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PARENTAL ACCEPTANCE OF BEHAVIOURAL TREATMENTS FOR CHILDREN WITH AUTISM

by

Karen L. Keleher

A thesis submitted in conformity with the requirements for the degree of Master of Arts
Department of Human Development and Applied Psychology
Ontario Institute for Studies in Education of the
University of Toronto

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Abstract

Parental Acceptance of Behavioural Treatments for Children with Autism

Master of Arts, 1999

Karen L. Keleher

Department of Human Development and Applied Psychology

Ontario Institute for Studies in Education of the University of Toronto

The relationship between acceptability of behavioural interventions for children with autism and parents’ knowledge of behavioural principles, parents’ education level, parents’ locus of control, and the severity of children’s symptoms was examined in the present investigation. Thirty-seven parents of children with autism participated by completing a series of questionnaires. Overall, behavioural interventions were rated as an acceptable treatment for children with autism. No significant relationships were found between acceptability and knowledge, acceptability and locus of control, acceptability and education level, and education and symptom severity. These variables accounted for a nonsignificant amount of the variance in acceptability of behavioural interventions. Results should be interpreted cautiously for several reasons, especially the small sample and low consent rate.
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Thanks also to Dr. James Tolliver and Dr. Tom Reimers, who provided information on scoring the Locus of Control Scale and the Treatment Acceptability Rating Form-Revised, respectively, as well as to Kathy Soule, for all her careful editing.

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throughout the years, even when I was at my most trying. My family has helped me see that something beautiful and strong can develop even in the least positive of experiences.

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Finally, I owe my thanks to all the children I have worked with. These children have been my inspiration for this study. They are proof that behavioural interventions are effective and can create a happier future for children with autism.
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Chapter I: Introduction

Treatment acceptability refers to "...judgements about the treatment procedures...[or, in other words,] evaluation of whether treatment is appropriate for the problem, whether treatment is fair, reasonable, and [non-]intrusive, and whether treatment meets with conventional notions of what treatment should be" (Kazdin, 1980, p. 259). Research on treatment acceptability is useful for clinicians, mainly because a treatment's success depends on its effectiveness and the acceptability of the recommended procedures (Reimers, Wacker, & Koeppel, 1987). Consumers will be unlikely to comply with a treatment they perceive as unacceptable, no matter how effective it may potentially be. Thus, knowledge of what makes treatments acceptable can help clinicians educate consumers about acceptable treatment options. This, in turn, may rectify some misconceptions consumers hold about particular treatments. Understanding the acceptability of treatments to clients also helps clinicians consider treatment options more effectively. This is particularly helpful when several effective treatments are available.

Review of the Literature

Kazdin introduced the Treatment Evaluation Inventory (TEI) in 1980. The TEI contained 15 items, rated on a 7-point Likert scale, used to examine whether people believed treatments were fair and appropriate for someone who could not make responsible treatment decisions for themselves. The TEI was also used to probe whether raters would recommend procedures. Kazdin (1980) explored undergraduate psychology students' acceptance of four treatments, differential reinforcement of incompatible behaviour (DRI), time-out, drug therapy, and shock, for hypothetical children. Overall, the destructiveness of the procedures influenced acceptability ratings more than any other factor. The most positive intervention, reinforcement, was most acceptable, followed by time-out, drug therapy, and shock. The most restrictive procedure, shock, was least
acceptable to the participants. Treatments were also significantly more acceptable for severe problems.

Research has examined acceptance of treatments by numerous groups since then. These groups have included the community (Blampied & Kahan, 1992) and post secondary students (Kazdin, 1981; Pickering, Morgan, Houts, & Rodrigue, 1988; Singh & Katz, 1985). Teachers (Elliott, Witt, Galvin, & Peterson, 1984; Norton, Austen, Allen, & Hilton, 1983; Witt, Moe, Gutkin, & Andrews, 1984; Schneider, Kerridge, & Katz, 1992; Witt & Robbins, 1985) have also participated in treatment acceptability research. Finally, research has looked at the views of direct-care staff (Kazdin, French, & Sherick, 1981; Miltenberger, Lennox, & Erfanian, 1989; Rasnake, Martin, Tarnowski, & Mulick, 1993; Tarnowski, Rasnake, Mulick, & Kelly, 1989).

Research has also explored the views of those receiving services. Children in psychiatric wards (Kazdin et al., 1981; Kazdin, 1984) and individuals with developmental delays (Miltenberger, Suda, Lennox, & Lindeman, 1991) have offered their views on treatment acceptability. Parents of children with developmental delays (Pickering & Morgan, 1985; Singh, Watson, & Winton, 1987) and children with autism (Pickering & Morgan, 1985) have also participated. Furthermore, researchers have examined the views of parents of children with emotional and/or behavioural difficulties (Kazdin, 1984; Kazdin et al., 1981; Reimers & Wacker, 1988; Reimers et al., 1991; Reimers, Wacker, Derby, & Cooper, 1995). Finally, parents of children who do not have any difficulties (Frentz & Kelley, 1986; Heffer & Kelley, 1987; Kalfus & Razzano, 1992; Norton et al., 1983; Reimers, Wacker, & Cooper, 1991) have participated in research on treatment acceptability.

Variables Related to Treatment Acceptability

Studies have revealed that treatment acceptability is related to treatment characteristics,
client characteristics, and characteristics of the person who rates the treatment. These variables are discussed in the next section.

**Treatment Characteristics**

Research has investigated whether acceptability is associated with specific treatment characteristics. These treatment characteristics include the restrictiveness of the procedures, treatment effectiveness, treatment risks, treatment setting, interventionist, treatment descriptions, time-involvement and expense.

**Procedural restrictions.** Generally, positive procedures have been rated as more acceptable than negative procedures. Negative procedures help reduce problem behaviours whereas positive procedures are useful for accelerating more socially desirable behaviours. Positive procedures that have been most acceptable include reinforcement (Kalfus & Burk, 1989; Kalfus & Razzano, 1992; Kazdin, 1981; Kazdin, 1980; Norton et al., 1983; Pickering et al., 1988; Reimers et al., 1991) and stimulus control (Rasnake et al., 1993). Self-instruction (Kalfus & Razzano, 1992) and isolation and contractual agreement (Norton et al., 1983) have also been rated as most acceptable.

In turn, negative procedures are consistently less acceptable than positive procedures. Shock (Kazdin, 1980; Pickering & Morgan, 1985; Pickering et al., 1988; Rasnake et al., 1993; Tarnowski et al., 1989) and medication (Kazdin, 1981; Reimers et al., 1991; Singh et al., 1987; Tarnowski, Simonian, Bekeny, & Park, 1992; Tarnowski, Simonian, Park, & Bekeny, 1992) have been rated as unacceptable. Similarly, restraint (Rasnake et al., 1993; Spreat & Walsh, 1994; Tarnowski et al., 1989), reprimands (Kalfus & Razzano, 1992), and physical punishment (Blampied & Kahan, 1992; Witt & Robbins, 1985) were also rated as unacceptable in a number of studies.
Tamowski, Simonian, Park, et al. (1992) demonstrated that the acceptability of treatments can change when a variety of procedures are incorporated in treatment programs. Specifically, acceptable treatments were less acceptable when implemented with another, unacceptable treatment. Participants rated time-out and token economy as the only acceptable treatments in this study. These participants were also asked to rate the acceptability of a dual treatment program that involved combinations of time-out, token economy, and drug therapy. Only time-out and token economy were acceptable individually and when implemented together.

