<td>$n = 5$ (3 males, 2 females). Aged 21–43 years. IQ not specified, but age equivalence on BPVS ranged from 2; 9 (years; months) to 9; 3.</td>
<td>Series of single-case studies. Measures—structured interview, test of emotional perception from faces, record of aggressive incidents (staff log and diary by participant with assistance of staff).</td>
<td>Group therapy CBT based on Novaco (1976). 16 weekly sessions or 1.5 h over 10 weeks, followed by 6 weekly sessions after 3-week break. One participant also received individual sessions.</td>
<td>Overall results indicate decreases in problem behaviors, but participant 5 demonstrated an escalation in behaviors over the last few months.</td>
</tr>
<tr>
<td>Lindsay et al. (1998)</td>
<td>Describe the CBT and outcomes for sex offenders.</td>
<td>$n = 2$ males. Aged 26 and 25 years. IQ = 65 and 63 (WAIS-R).</td>
<td>Single-case design—baseline, treatment, and follow-up. DVs = attitudes (questionnaire administered by therapists). Information on cognitions extracted from questionnaire data.</td>
<td>CBT. Participant 1—comprehensive treatment, including 2.5-h group sessions over a number of years. Participant 2—social and relationships training, individual CBT weekly sessions for 9 months.</td>
<td>Participant 1 demonstrated improved attitudes across some measures. Had not reoffended 5 years after treatment. Participant 2 demonstrated improved attitudes across some dimensions, but reoffended 9 months following treatment.</td>
</tr>
<tr>
<td>Quasi-experimental designs Wilcox and Guthrie (1957)</td>
<td>Description of therapy and outcomes.</td>
<td>$n = 114$ females. Aged 15–43 years. IQ 53–90 (tested).</td>
<td>Control group comprised of 17 participants comprising behavioral problems and/or passivity. 114 participants into an Experimental Group. IV = treatment. DVs = critical incidents, a rating by matrons.</td>
<td>Three 1-h therapy sessions/week, total of 25 sessions with one of four therapists.</td>
<td>in DVs. Chi-squared analysis indicated higher proportion of participants with positive change in the experimental group. Used only direction of change.</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Author and year</th>
<th>Aims</th>
<th>Participant details</th>
<th>Method</th>
<th>Therapy approach</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albini and Dinitz (1965)</td>
<td>Measure attitudinal and behavioral changes as potential outcomes of a psychotherapy program.</td>
<td>n = 73 males. Aged 7–15 years. IQ 40–78 (Stanford-Binet &amp; Weschler) Behavioral disturbance group (n = 37). No behavioral disturbance group (n = 37).</td>
<td>Behavioral disturbance group—therapy. No behavioral disturbance group—no treatment. IV = treatment. DVs = Classroom Behavior Checklist (teacher ratings); Pupil Evaluation Schedule (from school reports of students); Adapted Acceptance-Rejection Attitude Scale (verbal completion by participants); Original Acceptance-Rejection Attitude Scale (record of parental activities, unclear who completed this, presumably the researchers).</td>
<td>Psychotherapy program—identification, comprehension, and working through of problems. Group = 1 psychologist: 4 participants. No sessions not specified. Individual = 1 psychologist: 1 participant, up to 48 half-hour sessions.</td>
<td>Substantial decrease for both groups for Classroom Behavior Checklist, but not for any other DV. NS difference between groups for any DVs.</td>
</tr>
<tr>
<td>Davidson and Brown (1989)</td>
<td>Examine the effects of two types of humor in counseling people with ID.</td>
<td>n = 22 (11 males; 11 females). Aged 18–24 years. IQ = mild ID (on basis of IQ tests and adaptive functioning).</td>
<td>Pre-post design with order of treatment counterbalanced across participants. IV = humor (none, facilitative, and nonfacilitative). DV = counsellor effectiveness (participant self-rating Likert scale).</td>
<td>Client-centered counseling sessions of 5–10 min. Total of 24 sessions (eight of each condition).</td>
<td>2 (gender) × 3 (humor—repeated measures) ANOVA indicated no gender differences, but significant difference for humor, with counselor effectiveness rated higher for facilitative humor than other conditions. Individual participant analysis revealed this pattern was evident for most but not all participants.</td>
</tr>
<tr>
<td>Beail and Warden (1996)</td>
<td>Evaluate a psychodynamic psychotherapy service for adults with ID.</td>
<td>n = 10 (9 males). Aged 18–49 years. IQ = moderate to severe ID (based on educational placement).</td>
<td>Assessments pre-intervention, at termination, and 3-month follow-up. DVs = SCL-90R (participant interview) and Rosenberg Self-Esteem Scale (participant interview).</td>
<td>Psychodynamic psychotherapy sessions, weekly. Sessions ranged from 5 to 48 (mean = 18).</td>
<td>Repeated measures ANOVA across three assessments significant reductions on both DVs.</td>
</tr>
<tr>
<td>Source</td>
<td>Aims</td>
<td>Participant details</td>
<td>Method</td>
<td>Therapy approach</td>
<td>Outcomes</td>
</tr>
<tr>
<td>------------------------------</td>
<td>----------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Beail (1998)</td>
<td>Describe outcomes of psychoanalytic psychotherapy for treatment of behavior problems.</td>
<td>(n = 20) males. Aged 16–42 years. IQ = moderate to severe ID (based on educational placement).</td>
<td>Assessment pre-, post-intervention, and follow-up. DVs = frequency of behavior problems (interview of participant and carer); index offence (intake measure); frequency of offence in last 3 months as outcome.</td>
<td>Psychodynamic psychotherapy 1-h weekly sessions by same therapist (author). Intervention period ranged from 3 to 43 months (mean = 19.38).</td>
<td>Frequency of behavior problem reduced from up to 7 at intake to 0 at outcome and follow-up for most of the 12 participants referred for behavior problems. Offending behavior reduced to 0 for 8 participants in offender group.</td>
</tr>
<tr>
<td>King et al. (1999)</td>
<td>Examine the efficacy of CBT anger management training.</td>
<td>(n = 11) (7 males; 4 females). Aged 17–48 years. IQ = mild ID (source not reported).</td>
<td>Assessment pre-, post-intervention, and 12-week follow-up. DV = Anger Inventory for Mentally Retarded Adults, Coopersmith Self-Esteem Inventory (participant reports); Anger-Inventory—Caregiver Report, Developmental Behavior Checklist (caregiver reports).</td>
<td>CBT anger management developed by Benson (1990). Group therapy, 15 90-min weekly sessions, two therapists.</td>
<td>T-tests indicated significant changes across the three assessments for participant completed inventories, and the DBC completed by caregivers, but not for the anger inventory completed by caregivers.</td>
</tr>
<tr>
<td>Beail et al. (2005)</td>
<td>Examine the effectiveness of individual psychodynamic psychotherapy.</td>
<td>(n = 20) (17 males; 3 females). Aged 17–48 years.</td>
<td>Assessments at intake, outcome, and 3-month follow-up. DVs = SCL-90R, Inventory of Interpersonal Problems-32, and Rosenberg Self-Esteem Rating Scale.</td>
<td>Psychodynamic psychotherapy. Once weekly 50-min sessions, ranging from 5 to 48 (mean = 13.2).</td>
<td>ANOVA and post-hoc t-tests indicated significant differences from intake to follow-up, with modest to large effect sizes across the three DVs.</td>
</tr>
<tr>
<td>Experimental designs</td>
<td>Yonge and O’Connor (1954) Assess the effectiveness of psychotherapy for people with ID.</td>
<td>(n = 21) (gender not indicated). Details provided only for seven participants. Aged 16–20. IQ = 52–77 (source not given).</td>
<td>Participants matched on type of behavior disorder and assigned to 1 of 3 groups: one group not used in the study; other two groups were Experimental and Controls. DVs = observational and general reports across work, wards, and group therapy sessions (for Experimental group only).</td>
<td>Group psychotherapy, using a nondirective approach. Sessions twice weekly, total of 32 sessions over 6 months.</td>
<td>Significant differences seen for experimental group but not control group.</td>
</tr>
<tr>
<td>Gorlow et al. (1963)</td>
<td>Explore changes in self-attitude resulting from group psychotherapy.</td>
<td>(n = 69) females. Aged 15–23 years. IQ = 50–80 (testing).</td>
<td>Participants randomly assigned to Experimental ((n = 38)) and Control ((n = 31)) groups. IV = treatment. DVs = Behavior Rating Scale (from behavioral incidents, reports of carers, and other scales); Laurelton Self-Attitude Scale (participant completed).</td>
<td>Group psychotherapy, led by one of 2 therapists, 1-h sessions, 3 times/week, over 12 weeks (48 sessions).</td>
<td>No differences across therapists. No significant differences across DVs.</td>
</tr>
</tbody>
</table>
### Table 1 (Continued)