**Treatment effectiveness.** Most studies reveal that effective treatments are more acceptable than ineffective treatments (Kazdin, 1984; Reimers & Wacker, 1988; Reimers, Wacker, Cooper, & De Raad, 1992). In contrast, Kalfus and Razzano (1992) and Kazdin (1981) found that acceptability was not influenced by treatment effectiveness. In fact, Kazdin (1981) revealed that information about a treatment's effectiveness only influenced people's perceptions about that treatment's strength. This is interesting given that Kazdin et al. (1981) and Pickering et al. (1988) revealed that strong, effective treatments are not necessarily most acceptable. In illustration, time-out (Kazdin et al., 1981) and shock (Pickering et al., 1988) were rated as strong and effective, yet were considered least acceptable. Thus, the relationship between treatment effectiveness and acceptability is unclear across studies.

**Treatment risks.** The risks associated with a treatment's procedures are also related to treatment acceptability (Reimers et al., 1987). Generally, treatments with few side effects are more acceptable (Kazdin, 1981). However, Pickering et al. (1988) discovered that parents were not affected by the risks and benefits associated with treatment. Parents continued to rate shock and reinforcement as most and least acceptable, respectively, for self-abusive children. Results from these three studies do not show a clear relationship between treatment acceptability and treatment
risks. Pickering et al. (1988) suggests that researchers overlooked the effects that risk-benefit information has. More research is needed to determine how treatment acceptability is affected by the risks and benefits associated with various treatments.

**Treatment setting.** Blampied and Kahan (1992) also discovered that people's acceptance of treatments is associated with the treatment environment. The least acceptable treatment for participants in their study, punishment, was more acceptable when administered at home than school. One possible explanation for this result is that people may perceive that they have more control over the outcome if an unacceptable treatment is delivered in the safety of their own homes.

**Person who administers treatment.** Research has revealed a relationship between treatment acceptability and the person who administers treatment to the client (Blampied & Kahan, 1992; Witt & Robbins, 1985). Teachers thought that staying in after school was a more acceptable punishment for a misbehaving student when this was implemented by another teacher rather than the school principal. In contrast, other studies have not shown any relationship between the person who administers treatment and acceptability of treatments (Kalfus & Burk, 1989; Kalfus & Razzano, 1992). Interventions were just as acceptable when treatment was administered by either a parent/teacher or psychologist.

**Treatment descriptions.** Treatment acceptability is also associated with the way treatments are described (Witt et al., 1984). Witt et al. (1984) had teachers read descriptions of three interventions, which were phrased in humanistic, pragmatic, or behavioural terminology. The consequence was identical across interventions (i.e., recess was missed as a penalty for misbehaving), yet the pragmatic description was most acceptable. This illustrates how treatment acceptability is altered when treatment descriptions contain negative or ambiguous terms.

**Expense and time involvement.** Researchers have found that that time-consuming
treatments are less acceptable than quick treatments (Elliott et al., 1984). Elliott et al. (1984) discovered that in-class token economy was significantly less acceptable to teachers than praise and home-based reinforcement. In-class token economy required more than one hour a day to monitor and maintain, whereas the other two interventions required less teacher time to implement.

Furthermore, Reimers et al (1987) asserts that there is a "...paucity of research examining the influence of [cost]...on acceptability" (p. 221). However, cost may play a role in acceptability when decisions involve placements, facilities, and supplies that have varying levels of expense (Reimers et al., 1987).

Client Characteristics

Elliott et al. (1984) found that both treatment characteristics (i.e., time involvement) and client characteristics (i.e., severity of the client's problems) were related to acceptability. These client characteristics, which include type of disorder, problem severity, age, and gender, are discussed in the following section.

Type of disorder. Specific treatments may be more acceptable for certain disorders. Phares, Ehrbar, and Lum (1996) found that behavioural contingencies were more acceptable for children with externalising disorders, whereas individual therapy, family therapy, and medication were more acceptable for children with internalising disorders. Moreover, Kalfus and Razzano (1992) and Schneider et al. (1992) noted that a variety of interventions were more acceptable for children with external disorders (i.e., aggression) than internal disorders (i.e., withdrawal). Their results demonstrate that coaching (Schneider et al., 1992), self-instruction, time-out, and reprimands (Kalfus & Razzano, 1992) were more acceptable for children who were aggressive. These inconsistencies may be explained by problem severity. Phares et al. (1996) found participants considered internal disorders more severe, thus showing that the perceived severity of the problem,
rather than type of disorder, is related to people’s acceptance of treatments.

**Severity of client’s problem.** Most studies reveal acceptability varies as a function of problem severity (Frentz & Kelley, 1986; Kazdin, 1980; Reimers et al., 1987; Tarnowski et al., 1989; Witt et al., 1984; Witt & Robbins, 1985; Spreat & Walsh, 1994). As such, treatments that are unacceptable for mild problems may be acceptable for severe problems. This was not supported in a few other studies (Tarnowski, Simonian, Bekeny, et al., 1992; Tarnowski, Simonian, Park, et al., 1992).

**Client’s age.** Treatment acceptability may also be associated with the client’s age (Norton et al., 1983). Norton et al. found that behavioural procedures were more acceptable for 5-year-old children than 10-year-old children. However, other studies have not supported the relationship between treatment acceptability and the client’s age (Tarnowski et al., 1989; Tingstrom, McPhail, & Bolton 1989).

Results from one of these studies (Tarnowski et al., 1989) however, indicate that the client’s vulnerability, not age, is linked with treatment acceptability. Specifically, a behavioural intervention was equally acceptable for adults and children with severe to profound handicaps. Age was not a factor since adults and children with severe cognitive limitations often function at the same level. For example, a 26-year-old person who has severe cognitive limitations can function like a very young child. Thus, more comprehensive research is needed to determine whether treatment acceptability is associated with the client’s age.

**Client’s gender.** Most studies reveal that the client’s gender is not associated with people’s acceptance of a treatment (Blampied & Kahan, 1992; Norton et al., 1983; Phares et al., 1996). The specific effects of gender are unknown, however, because other factors such as age and problem severity are frequently combined with gender in vignette descriptions (i.e., Kazdin, 1981; Spreat &
Walsh, 1994). The effects of gender or any of the other variables can only be discerned when these variables are isolated in future research.

**Rater Characteristics**

Research has also probed whether treatment acceptability is influenced by variables associated with the person rating the treatment. These include the rater’s familiarity with, and knowledge of, the treatment, the rater-client relationship, demographics (i.e., age, gender, race, income, and education) and psychological well being (i.e., mood and marital satisfaction). These are discussed in the following section.

**Rater’s familiarity with the treatment.** Treatment acceptability has been linked with the amount of experience people have with treatments (Miltenberger et al., 1989; Schneider et al., 1992). Miltenberger and associates found that time-out was more acceptable to institutional staff than community staff, most likely because time-out was frequently used in the institution where they worked. Similarly, Schneider and his associates (1992) discovered that special education teachers found coaching and token reinforcement more acceptable than regular class teachers did. This may have occurred because special education teachers are more likely to implement these procedures when teaching children who have learning and/or behavioural difficulties. Both studies reveal that procedures are more acceptable to those who have experience using them.

**Rater’s knowledge of the treatment.** People's knowledge of the principles and procedures associated with a particular treatment can also be linked with treatment acceptability. This understanding can be acquired through either direct experience or education. Singh and Katz (1985), for example, discovered that students were more accepting of behavioural interventions, and less accepting of ineffective interventions, following a 3-hour lecture. It is difficult to discern whether knowledge increased as a result of the lecture in the latter study since these researchers did
not actually measure knowledge (Rasnake et al., 1993). Rasnake et al. (1993) used a quantitative approach to examine the relationship between knowledge and treatment acceptability. Staff at a facility for adults with severe mental retardation completed questionnaires about behavioural techniques. Overall, their knowledge of behavioural procedures was unrelated to their acceptance of these procedures.