<table>
<thead>
<tr>
<th>Author and year</th>
<th>Aims</th>
<th>Participant details</th>
<th>Method</th>
<th>Therapy approach</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Silvestri (1977)</strong></td>
<td>Examine the efficacy of treatment for people with ID.</td>
<td>$n = 24$ (gender details not provided). Age not provided. IQ = mean 70.3.</td>
<td>Participants matched on age, gender, IQ randomly assigned to implosive therapy, pseudotherapy, and no-therapy groups ($n = 8$ group). Assessments at pre-, mid-, posttreatment, and follow-up. IV = treatment. DVs = Brief Psychiatric Rating Scale, Nurses' Observational Scale for Inpatient Evaluation, modified Adjective Checklist, Occupational Rating Scale, Maximum Anxiety Rating Scale.</td>
<td>Implosive therapy over eight 45-min individual treatment sessions. Pseudotherapy received the same number of individual sessions in which they discussed dreams.</td>
<td><strong>3 (treatment) × 4 (testing interval) ANOVA. Significant results were mixed, indicating overall better results for Implosive therapy, but Pseudotherapy and no treatment achieved better or similar results for some items.</strong></td>
</tr>
<tr>
<td><strong>Taylor et al. (2002)</strong></td>
<td>Examine efficacy of CBT for anger intensity.</td>
<td>$n = 19$ males. Age mean = 29.2 years (SD = 7.2). IQ = 55–80 (testing).</td>
<td>Waiting-list control design (pre-post). Random allocation to Anger Treatment (AT) and Routine Care. IV = treatment. DVs = Provocation Inventory (PI, structured interview of participants); Ward Anger Rating Scale (WARS, carer-completed).</td>
<td>CBT based on Novaco (1975). One to two sessions/week, over 18 sessions, by the same therapist.</td>
<td><strong>2 (treatment groups) × 2 (assessment time) ANOVA revealed significant interaction effects for PI, such that significant differences evident on t-test at post- but not pre-intervention in favor of AT. Nonsignificant effects for the WARS were obtained, despite improvements for most ratings.</strong></td>
</tr>
<tr>
<td>Author and year</td>
<td>Aims</td>
<td>Participant details</td>
<td>Method</td>
<td>Therapy approach</td>
<td>Outcomes</td>
</tr>
<tr>
<td>----------------</td>
<td>------</td>
<td>---------------------</td>
<td>--------</td>
<td>-----------------</td>
<td>----------</td>
</tr>
<tr>
<td>Willner et al. (2002)</td>
<td>Examine effectiveness of CBT for anger management.</td>
<td>$n = 16$ (9 males, 5 females). Aged 18–57 years. IQ mean = 64.6 (tested).</td>
<td>Random allocation to Experimental (treatment) and Control (wait list) groups. IV = treatment. DVs = Anger Inventory and Provocation Index (completed by both participants and carers).</td>
<td>CBT based on Novaco (1975, 1979). Nine weekly, 2-h sessions.</td>
<td>2 (groups) × 2 (time) × 2 (instruments) × 2 (respondents). Significant group–time interaction, with anger ratings decreasing in Experimental and increasing in the Control group for both participant and carer ratings. Planned comparisons ($t$-test) indicated anger ratings decreased significantly on all four measures in experimental group. Overall moderate effect size for treatment. Further improvements evident at follow-up (significant).</td>
</tr>
<tr>
<td>Hagiliassis et al. (2005b)</td>
<td>Assess effectiveness of CBT for anger management.</td>
<td>$n = 29$ (16 males, 13 females). Aged 26–74 years. IQ—mean age equivalent score on Colored Progressive Matrices (nonverbal IQ) approximately 7, range 5–12.</td>
<td>Participants randomly assigned to Experimental or waiting-list comparison group. IV = treatment. DVs = Novaco Anger Scale; Outcome Rating Scale (quality of life): (both administered directly to participants). DVs measured pre-, post-intervention, and 4-month follow-up.</td>
<td>CBT—based on Novaco (1975). 12 weekly sessions of 2 h each.</td>
<td>2 (group) × 3 (time) ANOVA—significant interaction effect for Novaco Anger Scale indicating no difference between the groups at pre-intervention, but a significant difference in favor of the intervention and post-intervention, which maintained at follow-up. Analysis for Outcome Rating Scale indicated nonsignificant increases over time, but no group effect.</td>
</tr>
<tr>
<td>Author and year</td>
<td>Aims</td>
<td>Participant details</td>
<td>Method</td>
<td>Therapy approach</td>
<td>Outcomes</td>
</tr>
<tr>
<td>---------------</td>
<td>-----</td>
<td>---------------------</td>
<td>--------</td>
<td>------------------</td>
<td>---------</td>
</tr>
<tr>
<td>McCabe et al. (2006)</td>
<td>Assess the effectiveness of CBT in reducing levels of depression.</td>
<td>$n = 34$ (16 males, 18 females); 15 of these formed a Control ($n = 15$) group. Mean ages of 34 (Treatment) and 40 years (Control) with a range of 22–40 years. All scored at the minimal depression range on the Beck Depression Inventory-II (BDI-II) or above. All with sufficient language skills to participate in CBT.</td>
<td>Treatment and Control group, but no indication of randomization. Control group recruited from the same setting, were to receive the treatment 3 months later. IV = treatment with CBT. DVs = BDI-II, Social Comparison Scale, Rosenberg Self-Esteem Scale, Automatic Thoughts Questionnaire. DVs measured pre-treatment; 1 week post-treatment and at 3-month follow-up for Treatment group, and at time 1 and 6 weeks later for Control group.</td>
<td>CBT from various sources. Delivered over five 2-h sessions.</td>
<td>Significant differences for the treatment group were obtained for all DVs from pre- to post-intervention. No differences for the treatment group were found between post-intervention and follow-up, demonstrating maintenance of changes.</td>
</tr>
</tbody>
</table>