**Rater’s status.** Ratings by individuals playing different roles with respect to the client have been compared to determine whether some perceive treatments differently than others. Overall, little difference in acceptance of treatments has been found between parents and their children (Kazdin et al., 1981; Kazdin, 1984), parents and staff (Kazdin et al., 1981), and parents of problematic and non-problematic children (Frentz & Kelley, 1986). Only Norton et al. (1983) found a link between the rater-client relationship and acceptance of interventions. In that study, treatments were more acceptable to teachers than to parents. Overall, rater's status appears to be related to treatment acceptability only in certain dyadic relationships.

**Demographics.** Other personal factors have been investigated. Several studies reveal that males and females differ in their acceptance of treatments (Miller & Kelley, 1992; Phares et al., 1996). Specifically, Miller and Kelley (1992) discovered that punitive techniques were more acceptable to fathers, whereas mothers found positive procedures more acceptable. Acceptability has also been linked with the rater's race (Tarnowski, Simonian, Bekeny, et al., 1992) and age (Rasnake et al., 1993). Tarnowski, Simonian, Bekeny, et al. (1992) discovered that interventions were less acceptable to African-American mothers than Caucasian mothers. Furthermore, Heffer and Kelley (1987) determined that treatment acceptability was associated with the rater's income. Behavioural procedures were more acceptable to mothers from low-income families in this study.

In contrast, results from other studies do not document any relationship between treatment
acceptability and the rater's gender (Blampied & Kahan, 1992; Kazdin, 1980; Kazdin et al., 1981; Singh & Katz, 1985) or education (Blampied & Kahan, 1992; Kazdin et al., 1981). Other studies have failed to detect any association between acceptability and the raters' socioeconomic status (Tarnowski, Simonian, Park, et al., 1992), race (Heffer & Kelley, 1987; Tarnowski, Simonian, Park, et al., 1992), or age (Blampied & Kahan, 1992; Kazdin et al., 1981).

Psychological well being. Finally, psychological factors such as parent's satisfaction with their marriages (Miller & Kelley, 1992) and maternal mood (Keane, Nelson, & Herbert, 1987) can be linked with treatment acceptability. Results suggest that positive reinforcement is significantly more acceptable to parents in stable marriages and mothers who are in a positive mood.

Summary of Findings from Treatment Acceptability Research

In summary, treatment acceptability is related to factors associated with the treatment, client, and rater. Researchers have investigated numerous variables within each category.

Most studies reveal that acceptability is linked to some treatment characteristics such as the restrictiveness of the procedures, treatment setting, treatment descriptions, expense, and time involvement. Studies have yielded inconsistent results regarding the relationship between treatment acceptability and treatment risks, treatment effectiveness, and the person who administers the intervention.

Research has also determined that some client characteristics are related to people's acceptance of treatments. Those client characteristics that are linked with acceptability include the type and severity of the disorder. The association with the client's age and gender, however, is unclear.

Finally, studies consistently reveal that treatment acceptability is related to rater characteristics such as familiarity with the treatment being rated and psychological well being.
Studies have shown inconsistent results regarding factors such as the rater-client relationship, rater's knowledge of procedures, and demographic information.

Limitations of Past Studies

Analogue designs have been the predominant method of assessing acceptability. Typically, the rater reads or listens to a vignette of a client who presents with behavioural problems like aggression or non-compliance then rates the acceptability of different forms of treatment (e.g., behavioural, pharmacological) for that client. Analogue designs are easy to administer and help researchers control the parameters of the treatment to be rated. However, analogue designs may limit the ecological validity of a study. Rating the acceptability of a given treatment for a fictitious client is easy, whereas choices are more difficult when the welfare of real people, especially one's loved ones, is at stake. Indeed, one study (Pickering et al., 1988) revealed that parents were more likely to reject treatments with aversive components than nonparents were.

Past research has compared the acceptability of specific aspects of behavioural interventions, such as time-out, differential reinforcement of other behaviour (DRO), and overcorrection, yet any or all of these procedures could be implemented during a behavioural treatment of an individual client. For example, DRO might be used at the onset of treatment for a particular client; however, time-out could replace DRO if it was not managing the problem effectively. Information from previous studies about the relative acceptability of different aspects of behaviour therapy could be useful to clinicians that are selecting among the specific behavioural techniques that are available, as these may not be equally acceptable to the client. It would be valuable to assess parents' overall acceptance of the 'package' of behavioural techniques that might be proposed to them. This is because specific techniques will be used together in a majority of cases. Only a few studies (Reimers & Wacker, 1988; Reimers et al., 1992; Reimers et al., 1995)
have explored the latter.

Parents of children with developmental challenges, particularly autism, have been under-represented in treatment acceptability research. Parents of higher-functioning children exhibiting behavioural difficulties (Kazdin, 1984; Kazdin et al., 1981; Reimers & Wacker, 1988; Reimers et al., 1991; Reimers et al., 1992; Reimers et al., 1995) have participated in acceptability studies. Similarly, parents of children with mental retardation (Singh et al., 1987) have also offered their views on the acceptability of various treatments. To our knowledge, however, only Konstantareas, Homatidis, & Cesaroni (1995) and Pickering and Morgan (1985) have explored the views of parents of children with autism. These studies examined factors influencing parents' choices to medicate their children (Konstantareas et al., 1995) and their reasons for accepting specific aspects of behavioural treatments intended for a problem presented in a vignette (Pickering & Morgan, 1985). Each study is limited: one by its examination of psychotropic medications and not behavioural treatments (Konstantareas et al., 1995), the other by its analogue design (Pickering & Morgan, 1985). As already mentioned, any decision parents make for their own children could be quite different from decisions they would make for a hypothetical child. Pickering and Morgan's study is also limited by the small sample (N = 13) of parents of children with autism. The present study is an attempt to fill these gaps in past research.

Treatment Acceptability and Autism

Autism is a severely debilitating disorder of childhood that has repercussions for both children and their families. In-patient treatment is often expensive and ineffective for children with autism (Faretra, 1979; Rutter, 1973), which means that parents are responsible for making and implementing treatment decisions. A better understanding of what makes treatments acceptable or unacceptable to parents of children with autism is needed, as this might help alleviate some
problems that occur when choosing treatment options for this population. As mentioned earlier, parents will not comply with a treatment they find unacceptable, regardless of how effective that treatment may be.

Children with autism require effective interventions. Results from treatment acceptability research can be used by clinicians to ensure that the most effective intervention (i.e., behavioural) is acceptable to their parents. Therefore, this study explores the acceptability of behavioural treatments.

What is autism? Autism is one of two types of Pervasive Developmental Disorders (PDD). The Diagnostic and Statistical Manual of Mental Disorders (4th ed.) (DSM-IV), published by the American Psychiatric Association (1994), states autism is characterised by deficiencies in communication, social interaction, and repertoire of activities and interests. A diagnosis of Pervasive Developmental Disorder Not Otherwise Specified (P.D.D. N.O.S.) occurs when children can not be considered 'Autistic' due to late onset, atypical symptomatology, subthreshold symptomatology, or a combination of all three (DSM-IV, 1994, p. 62). Autistic Disorder and P.D.D N.O.S. appear to represent a continuum of severity, rather than distinct clinical disorders. As such, both types of P.D.D are referred to as 'Autism' in the present study.

People with autism present with complex communication deficits. These deficits may include delayed speech and difficulties understanding others' speech, gestures, and facial expressions. People with autism often do not use gestures or facial expressions to convey information meaningfully or to sustain conversation. At least one-third of individuals with autism can not speak (Bryson, 1996). Speech, when present, often contains odd features such as pronoun reversals and echolalia (i.e., repetitive utterances). The latter reflect, as well as contribute to, the social deficits of people with autism.
The social deficits of people with autism are often expressed by a global disinterest in others. People with autism may not understand social rules and boundaries, and may have difficulty initiating and maintaining conversation. People with autism have difficulty engaging in eye contact with others and display a limited awareness of other people's emotions. Their play and imitation skills are poor. Consequently, people with autism struggle in interpersonal relationships.

People with autism often engage in activities or have interests that are repetitive and ritualistic. These may involve self-stimulatory behaviour (e.g., rocking or flicking fingers), preoccupation with routines (e.g., lining up objects or looking at signs), and unusual attachments to objects (e.g., keeping a toothbrush on their person at all times). Such activities and interests are obsessive and cause great distress to the child when interrupted. They also preclude the development of social interaction and appropriate play.

Behaviours that accompany autism, yet which are not always part of the syndrome, include difficulties with eating and toileting, temper tantrums, phobias, sleep and behavioural disturbances, poor responses to frustration, aggression (Howlin & Rutter, 1987), and attention problems. Furthermore, Bryson (1996) contends approximately 50% of people with autism have psychiatric or medical problems.

Some people with autism also engage in self-abusive behaviours. These behaviours may involve head banging, biting, and/or scratching. Bryson, Clark, and Smith (1988) discovered that the majority of children with this disorder in their study reacted strangely to sensory information. These children were sensitive to certain sounds (e.g., covering ears), light (e.g., squinting), and smells (e.g., smelling inedible objects).

Epidemiological data suggests autism occurs in at least 10 out of every 10,000 births in Canada, with approximately 2.5 times more boys affected than girls (Bryson et al., 1988).
Approximately 75% to 85% of people with autism demonstrate some cognitive impairments (Biesik Zoltak, 1986; Bryson et al., 1988; Howlin & Rutter, 1987), with females showing more cognitive impairments than males (Bryson et al., 1988). Specific cognitive deficits involve symbolisation, abstraction, and conceptual processing (Howlin & Rutter, 1987).

Genetic and neurobiological factors, not sociological factors such as poor parenting, are now known to be at the heart of the disorder. Researchers have identified a small number of interacting genes (Rutter, Bailey, Simonoff, and Pickles, 1997) and neurobiological abnormalities (Minshew, Sweeney, and Bauman, 1997). More research is required in this area, nonetheless, as results have been inconsistent across studies (Tsai, 1989).

Interventions for children with autism. Many treatments are available to treat autism. Some of these include play therapy, music therapy, Applied Behavioural Analysis (ABA) or Behavioural Therapy, Sensory Integration, Auditory Integration Training, Facilitated Communication, Gentle Teaching, medication, and dietary interventions. Although these treatments are helpful for some children, only applied behavioural therapy has demonstrated any empirically based effectiveness in treating autism. "Currently, behaviour therapy is broadly accepted as the most well-developed, reliable, and effective treatment intervention with persons who [have autism and severe behavioural disorders]" (Groden & Baron, 1991, p. 7).

Behavioural interventions. Behavioural interventions incorporate operant conditioning and social learning techniques to help children with autism acquire adaptive skills such as communication, play, academics, socialization, and self-help skills. Behavioural therapy also attempts to decrease unacceptable behaviours (i.e., repetitive and/or compulsive behaviours, aggression, and self-injurious behaviours). Therapy is individualised to ensure that learning is consistent with each child's abilities.
Behavioural therapy occurs in highly structured environments where lessons are broken down into small, teachable parts. This means that students can master easier tasks before attempting harder tasks. For example, students learn to imitate two actions (e.g., touch nose and ear) only after mastering one action (e.g., touch nose). This method ensures success. Lessons are taught using clear, simple instructions.

Correct responses are immediately reinforced or rewarded. Reinforcement may involve social praise (e.g., saying "great job!"), treats (e.g., stickers, bubbles, preferred food) or the loss of an unpleasant condition (e.g., being able to stop work to go play) after completing a task successfully. Positive feedback increases the likelihood that students will continue responding correctly. Students are not rewarded for making incorrect responses or ignoring the instructional demands.

Several techniques are used to discourage poor performance and inappropriate behaviours (e.g., aggression). These include:

1. teaching alternative, more appropriate behaviours (e.g., echolalia can be reduced by teaching children to say "I don’t know")

2. extinction (i.e., ignoring the behaviour)

3. time-out (i.e., removing the child from any attention by going to a secluded spot)

4. response cost (i.e., removing a privilege)

5. stimulus control (i.e., preventing problem behaviours from occurring by changing teaching skills, routines, etc.)

Additional techniques are used to help children acquire new behaviours. One of these, prompting, occurs when the teacher physically guides the student to complete a task. For example, the teacher initially helps the child "touch nose" by taking the child's finger and placing it on his/her
nose, with help slowly faded, as the child becomes successful. Another technique, modelling, requires that students observe and imitate a role model. For example, a child follows a request to "stand up" after watching the teacher stand up. Behavioural techniques are taught to all significant persons in the child's environment (i.e., parents, siblings, teachers, etc.) to help students learn and generalize new skills.

The prognosis was once very poor for children with autism. However, advances in educational and behavioural methods mean that children with autism can have a brighter future. Behavioural researchers such as Lovaas (1987) and Strain and Hoyson (1988, as cited in Powers, 1992) found that early, intensive behavioural intervention helped approximately 50% of preschoolers with autism achieve normal academic and intellectual functioning by grade one. This is in contrast to children in the control group who remained seriously impaired.

Most children with autism and related developmental handicaps make progress in behavioural programs. The extent of each child's improvement, however, is affected by the child's gender, cognitive level, the age when the disorder first appeared, the age when speech developed, and EEG results (Wolf & Goldberg, 1986).

The behavioural approach is the most effective intervention for children with autism (Groden & Baron, 1991), yet it has several weaknesses. Behavioural interventions are time-consuming; they do not lead to recovery for all children; and lastly, therapeutic gains will relapse (for all but those who recover) once therapy is terminated (Lovaas, Calouri, & Jada, 1989). Nonetheless, behavioural interventions should still be the treatment of choice for children with autism due to their documented effectiveness. However, behavioural interventions will not be very effective if they are not acceptable to parents.
Overview and Rationale of this Study

Behavioural treatments are effective, yet it is difficult to understand why they are not always implemented for children with autism. Catherine Maurice, the author of *Let Me Hear Your Voice* (1993), originally rejected behavioural interventions for her children, opting instead for several other therapies that proved ineffective. Maurice then turned to the behavioural program that helped recover her two young children from autism. A better understanding of what makes behavioural treatments acceptable may ensure that similar experiences can be avoided. Timely implementation of behavioural interventions can improve children's opportunities for developing more adaptive behaviours.

Behavioural interventions may be unacceptable to some parents because of the time, expense, and parental involvement they require. Unlike many therapies, behavioural interventions have not been presented as a 'miracle' cure. Parents may also possess misconceptions about behavioural procedures, which may lead to their unacceptability. This has been confirmed by some studies conducted with other populations (e.g., Clark & Elliott, 1988). Clark and Elliott found behavioural interventions were less acceptable to people who did not understand behavioural procedures.

Personality factors might also play a role in acceptance of behavioural interventions. Locus of control, which is how people view the source of their outcomes, is of relevance to treatment acceptability research. Choosing a treatment is one way people attempt to ameliorate or control their life conditions (Rotter, 1966), yet individuals vary in the degree to which they perceive their own abilities and effort to be associated with their outcomes. Some researchers suggest that individuals with external locus of control (i.e., those who believe that outcomes in life are the result of external forces and not their own effort) identify with behavioural approaches (Barber &
Stoltenberg, 1994; Vincent & LeBow, 1995).