ID = intellectual disability; CBT = cognitive–behavioral therapy; BPVT = British Picture Vocabulary Test; BPVS = British Picture Vocabulary Scale; WAIS-R = Weschler Adult Intelligence Scale; DV = dependent variable; IV = independent variable; NS = nonsignificant; SCL-90R = Symptom Checklist 90-Revised; DBC = Developmental Behaviour Checklist.
on outcome measures, such as use of self-rating measures (e.g., Black & Novaco, 1993; Lindsay, Howells, & Pitcaithly, 1993) and rating measures completed by staff or carers (e.g., Lindsay, Olley, Jack, Morrison, & Smith, 1998). The use of such measures provides a more objective way of determining outcomes of intervention than earlier descriptive case studies. Although these studies are clinically informative, they still do not demonstrate treatment efficacy because no control groups were utilized (Hatton, 2002). Included in Table 1 are studies in which inferential statistics have been used to determine the significance of changes observed in dependent variables. These studies are described as quasi-experimental, however, because they have failed to include a control or no-treatment group (e.g., Albini & Dinitz, 1965; Beail, 1998; Beail & Warden, 1996; Beail, Warden, Morsley, & Newman, 2005; King, Lancaster, Wynne, Nettleton, & Davis 1999).

Although few, there are some studies that have been able to demonstrate effectiveness of interventions using experimental designs, including RCTs. Summaries of these studies have also been included in Table 1. The earliest example of an attempt to conduct an experimental study was by Yonge and O’Connor (1954). A group of 16- to 20-year-old participants were assigned to one of three groups after having been matched on the type of behavior disorder demonstrated. One of the groups was not included in the study, with the reason not provided, resulting in two groups of seven participants, only one of which received group psychotherapy. A nondirective approach was used, based on an analytic model developed by Foulkes (1948). Unfortunately, the small sample size, and lack of detail regarding participants, dependent measures, and the intervention render the results of this study somewhat uninformative.

More recent studies have been characterized by stronger designs and methodologies. Taylor, Novaco, Gillmer, and Thorne (2002); Willner, Jones, Tams, and Green (2002); and Hagiliassis, Gulbenkoglu, Di Marco, Young, and Hudson (2005b) all used random allocation to experimental and control (wait list) groups. In each of these studies, CBT was found to be effective for anger management. In addition, McCabe, McGillivray, and Newton (2006) demonstrated the effectiveness of five sessions of CBT in reducing levels of depression in adults with mild/moderate intellectual disability. An intervention group was compared with a control group (who received a delayed treatment), but no information was provided about randomization procedures. Improvements for the intervention group were demonstrated for ratings on measures of depression, social comparison, and negative automatic thoughts. Examination of this research base (Table 1) also reveals changes in perspectives in counseling interventions. The early research appears to have been driven by a psychodynamic perspective that often had a focus on curing intellectual disability (Bender, 1993). Despite the fact that in some studies, no changes were reported (Albini & Dinitz, 1965; Gorlow, Butler, Einig, & Smith, 1963), most of these early authors emphasized that psychotherapy can be effective and relevant. Unfortunately, this argument did not lead to a strengthening of scientific attention (Hurley, 1989; Thompson Prout & Nowak-Drabik, 2003) or an increase in empirically based outpatient services (Nezu & Nezu, 1994).

The literature in this area is possibly best characterized by Beail and Warden (1996) in their observation of shifts in the outcome focus and the criterion by which psychotherapy was being judged. The early research, up until the 1980s, was mostly concerned with the issue of whether or not psychotherapy was relevant to this group. This criterion shifted to determining whether or not provision of intervention was to ensure equity, reflecting the influence of normalization (Wolfensberger, 1972), with its strong impact on models of service delivery. The criterion that has been applied since the mid- to late 1990s has been to demonstrate the effectiveness of this intervention for people with intellectual disability; but as is evident from Table 1, there is much work needed to develop the evidence base.

**Barriers to provision of intervention** The limited research is attributable, at least to some extent, to a number of barriers to using counseling with this group. Bender (1993) argued that there has been a historical disdain toward therapy and research into its effectiveness for people with intellectual disability. He charted the history of this bias from Freud (1904) to Rogers (1951), each of whom stated that clients must be of average intelligence and able to communicate using speech to benefit from client-centered therapy. Cognitive–behavioral therapists have also suggested that their model of therapy may not be applicable to people with below borderline levels of intellectual disability (Hollon, 1984). According to Hurley (1989), no real evidence is available to support these views. In fact, Hurley, Pfadt, Tomasulo, and Gardner (1996) argued that although the evidence has been patchy and intermittent over the years, the results, generally, have been positive, as is evidenced by a number of studies (Hagiliassis et al., 2005b; Silvestri, 1977; Taylor et al., 2002; Willner et al., 2002).