The link between external locus of control and endorsement of behaviour therapy was largely confirmed in the two studies just cited. However, both studies dealt with adult clients' choices regarding counselling techniques for themselves. The association between locus of control and the acceptability of behavioural treatments has not been explored with regard to parent-mediated behavioural interventions for children with autism. The matching hypothesis (Fry & Charron, 1980) proposes that clients prefer and respond more favourably to therapy when the therapeutic approach is similar to their specific cognitive or attitudinal styles.

Other factors that may be related to people's acceptance of behavioural treatments include severity of the client's problem and rater's educational level. These factors have not been explored with regards to the acceptance of behavioural treatments for children with autism.

**Goals of the Present Study**

This study addressed parents' acceptance of behavioural treatments for their children with autism. Kazdin (1980) believed that studies needed to use a larger number of cases than had previously been used; he also asserted that these cases needed to reflect more variance in age and problem severity. The present study achieved this by using a larger sample (N = 37) of parents who rated their children's symptoms on the Childhood Autism Rating Scale (CARS). The CARS was used to address the relationship between acceptability of behavioural interventions and severity of the child's symptoms. This study also examined the impact that parents' knowledge of behaviour modification, parents' locus of control, and parents' formal education have on parents' acceptance of behavioural interventions.

**Hypotheses**

1. A positive relationship between knowledge of behavioural principles and acceptability was
expected. Knowledge was thought to be associated with acceptability of behavioural treatments, and misconceptions were thought to be associated with poor ratings of acceptability.

2. It was expected that severity of children's symptoms would be positively related to parents' acceptance of behavioural treatments. Specifically, parents would find behavioural treatments most acceptable when these symptoms are severe.

3. Based on findings from past research, a positive relationship between external locus of control and treatment acceptability was expected. Parents with an external locus of control would find behavioural treatments most acceptable, whereas internals would find behavioural treatments less acceptable.

4. A positive relationship between education and acceptability was also expected. Parents with more extensive formal education were expected to be more accepting of behavioural treatments. This deduction was intuitive, based on the assumption that education provided these parents with the background to research and appreciate the empirically demonstrated effectiveness of behavioural treatments.
Chapter II: Method

Participants

Thirty-seven parents of children with Pervasive Developmental Disorders (Autism and P.D.D. N.O.S.) participated in the present study. These participants were members of various agencies and Internet groups that provide services and information to individuals with autism and their families. Fourteen participants were recruited from TRE-ADD (Treatment, Research, and Education on Autism and Developmental Disorders). Two participants were obtained from the Geneva Centre and Autism Society newsletters. Thirteen participants were obtained from the Me-List, an Internet list that educates people about behavioural interventions for children with autism. Finally, eight participants were obtained from the St. John’s list, another Internet group that discusses a variety of issues related to autism.

All participants read a letter about the study then provided informed consent to participate (refer to Appendixes A and B). All parents who expressed an interest to participate, whose child satisfied DSM-IV criteria for Pervasive Developmental Disorder, were included in the present study.

In the present study, 95% of the participants were female. The majority of these mothers were married (83.8%) and university educated (67.6%). Approximately 84% of these parents were using some type of behavioural intervention for their children at the time of this study.

Measures

Participants were given a package a questionnaires. All questionnaires contained standard written procedures (Appendix C and D). Measures included:

Modified Parent Child Autism Rating Scale (CARS). The CARS is a 16-item behavioural scale, modified by Freeman, Perry, and Factor (1991) from the original CARS (Schopler, Reichler,
DeVellis, & Daly, 1980). The modified version was included because it contains two new items that reflect maladaptive behaviour: Physical Aggression and Self-Injury. Each item on the CARS has a 4-point severity rating. The original CARS has an average inter-rater reliability of .71 and an internal consistency of .94 (Schopler, Reichler, & Renner, 1986). Test-retest reliability of the CARS was .88, showing it is relatively stable over time. Parents rated their own children in the present study. Freeman et al. (1991) demonstrated that parents' ratings of their children's behaviours on this measure were consistent with professionals' ratings using the original CARS. Professional's ratings were based on observations. The modified parent CARS provides for a continuum of severity rather than just mild or severe, as in past research, thereby allowing for better conclusions.

**Short profile.** A brief questionnaire was created for the present study. This questionnaire involved demographic information such as the child's birth date, diagnosis, parents' formal education, and the agencies and treatments parents had used or were currently using for their children (see Appendix E).

**The Behavioral Vignettes Test (BVT IIIa)** (Heifetz, Baker, & Pease, 1981). The BVT-IIIa is a series of 20 brief vignettes reflecting a continuum of problem behaviours typically treated in a behavioural program (see Appendix F). The BVT measured parents' knowledge of behavioural principles. Parents were asked to select the most effective solution from four alternatives. The BVT IIIa covers a) general learning principles b) punishment, time-out, and extinction procedures, c) reinforcement schedules and procedures, d) task analysis and shaping, and e) data collection. The Spearman-Brown corrected split-half reliability of pre-training BVTs was $r = 0.75$ in one study (Brightman, Baker, Clark, & Ambrose, 1982).

**Internal-External Locus of Control Scale** (Rotter, 1966). The Internal-External Locus of
Control Scale is a self-report inventory that contains 29 forced-choice items. Of these, 23 assess locus of control and six disguise the purpose of the test. Respondents read two statements for each item then selected the statement that best described themselves. Research reveals that the I-E Scale has good internal consistency and retest reliability (Liebert & Spiegler, 1990). Rotter (1966) reported that the internal consistency and test-retest reliability of the I-E scale were greater than $r = .65$ and $r = .49$, respectively, in a number of samples. The I-E scale has been the most widely used measure of locus of control in adults (Liebert & Spiegler, 1990).

**Description of behavioural treatments for children with autism and the Treatment Acceptability Rating Form-Revised** (Reimers & Wacker, 1988, as cited in Reimers, Wacker, Cooper, & DeRaad, 1992). Parents read a description of behavioural interventions (Appendix G). They then used the Treatment Acceptability Rating Form-Revised (TARF-R) to rate their acceptance of that treatment for their child (Appendix H). The TARF-R, which consists of 20 Likert-type items (1-to-7 point scales), explores the total acceptability of the recommended procedures. According to a factor analysis conducted by the developers of the scale, 16 of 17 items loaded highly on a single principal component before rotation. This component accounted for 47.4% of the variance (Reimers et al., 1991). Items from the TARF-R can be divided into numerous sub-clusters that may be of heuristic value. These subclusters include reasonableness, effectiveness, side effects, disruption/time, cost, willingness, and the degree to which the child's behavioural difficulties are perceived to be severe. Reimers et al. (1992) found that the internal consistency of the TARF-R was greater than .89 across measures and time points.

Several professional behavioural analysts reviewed the behavioural description that accompanied the TARF-R in the present study. These professionals agreed the description was reasonably representative of a behavioural treatment that might be proposed for children with
autism.

Procedure

Agency parents received a package of questionnaires from a staff member at that agency. All other participants received their questionnaires in the mail. All participants were asked to complete these forms in the given order, without skipping items or sections (appendix C). Agency parents returned their completed questionnaires to a staff member, who was responsible for contacting participants to clarify missing information. All other participants returned their questionnaires in a postage-paid self-addressed envelope. The procedure took approximately half an hour.
Chapter III: Results

The mean scores on the Treatment Acceptability Rating Form-Revised was 90 (SD = 12.65) in the present study. The mean acceptability score for behavioural interventions in this study is similar to several studies that have investigated parents' acceptance of behavioural interventions for their children (Reimers et al., 1992; Reimers et al., 1995). The mean acceptability ratings on the TARF-R in those studies ranged from 91.5 to 94.4 (Reimers et al., 1992) and 90.8 to 94.8 (Reimers et al., 1995) across several times following the implementation of treatment.