Recently, interest in identifying prerequisite or readiness skills for CBT for people with intellectual disability has been evident (Joyce, Globe, & Moody, 2006; Sams, Collins, & Reynolds, 2006; Willner, 2006). Willner (2006) argued that CBT requires a certain level of verbal ability, including being able to reflect on the meaning and motivations of behaviors, and understanding the mediating role of cognition. Sams et al. (2006) investigated the notion of prerequisite skills for CBT with 59 people with intellectual disability. They found that those with higher IQs and receptive language did better on cognitive therapy tasks, including identifying different emotions, and discriminating among thoughts, feelings, and behaviors. Limited verbal ability does not appear to preclude people from CBT or psychotherapy, however. Thompson Prout and Nowak-Drabik (2003) suggested there was sufficient evidence to include psychotherapy in treatment plans for people with intellectual disability in light of moderate levels of effectiveness demonstrated from their metaanalysis. Use of these interventions does require adaptations: Whitehouse, Tudway, Look, and Stenfert Kroese (2006), in reviewing 25 studies in which CBT or psychodynamic interventions were used identified a total of 94 adaptations. They included simplification of tech-
nique and language, and involving carers. Others have suggested the use of visual supports or picture cues (Sams et al., 2006; Willner, 2006), which can be considered forms of AAC, to support understanding.

In reviewing the literature, Nezu and Nezu (1994) postulated four reasons for the lack of rigorous research and why therapists have been reluctant to provide psychotherapy and counseling to people with intellectual disability. First has been the diagnostic overshadowing described above (Levitan & Reiss, 1983). Second has been the pervading view that people with intellectual disability are immune to mental illness, and third the historical disdain toward working with this group (Rendel, 1993). An additional problem has been that mental health and intellectual disability services have often been dichotomized as noted for the USA by Nezu and Nezu (1994). In Australia, such a dichotomy has limited people with an intellectual disability’s access to mental health services (Mohr, Curran, Coutts, & Dennis, 2002). This situation appears to be common in developed countries. Davidson, Morris, and Cain (1999) reviewed dual diagnosis services, providing examples from the USA, Canada, the UK, and Australia, while Jacobson (1999) provided similar examples from these and other countries, including European countries, South America, and New Zealand. These reviews indicated that services representing collaboration between generic psychiatric and intellectual disability appeared to be mostly in the form of model projects. According to Davidson et al. (1999), there appeared to be “both conceptual and operational gulfs between mental health and developmental disabilities services” (p. 367). Contributing to this gulf is a lack of training in developmental disabilities for mental health practitioners. Lowry (1998), for example, reported the results of a survey indicating that 75% of clinical and 67% of counseling training programs in North America did not include intellectual disability in their curriculum. In terms of psychiatric training, Jess et al. (in press) reported on the UK model in which psychiatrists can specialize in intellectual disability by taking an additional 3 years of supervised training. They contrasted this model to a generic model in Australia, in which intellectual disability psychiatry is not recognized as a specialty. Data were collected by surveying consultant and trainee psychiatrists in the two countries. Jess et al. found that in comparison with Australian psychiatrists, the UK psychiatrists were more positive and had greater confidence in working with this group, and were more flexible in the range of mental health needs addressed and treatment options chosen. They attributed this difference to the specialist intellectual disabilities model of training provided UK psychiatrists, which, except for a few exceptions, is not available to Australian psychiatrists who are trained in the generic system.

In addition to the above factors, it can be argued that people with an intellectual disability have limited access to counseling and psychotherapy because they are less likely to self-refer or be financially capable of paying for these interventions (Hurley et al., 1998). Furthermore, the small number of clinicians trained to work with this group and the lack of a theoretical framework from which therapists work may also limit the development of psychotherapy services for this group and research into its effectiveness. With regard to research, a number of methodological barriers have also been reported by Oliver et al. (2002), such as the relatively small client numbers of most disability services and logistical problems of running large trials.

Cerebral palsy  People with cerebral palsy are largely neglected in the intervention literature. Two notable exceptions are case study reports by Crawford (1987) and Lantican, Birdwell, and Harrell (1994). Lantican et al. (1994) included people with cerebral palsy, but there was no indication of communication difficulties, and limited details of the intervention or outcomes were provided. Crawford (1987) argued that psychotherapy can be used effectively with people who rely on AAC. Included in his seven-case studies were two men with cerebral palsy. Details were lacking, however, as to the nature of their mental health problems, the treatment, and outcomes. The study serves simply to highlight the right of people with complex communication needs associated with physical disability to access counseling therapies, their potential to benefit from them, and the responsibility of clinicians to learn about their communication systems.

Theoretical Frameworks

In closely examining the current literature base, evaluation of the evidence according to the theoretical framework used provides a means of determining interventions that may have the most potential application for people with a developmental disability. Given the lack of empiric or other reports involving people with cerebral palsy, the literature from which we can draw involves mostly people with intellectual disability. The leading models in the counseling literature, and which also include some reference to people with intellectual disability, are psychodynamic, CBT, client-centered approaches and group work.

Psychodynamic therapy  The early literature was dominated by psychodynamic approaches (Crowley, 1965; Kaldeck, 1958) that were primarily case descriptions (as described above) and observations. Sinason (1992) argued that these contributions are limited to a few moments of curiosity. No case studies of psychodynamic therapy have been reported in which outcome measures were utilized; hence, outcome data are unavailable. According to Sinason, such reports have focused on process, providing anecdotal information only. The issue of outcome data has been an issue for psychodynamic literature in general.

Exceptions to the anecdotal nature of most studies have been three studies by Beail (1998); Beail and Warden (1996); and Beail et al. (2005), details of which are provided in Table 1. The measures used by Beail and Warden (1996) and Beail et al. (2005) included the Symptom Checklist 90-Revised (Derogatis, 1983) and the Rosenberg Self-Esteem scale (Rosenberg, 1965), which, combined, provided scores in nine symptom areas and self-esteem. Changes in both measures were found when comparing
The aim of the intervention by Beail (1998) was to reduce problem behaviors in 20 men with intellectual disability; hence, the main outcome measure was the frequency of occurrence of these behaviors, as determined by interviews of the participants and their carers. For 19 participants, incidents of the problem behaviors reduced to zero after therapy, an outcome that was maintained at a 6-month follow-up. Despite their methodological flaws, including their failure to include controls (see Table 1), the studies by Beail et al. (Beail, 1998; Beail & Warden, 1996; Beil et al., 2005) do provide some level of evidence for the therapeutic intervention. In particular, the studies were conducted within regular clinical practices and, as a result, perhaps most closely match the experience of therapists providing counseling to people with intellectual disability. A further strength is that these studies included relatively large sample sizes for clinical intervention studies (10; 20 and 20 participants, respectively). As a result, they are included in the types of studies that led Nezu and Nezu (1994) to conclude that, despite their methodological shortcomings, they contribute enough evidence to warrant further investigation into the effectiveness of psychodynamic therapies with people with intellectual disability.

It is possible that these studies provide as much evidence for the effectiveness of client-centered counseling as for psychodynamics. The process of psychodynamics is not clearly defined in these studies. Beail (1998) claimed that it is possible that the results were achieved because every week someone gave attention and listened to participants, and focused on their feelings and behaviors. These are also factors that are inherent to client-centered (Rogerian) counseling.

**CBT** As recently as 1990, it was claimed that there was no research utilizing CBT for people with an intellectual disability (Benson, 1990). Since then, there have been several case studies documenting positive outcomes (e.g., Black & Novaco, 1993; Lindsay et al., 1998) while group studies have had a particular focus on the effect of CBT on anger management in groups (Hagiliassis et al., 2005b; King et al., 1999; Rose, 1996; Taylor et al., 2002; Willner et al., 2002) (see Table 1).

In general, such studies have demonstrated reductions in aggressive behavior using cognitive–behavioral techniques. Lindsay et al. (1998), for example, outlined the effects of CBT for two stalkers who had an intellectual disability. One man did not reoffend, but the other did within 9 months. The noncontrolled group studies also showed reductions of aggressive behavior in the short term (King et al., 1999; Rose, 1996).

Adaptations of CBT for people with an intellectual disability in which all the core elements are maintained have demonstrated the effective treatment of depression (see Tables 1, e.g., Lindsay et al., 1993; McCabe et al., 2006). The effectiveness of adaptations, such as those suggested by Lindsay et al. (1993), Willner (2006), and Sams et al. (2006) to treat problems other than anger, is still to be demonstrated beyond the level of a case study, with the exception of the study by McCabe et al. (2006); hence, further experimental support is needed. In addition, and of greater relevance here, is that there have been no reports on how relevant and effective such modifications might be for people with more severe levels of intellectual disability, in particular, those with complex communication needs, given that participants in the studies by Lindsay et al. (1993) and McCabe et al. (2006) had only borderline to mild/moderate intellectual disability and good language skills.

As noted above, experimental evidence for counseling people with intellectual disability has come from three RCTs targeting anger management and one experimental study for treating depression through the use of CBT. However, Willner et al. (2002) noted that the behavioral and educational elements were more effective in reducing anger than were the cognitive restructuring processes, while Sturmey (2006) argued that studies claiming the use of CBT have, in fact, used behavioral techniques. According to Sturmey, rather than demonstrating the effectiveness of CBT for people with intellectual disability, they demonstrated the effectiveness of behavioral interventions. A further problem with the literature base is that, by focusing on group experimental studies, there are no data to provide evidence for the usefulness of CBT used individually (rather than in groups).