Spearman rank order correlation coefficients were calculated to examine the hypotheses that acceptability of behavioural interventions would be positively related to knowledge of behavioural treatments, symptom severity, and external locus of control. No significant correlation was found between acceptability and knowledge of behavioural treatments ($r = .08$), acceptability and symptom severity ($r = -.15$), and acceptability and locus of control ($r = .04$). A Pearson correlation coefficient was also completed to assess whether education level was positively associated with acceptability of behavioural interventions. This relationship also failed to reach statistical significance ($r = -.20$).

Multiple regression analyses was conducted to examine the combined and interactive effects of variables using backward elimination. Education, locus of control, knowledge of behavioural principles, and perceptions of children's symptom severity accounted for a nonsignificant amount of the variance in acceptability of behavioural interventions, $F(4, 31) = 0.91$, $p > .05$. 
Chapter IV: Discussion

Results from the present investigation reveal that parents' locus of control, parents' knowledge of behavioural principles, parents' education, and parents' perceptions of the severity of their children's symptoms contribute very little to the acceptability of behavioural interventions for children with autism. Overall, these parent variables explained a non-significant amount of the variance in acceptability. Severity accounted for a mere 0.1% of the variance, thus showing that severity of children's autism is not associated with parents' acceptance of behavioural treatments.

The hypothesis that parents' knowledge of behavioural principles would be associated with acceptability ratings of behavioural interventions was not supported. This is consistent with results from another study (Rasnake et al., 1993) which demonstrated that staff's knowledge on a similar behavioural measure was unrelated to their acceptance of the procedures.

Results also failed to support a relationship between severity of children's autistic symptoms and parents' acceptance of behavioural interventions. This finding is surprising given that the majority of studies have supported an association between acceptability and problem severity. Children in the present study presented with a range of symptoms, ranging from mild (20) to severe (60) ($M = 37.8$, $SD = 10.5$). The lack of relationship between acceptability and severity suggests these parents found behavioural treatments acceptable for children who present with a wide range of symptoms. These results are consistent with two other studies (Tarnowski, Simonian, Bekeny, et al., 1992; Tarnowski, Simonian, Park, et al., 1992), which also failed to show any relationship between severity and acceptability. Tarnowski, Simonian, Park, et al. (1992) suggest these inconsistent findings are a result of differences amongst raters across studies. The current investigation is one of the few studies that investigates the views of parents of children with autism. It is quite plausible that parents in the present study differ from participants in other studies.
due to the extreme nature of their children's difficulties.

Contrary to expectation, an external locus of control was not associated with the acceptability of behavioural interventions. This is inconsistent with other studies (Barber & Stoltenberg, 1994; Vincent & LeBow, 1995) which suggest that people who have an external locus of control (i.e., those who attribute things that happen to them to external factors such as luck, not their own effort) identify with behavioural approaches. The data from the current study suggests that behavioural treatments are acceptable to parents with both external and internal locus of control.

Finally, results from the present study failed to confirm the hypothesis that extensive formal education would be associated with higher acceptability ratings. Acceptance of behavioural treatments was not associated with a university education. It is possible that behavioural interventions become acceptable to parents through other sources such as the media, professionals, literature, and experience.

Limitations of the Study

Results from the present investigation need to be interpreted cautiously for several reasons. First, only a small percentage of parents who were contacted agreed to participate. The consent rates for parents at the agency and Internet groups were 27% and 0.01%, respectively. To compound the problem, only 54% of those participants returned their questionnaires. The low consent rate, as well as the high mortality rate, suggests these parents may have been more accepting of behavioural treatments than other parents were. Indeed, 83.8% of the sample was currently using some form of behavioural intervention at the time of this study. This creates some bias. The poor consent rate also suggests that respondents were more motivated to participate in this study than the average parents of children who have autism. Results from this investigation
also suggest that these parents were more knowledgeable about behavioural interventions than most parents of children with autism. For example, these parents scored higher than staff who worked with individuals who had developmental delays (Rasnake et al., 1993). On average, staff achieved 46% on a similar knowledge measure, whereas parents from the present study achieved an average of 64%. Results, then, may only be applicable to a small group of parents who have children with autism. These parents would be female, highly motivated, knowledgeable, and accepting of behavioural interventions. These parents would also be Internet users since over half of the participants in the current investigation belonged to an Internet group.

A few measures in the present study were of concern due to their lack of relevance to the children with autism and their parents who were sampled. Adrienne Perry (personal communication, November 12, 1998) indicates that symptom scores on the Childhood Autism Rating Scale may be under or over inflated for very young children. This is problematic because 30% of parents in the current investigation had children under the age of five. Inaccurate scores for young children may have distorted the true relationship between symptom severity and acceptability of behavioural interventions in this study.

The Locus of Control Scale may also be an unreliable measure of the attributions that parents of children with autism make. Many participants wrote on questionnaires that they felt limited and frustrated by the forced-choice format of the LOC scale. The reliability of the LOC scale may have been compromised if some parents guessed or gave up on difficult items.

Another limitation of this study was that independent clinical observations were not available to confirm that all participants had children with autism. It was assumed that children from the Internet and newsletter groups satisfied the criteria for autism based on parental report, which may not be as reliable or valid as independent clinical observations.
Finally, the nature of the behavioural services children received may have confounded the true impact of the variables studied. For example, some children were receiving intensive home-based behavioural programs, whereas other children were receiving behavioural treatment in government sponsored group homes and classrooms. This difference in treatment setting may have altered parents’ knowledge of behavioural principles and their locus of control. These differences may also have affected the severity of children’s symptoms.

The insignificant findings in this study may reflect the limited range of variables that were examined. Future studies must examine the relationship between acceptability and other factors such as participant’s compliance with treatment, their need for prompting, and their emotional reaction to the proposed treatment (Miltenberger et al, 1991). Future studies should also involve more controlled measures and tighter sampling procedures. This may allow for a better understanding of factors that are associated with parents’ acceptance of behavioural interventions for children with autism.
References


efficacy and adverse side-effects. Behavior Therapy, 12, 493-506.


Appendix A

Consent Form for Participation in
Parental Acceptance of Behavioural Treatments
For Children with Autism

I, ______________________________, understand the nature of this study as described in the attached letter and agree to participate.

Participant's name ___________________________ Date of signing __________

Witness' signature ___________________________ Date of expiry __________

Karen Keleher, B.A.
Principal Investigator

Barry Schneider, Ph.D., C. Psych.
OISE and University of Ottawa
Thesis Chairperson

David Factor, Ph.D., C. Psych.
Thesis Committee Member

Would you be interested in receiving feedback on the results of this study? If yes, please print your name and address on this form, and return this consent form in the enclosed envelope. A brief outline of the results will be mailed to you once the study has been completed, but we will retain no record of your name.

NAME:_____________________________________

ADDRESS:_________________________________
Appendix B

Letter of Information

Dear Prospective Participant:

You are invited to participate in my research. I am a Masters student at the Ontario Institute for Studies in Education (O.I.S.E./University of Toronto). My research examines parents' acceptance of behavioural interventions for children with Pervasive Developmental Disorders. The purpose of this study is to determine how acceptable behavioural treatments are to parents, as well as what makes these treatments acceptable. This study also investigates whether a specific group of parents finds this type of treatment more acceptable than others. Your participation will be very valuable since very little research has been conducted in this area.