**Client-centered counseling** Client-centered counseling was developed by Rogers (1951) and is probably the therapeutic model that is most closely associated with the term *counseling*. Without research evidence, it can only be speculated that, when assisting people who have an intellectual disability in dealing with day-to-day issues, it is likely that client-centered counseling is the dominant perspective from which clinicians operate.

Unfortunately, support for such an approach is limited, and in fact, the quasi-experimental study conducted by Albini and Dinitz (1965) would suggest it may fail to be responsible for positive outcomes. A major problem with this study was that results for a group of 37 children and adolescents (aged 7 years–15 years) with antisocial behaviors, such as truancy, stealing, and fighting, were compared with a group of 36 children without behavioral disturbance; hence, there was no effective control group (i.e., a group matched for the target problem and formed by random allocation) (Hurley, 1989). In addition, outcome measures were used without any information on their validity or reliability. Other problems that were noted by Hurley (1989) included that the therapy was not integrated into the rest of the facility’s programs, little detail about the therapy was provided, and therapists did not develop clear goals with participants.

Although no other studies have had a specific focus on client-centered counseling for people with intellectual disability, a number of studies have demonstrated a positive effect using non-directive forms of counseling that have similar characteristics to client-centered therapy (Davidson & Brown, 1989; Klugerman & Darkenwald, 1982). These effects were based on measures of self-esteem and self-assessments of counsellor effectiveness.
PRACTICE IMPLICATIONS

In light of the lack of research literature addressing mental health needs of people with complex communication needs associated with intellectual disability and/or cerebral palsy, the source of guidance for counseling intervention must be drawn from the substantial evidence base developed for the general population (Bergin & Garfield, 1994; Nathan & Gorman, 1998). The implication for clinicians is that in order to appropriately address the mental health needs of people with complex communication needs, adaptations to evidence-based techniques designed for people who primarily use speech to communicate will be required. Currently, therapists make these adaptations in the absence of current evidence from any RCTs. Justification for this can be drawn from the UK National Health Service executive notes that, where there is an absence of RCTs, clinicians can legitimately draw on experience and expert opinion (NHS Executive, 1996).

Evidence-Based Psychological Therapies

The Australian Psychological Society (2004) recently undertook a systematic review of evidence-based psychological therapies. On the basis of this review, it was concluded that CBT is a promising intervention in that it may reduce symptoms for psychiatric disorders. It was also concluded that CBT is an effective treatment for panic disorder, agoraphobia, phobias, depression, and bipolar disorder. Another approach that was found to have a strong evidence base for the treatment of depression was interpersonal therapy (IPT). IPT is a brief, structured psychotherapy that focuses on changing relationship patterns and improving interpersonal problem-solving skills. It has no particular theoretical origin but is a synthesis of ideas from interpersonal psychodynamic theorists, attachment literature, and family systems theory (Teyber, 1997). No research has been conducted into the use of IPT with people with disabilities. In contrast to CBT and IPT, the review by Australian Psychological Society (2004) indicated insufficient evidence to support the effectiveness of psychodynamic psychotherapy for any mental health issues.

Challenges for Counseling People With Complex Communication Needs

Despite the absence of an evidence base, people with intellectual disability and/or cerebral palsy have both a demonstrated need and a right to access mental health interventions. Until research is available to direct approaches, it may be most appropriate to adapt key elements of counseling approaches for this group. The processes of speech and listening underlie the range of counseling techniques and knowledge, including the interpersonal skills of paraphrasing, reflecting, questioning, summarizing, and challenging. Hence, it can be argued that all research and outcome studies of the leading models of counseling and psychotherapy are based on speech and listening processes. The implications for clinicians working with people who have complex communication needs are substantial. As an example, in client-centered counseling (Rogers, 1951), an important technique is to not only ask open-ended questions, but avoid asking closed questions because of the potential to lead clients to respond in a particular way and restrictions to the potential to elicit new information. A client who presents to counseling without speech and whose main form of communicative response is to indicate yes or no presents a challenge to the clinician working within this model, who must rely on closed questions.

Other issues influence the effectiveness of counseling for people with complex communication needs.

1. Therapists need to draw on sources of information that indicate the person’s underlying language ability. Such knowledge is most likely to come from speech pathology assessment, guided by the mental health therapist’s need to determine the person’s ability to understand and talk about concepts and processes key to the therapeutic process.
2. Therapists must know whether the person is using AAC to generate unlimited messages or must work within a limited message set.
3. An individual’s AAC system is likely to need to be prepared (e.g., specific vocabulary added to a communication board or programmed into an electronic device) to provide the language for the specific techniques of CBT and IPT.
4. The pace of counseling is slower given the slow rate of communication when an AAC system is used. Therefore, less content can be covered in each session, regardless of whether the person is able to produce unlimited or limited messages.
5. Therapists must be cognizant of the potential for conversational breakdowns and be familiar with strategies used by the client to signal these. As a result, there is greater potential for the therapist to misunderstand or wrongly interpret the client’s messages.
6. It can be difficult for the therapist to disseminate the sensory features of communication such as nonverbal cues and body language. This difficulty may lead to misunderstandings by the therapist of the predominant affect.
7. The therapist may find it difficult to determine the generic level of meaning in conversation, one of two distinct types of meanings postulated in the CBT literature (Teasdale, 1993). In contrast to specific meaning that relates to specific content conveyed by single sentences in which truth value can be assessed, generic meaning relates to the schematic mental models of experience behind communication. It is more than intent, reflects the implicational meanings behind communication, and is attached to emotion.
8. A person using AAC is less likely to initiate new topics and is more likely to take a subordinate role in conversations in comparison with people who rely on speech
(Buzolich & Lunger, 1995; Iacono & Johnson, 2004). As a result, difficulties arise in attaining client-directed counseling, an important hallmark of effective counseling (Egan, 1994).

In light of the strong evidence base for CBT and the promising role of IPT (Australian Psychological Society, 2004), a number of adaptations to counseling involving key elements of these approaches have been proposed by Hagiliassis, Di Marco, Gulbenkoglou, Iacono, and Watson (2006). These were developed for people with intellectual disability and/or cerebral palsy who have complex communication needs and rely on various forms of AAC. The guidelines are specific to whether an individual (1) can generate any message, being limited only by the physical effort and time needed for encoding, such as when a person spells out a message on a communication board or device, or can use codes; or (2) is limited to a small message set because of a reliance on various types of picture symbols on a communication board or device, or some other form of AAC.

Examples of key adaptations are (1) providing the person with strategies to signal when they want to take a turn or initiate in the conversation; (2) slowing down the therapist’s rate of conversation by inserting frequent pauses, working with the person to co-construct messages; and (3) using closed questions strategically as openers to further targeted questions.

Future Research and Policy Implications

Given the paucity of research addressing the mental health issues of people with complex communication needs, the scope for future research is wide. There is a need for the development of mental health assessment tools that enable clinicians to obtain information directly from the individual. For people who use AAC, such assessments may need to take into consideration the person’s access to messages (Hagiliassis et al., 2005a). The research tasks in the assessment area are significant, given the need to both develop the tools and assess their validity and reliability.

Similarly, in intervention, there are many questions to address. Efficacy research into interventions is needed, but given the heterogeneity of this client group, RCTs are likely to prove a logistical impossibility. Designs, such as the use of experimental single-case designs that allow the individual to act as his or her own control in determining treatment effectiveness, may prove most plausible, particularly in clinical settings. Such designs have been used frequently in intervention studies involving people with complex communication needs, when the outcome has been in relation to the person’s communication (Schlosser, 1999). This design may be most appropriate in initial attempts to develop the evidence base in the use of counseling therapies with this group. In addition, single-case experimental designs may help to determine the extent to which adaptations to approaches, such as those suggested above, impact on the therapeutic process. As examples, research is needed into whether a slow pace of interaction impacts on the therapeutic relationship, and whether the therapist’s attempts to repair conversational breakdowns influence the client’s view of his or her empathy, understanding, genuineness, competence, and expectation for change.

The lack of research and appropriate assessment tools influences problems in the delivery of mental health services. In discussing use of psychotherapy with people with intellectual disability (but not necessarily complex communication needs), Thompson Prout and Nowak-Drabik (2003) argued the need for mental practitioners working in disability services be trained in the use of counseling therapies, rather than focusing on behavioral techniques. Conversely, they argued for training of mental health practitioners working in generic services to be trained in developmental disabilities. For people with complex communication needs, there is a need to extend the notion of cross-pollination across disciplines to include speech pathology. Such collaboration enables service providers to draw on evidence from the three disciplines of mental health, developmental disabilities, and speech pathology to address the mental health of people with complex communication needs. In order to facilitate such collaborative service provision, policy is needed to allow governments to draw on funding that may sit in different departments. By encouraging such collaborative practice through appropriate funding, policy can drive interdisciplinary training of practitioners and the development of the evidence base to further drive the practice of providing mental health services to people with complex communication needs associated with developmental disabilities. Government departments responsible for regulating these services need to develop policy that not only ensures services recognize the mental health needs but actively pursues the development of evidence-based practices and appropriate assessment tools.

CONCLUSIONS

The lack of evidence to support the use of counseling for people with complex communication needs associated with intellectual disability and/or cerebral palsy appears to be based on a failure by mental health researchers to acknowledge this group’s vulnerabilities and needs. Similar problems have been evident in terms of the provision of clinical services, which are exacerbated by a dearth of appropriate assessment tools and information on how best to adapt current approaches found to have some evidence base for the general population. There is a compelling need for the development of such tools and for building the evidence base for counseling people with complex communication needs. While research is addressing these issues, clinical practice is reliant on adaptations of current practices, developed through clinical experience and the development of policy to support collaboration among mental health, developmental disability, and communication specialists.
REFERENCES