Participation involves completing the following questionnaires:

1. A checklist in which you will rate your child's behavior on 16 items.
2. A demographic questionnaire that asks about your education, your child's age and diagnosis. You will be asked to list the agencies (i.e. TRE-ADD, Surrey Place) and treatments you have used both in the past and present for your child.
3. A 20-item multiple choice questionnaire that looks at how you would react to some of the problems that frequently occur in a behavioral program for children with autism.
4. A 29-item questionnaire that looks at why you feel things happen to you.
5. A rating of the acceptability of behavioral treatments. To help you fill this out more clearly, I will provide a 2-page description, with examples, that explains this type of treatment.

Filling out these questionnaires will take approximately 45 minutes of your time.

Your privacy will be respected in the following ways: your name will be replaced by a participant number on questionnaires; only group results, not individual responses, will be reported in the final report; and all data will be stored in a locked filing cabinet, to be used by only the primary investigator (Karen Keleher) and her thesis committee (Dr. Barry Schneider and Dr. David Factor). The principal investigator will keep a copy of data, with names removed, at her home. Any information you provide will be confidential, and will be released to others only with your written consent. However, confidentiality can not be kept under extreme circumstances as required or allowed by law.

You will have access to the results if you wish: include your name and address on the consent form and feedback will be mailed out once the study is completed.

Your participation is purely voluntary. There should be no risks to participating in the present study. You can withdraw your consent at any point in time and for any reason if participation causes any discomfort. Your decision to participate/not participate will not affect your child's treatment/care.
Once again, thank you. Please contact the following people if you have any questions or concerns:

Karen Keleher, B.A.
Masters Student at O.I.S.E./U. of Toronto
50 Forthbridge Cr.
North York, Ontario
M3M 2A1
(416) 245-7178

Dr. Barry Schneider, Ph.D., C. Psych.
Thesis Supervisor
University of Ottawa
School of Psychology
120 University Private
Ottawa, Ontario
K1N 6N5

-or contact Diana Robinson, Barry's secretary at O.I.S.E., at (416) 923-6641 ex. 2414

Dr. David Factor, Ph.D., C. Psych.
-thesis committee member
-TRE-ADD Consulting Psychologist
-(416) 326-0627
Appendix C

Standard Written Procedures

You have been provided with a package of questionnaires. It is important that you take your time to complete these questionnaires in the order given, and that you do not skip any items or sections. Please contact the examiner at 416-245-7178 if you have any questions about the items.
Appendix D

Standard Written Procedures

The following written directions preceded the description of behavioural treatments.

Please read the description of the behavioural treatment. Please complete the TARF-R using your experience with this treatment, as well as the description, to guide your answers. Your ratings should reflect how acceptable this behavioural treatment is for your own son or daughter.
Appendix E

Short Profile

1. Child’s first name: ________________________________

2. Child’s date of birth: ________________________________

3. Child’s most recent diagnosis: ________________________________

4. How old was your child when he or she was diagnosed with a Pervasive Developmental Disorder? __________

5. If applicable, how old was your child when he/she first started to receive a behavioural treatment? __________

6. Number of children in your family: ________________________________

7. What is your marital status? Married/common law ______ single _______
   divorced ______ other ______

8. What is the highest level of education you have completed? (e.g., gr. 11, B.A., etc.): __________

9. Please list any agencies and treatments used (including both past and present):

<table>
<thead>
<tr>
<th>Agency</th>
<th>Type of Treatment</th>
<th>Who received treatment (i.e., child)</th>
<th>Year</th>
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Appendix F

Behavioral Vignettes Test IIIa (BVT)

For each situation below, circle the letter of the response you think would be best. Circle only one letter.

1. You have just started a program to reduce a child’s temper tantrums. After following the program for two days, you find the tantrums are occurring more often than before. You should:

   a. Continue the new program for a week, then change the program if there is still no improvement.
   b. Abandon the program since it is clearly ineffective.
   c. Put the program aside and try it again in a week or two.
   d. Change the program somewhat and see if it works any better.

2. Although Jackson knows how to speak properly, he deliberately talks silly very often when he’s at home. A lot of times the things he says make no sense at all. In order to reduce this behavior, his family should:

   a. Ignore him at these times and talk to him when he makes sense.
   b. Make fun of his silly talk.
   c. Scold his silly talk and tell him to talk sense.
   d. Try to understand his silly talk, translate it into normal talk, and encourage him to imitate it.

3. You are beginning to teach Alan to name colors. During teaching sessions, especially during the first one or two minutes, he looks away and often leaves his chair and walks around the room. You should:

   a. Offer a large reward for naming a color correctly.
   b. Forget it for now but promise him a reward for working with you later.
   c. Reward him at first for sitting quietly and looking at you.
   d. Try to interest him by pointing at objects in the room and naming the various colors.

4. Twelve-year-old Lisa has some grooming skills and usually dresses herself. Yet she had never made a bed, and you want to teach her how. On the first teaching day you would:

   a. Offer her a reward for making the bed.
   b. Make the bed completely, except for pulling the spread over the pillow, then have Lisa complete the task and reward her.
   c. Make the bed completely and explain each step. Then ask Lisa to do the first step, rewarding her for success.
   d. Have Lisa unfold the sheet and reward her for doing it.
5. Darryl’s mother is teaching him to button his pajamas. One of the following suggestions is wrong. Which one?

a. Start by placing her hands on his to guide him.
b. Use small buttons to fit his small hands.
c. Start by teaching him the last step involved in buttoning.
d. Teach where there are no distractions.

6. You are going to teach 10-year-old Sarah to throw a ball. Which of the following would be the best reward to use?

a. Food, such as popcorn or M & Ms.
b. Affection, such as a hug or praise.
c. Activity, such as watching TV.
d. Cannot say.

7. You are working on Mary’s speech. You show her common objects (a ball, a stuffed dog, etc.), name them, and reward her with M & Ms for repeating the name of each object. During the first teaching session which of the following should you NOT do?

a. Give her an M & M reward at the beginning of the session for sitting down and paying attention.
b. Reward her with praise as well as an M & M for every correct imitation.
c. Give her M & Ms to keep up her interest when she seems to be getting frustrated.
d. Play her favorite game with her after the teaching session ends successfully.

8. Sylvia’s mother has been teaching her to drink from a cup. Today, for the first time, Sylvia is able to handle a cup that is ¾-full. The, a few minutes later, Sylvia fumbles the cup, spills some milk and gets upset. Her mother should:

a. End the session for the day
b. Calm her down and have her try the ¾-full cup again.
c. Calm her down, have her drink from a ½-full cup, praise her and then end the session.
d. Calm her down, praise her for doing as well as she did, and end the session.

9. Debby has learned that you will punish her by putting her in her room for two minutes if she spits. When would it be appropriate to give her a second chance?

a. When she promises not to do it again.
b. When you know she did it just to see what you would do.
c. When you think she has forgotten what would happen if she spits.
d. None of these
10. Peter often gets up and leaves the table during meals. The best time to begin a program to reduce this behavior would be:

a. Right away, since his parents know what the problem is.
b. Right away, keeping records of how often he leaves the table after the program starts.
c. After keeping records of how often Peter leaves the table for a couple of meals.
d. After keeping records of how often Peter leaves the table for a week.

11. Melda often tries to attract the attention of her sisters by pinching or slapping them. When this does not work she pinches and slaps harder. To eliminate this behavior:

a. Isolate her (put her in her room) for 3 minutes. If she pinches or slaps again, isolate her for another 3 minutes.
b. Isolate her (put her in her room) until she calms down.
c. Ignore her so she won’t be rewarded by your attention.
d. Scold her.

12. Billy is constantly out of his seat in class. A new program is introduced which gives Billy a star every time he stays in his seat for five minutes. Which of the following would most clearly show that a star is a good reward for Billy?

a. Billy stays in his seat longer on each of the next three days
b. Billy proudly shows his stars to teachers and visitors.
c. Billy trades his stars at the class store for candy, which he likes.
d. Billy asks his teacher for extra stars.

13. Which of the following would always be a punishment for any child?

a. Placing him in his room alone.
b. Spanking him.
c. Scolding him.
d. None of these.

14. Joe, age 7, is able to sit and pay attention for a brief period of time. He can imitate simple actions, like clapping. He makes a variety of infant-like babbling sounds, but he does not say any words. The best way to begin teaching him to speak is to:

a. Make sure he is present during conversations between members of the family, involve him by asking him questions which require him to say a simple YES or NO answer.
b. Teach him to imitate simple sounds, rewarding him for increasingly good imitations of the sounds.
c. Wait for him to say simple words and reward him when he does.
d. Teach him to imitate simple words and reward him for correct imitations.
15. Michael is constantly getting out of his seat during his class. He usually wanders to the same cardboard clock. How would you reduce this wandering while motivating him to stay seated and work?

a. Reduce opportunities to leave his seat.
b. Put the clock out of reach.
c. Tell him if he sits down and works for 5 minutes, then he can play with the clock for 5 minutes.
d. Use all three of these methods.

16. Cheryl, age 7, knows the names of several common objects (“cup”, “ball”, etc.) and you want to teach her more. If you are going to put four objects in front of her and ask for one, you should start with:

a. 3 new objects and 1 old object.
b. 2 new, 2 old.
c. 1 new, 1 old.
d. Depends upon how fast Cheryl learns.

17. Elena’s parents say that she is an aggressive child. The first step in changing Elena’s aggression is to:

a. Find out why Elena is aggressive.
b. Teach her to express her aggression in more appropriate ways.
c. Specify what the behaviors are that lead Elena’s parents to call her “aggressive”.
d. Ignore the aggression and praise Elena when she is not aggressive.

18. Maria has begun to fight with her brothers. In order to get her to stop when she’s fighting, her father promises Coke or candy, which Maria enjoys. In the future, Maria’s fighting will likely:

a. Occur less often.
b. Occur more often.
c. Occur about the same.
d. There is no way to predict.

19. Juan has been learning to tell time and is doing very well. For the last few days, though, he is making more errors and is easily distracted from the task. In troubleshooting your program you would want to consider:

a. May need to switch to different rewards
b. May need to advance more slowly, or more quickly.
c. May need to quit teaching time-telling until he’s older
d. Two of the above.
20. Whenever his teacher reads a book in front of the class, Ross looks at the book for about 30 seconds and then gets up and wanders around the room. Also, when playing circle games, Ross will pay attention for about four minutes and then stand up and leave the circle. In setting up a program for Ross, he can best be described as:

a. A hyperactive child.
b. A child whose attention span is limited to 30 seconds when looking at books and four minutes when playing circle games.
c. A restless child.
d. An easily bored child who is also hyperactive.
Appendix G

Description of Behavioural Treatments

Behavioural therapy incorporates operant conditioning and social learning techniques to help autistic children acquire new skills (i.e., communication, play, academics, socialization, and self-help). Behavioural therapy also attempts to decrease unacceptable behaviours (i.e., aggression, repetitive/compulsive behaviours, self-injurious behaviours). Therapy is individualised for each child.

Behavioural therapy occurs in a highly structured environment, where lessons are broken down into small, teachable parts. This means students can master easier tasks before moving on to the next, more difficult level. For example, students would first learn to imitate on action (such as “touch nose”), then learn two actions (“touch nose and ear”). Emphasis is placed on ensuring the child’s success and lessons are taught using clear and simple instructions.

Any correct response the child makes is immediately reinforced or rewarded. For example, the student would receive social praise (i.e., “great job!”), a treat (i.e., a small amount of a favourite food, a sticker, bubbles, etc.) or the loss of an unpleasant condition (i.e., stopping a chore to go play) after responding correctly. This positive feedback is given to increase the frequency of correct responses.

Behavioural therapists use several techniques to discourage poor performance or inappropriate behaviours (i.e., aggression):

1. Teaching alternative behaviours that are more appropriate (for example, children are taught to say “I don’t know” in order to decrease any echolalic or repetitive speech).
2. Extinction (i.e., ignoring the behaviour).
3. Time-out (i.e., removing the child from any attention by going to a secluded spot).
4. Response cost (i.e., removing a privilege).
5. Stimulus control (i.e., preventing problem behaviours from occurring by changing the parent/teacher skills, routines, etc.).

Children are taught new behaviours through additional techniques such as prompting (e.g., the teacher initially helps the child “touch nose” by taking the child’s finger and placing it on his/her nose, with help slowly faded as the child becomes successful) and modelling (e.g., following a request to “stand up” after watching someone else stand up).
Parents and teachers are taught these behavioural techniques to help children learn and acquire new skills.
Appendix H

Treatment Acceptability Rating Form- Revised

Please complete the items listed below. The items should be completed by placing a check mark on the line under the question that best indicates how you feel about the psychologist’s treatment recommendations.

1. How clear is your understanding of this treatment?

| Not at all clear | Neutral | Very clear |

2. How acceptable do you find the treatment to be regarding your concerns about your child?

| Not at all Acceptable | Neutral | Very acceptable |

3. How willing are you to carry out this treatment?

| Not at all Willing | Neutral | Very willing |

4. Given your child’s behavioral problems, how reasonable do you find the treatment to be?

| Not at all Reasonable | Neutral | Very reasonable |

5. How costly will it be to carry out this treatment?

| Not at all Costly | Neutral | Very costly |

6. To what extent do you think there might be disadvantages in following this treatment?

| None are likely | Neutral | Many are likely |

7. How likely is this treatment to make permanent improvements in your child’s behavior?

| Unlikely | Neutral | Very likely |
8. How much time will be needed each day for you to carry out this treatment?

| Little time will be needed | Neutral | Much time will be needed |

9. How confident are you that the treatment will be effective?

| Not at all confident | Neutral | Very confident |

10. Compared to other children with behavioral difficulties, how serious are your child’s problems?

| Not at all serious | Neutral | Very serious |

11. How disruptive will it be to the family (in general) to carry out this treatment?

| Not at all disruptive | Neutral | Very disruptive |

12. How effective is this treatment likely to be for your child?

| Not at all effective | Neutral | Very effective |

13. How affordable is this treatment for your family?

| Not at all affordable | Neutral | Very affordable |

14. How much do you like the procedures in the proposed treatment?

| Do not like them at all | Neutral | Like them very much |
15. How willing will other family members be to help carry out this treatment?

- Not at all willing
- Neutral
- Very willing

16. To what extent are undesirable side-effects likely to result from this treatment?

- No side-effects are likely
- Neutral
- Many side-effects are likely

17. How much discomfort is your child likely to experience during the course of this treatment?

- No discomfort at all
- Neutral
- Very much discomfort

18. How severe are your child's behavioral difficulties?

- Not at all severe
- Neutral
- Very severe

19. How willing would you be to change your family routine to carry out this treatment?

- Not at all willing
- Neutral
- Very willing

20. How well will carrying out this treatment fit into the family routine?

- Not at all well
- Neutral
- Very well

21. To what degree are your child's behavioral problems of concern to you?

- No concern at all
- Neutral
- Great concern
50 Forthbridge Cr.
North York, Ontario
Canada
M3M 2A1

December 31, 1998

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January 12, 1999

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Very truly yours,

Julian B. Rotter
Professor of Psychology
January 20, 1999

Karen Keleher
50 Forthbridge Crescent
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Canada

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