

The Effects of Differential Attention on the Cooperative Behaviour of Preschool Children

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CONTENTS

	Page
Acknowledgements	3
Abstract	4
Chapter 1 INTRODUCTION	5
Chapter 2 METHOD	27
Centre 1 Participants and Setting	28
Centre 2 Participants and Setting	30
Centre 3 Participants and Setting	30
Centre 4 Participants and Setting	32
Observation Procedures	33
Experimental Design	34
Experimental Procedures	34
Teacher Intervention Training	35
Schedule of Events	37
Chapter 3 RESULTS	40
Chapter 4 DISCUSSION	60
REFERENCES	74
APPENDIX	80
APPENDIX 1	80
APPENDIX 2	84
APPENDIX 3	86
APPENDIX 4	89
APPENDIX 5	90
APPENDIX 6	96

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ABSTRACT

Research has shown that at least half of children who display problem behaviour in preschool maintain these behaviour patterns when they reach school age. Without targeted intervention these behaviours may lead to an antisocial developmental pathway and problem behaviours which become increasingly entrenched and unlikely to respond to treatment. The present study had two aims, the first was to evaluate the use of differential attention as a behaviour management strategy in a preschool setting and to assess its effectiveness in encouraging prosocial behaviour in children who require extra assistance with their social development. The second was to assess the extent to which groups of Early Education teachers were able to implement differential attention during structured mat times and eating periods. This was achieved by observing both child appropriate and inappropriate behaviour and teacher attention to child appropriate and inappropriate behaviour. The study found that when teachers increased their rate of attention to appropriate behaviour to a level greater than their rate of attention to inappropriate behaviour, the child's behaviour changed with appropriate behaviour increasing and inappropriate behaviour decreasing. Child behaviour only changed when teachers behaviour changed and was only maintained in the cases where teachers' behaviour was maintained. One of the most significant observations in the study was the variability in implementation of the differential attention procedure across teachers and centres, leading to a number of recommendations for future research in preschool settings.

CHAPTER 1

INTRODUCTION

Young children are spending increased periods of time in early childhood centres and this increases the importance of the role that early childhood teachers play in shaping prosocial and pre-academic behaviours. Between 1990 and 2008 the proportion of children enrolled in early childhood centres increased by 56% (Ministry of Education, 2008). Some of these children arrive at preschool with behaviours that early childhood teachers find difficult to manage. Of particular concern are those behaviours that signal risk with respect to antisocial development.

It is generally agreed that during childhood, it is the child's relationships with parents, siblings, peers and teachers which provide the basic social ecologies within which both prosocial and antisocial behaviours are displayed, learned, practiced, accelerated, or suppressed (Dishion, French, & Patterson, 1995). If parents and teachers fail to set limits and to enforce compliance with the limits which have been set the result, by the time of entry to school, may be a non-compliant child who has a short attention span, who lacks social skills and who engages in elevated rates of coercive and antisocial behaviour. In some cases these behaviours will have been practiced many thousands of times, will have become habitual and will have a profound effect on the child's development during the next 15 years (Church, 2003).

Our current understanding of antisocial development over the lifespan is the result of much research (Dulcan, 2009). This research has shown that at least half of children who display problem behaviour in preschool maintain these behaviour patterns in school (Campbell, 1995, 2002). It has been reported that after age 8, persistent antisocial behaviour

can be regarded as a chronic problem which is increasingly unlikely to respond to treatment (Kamps, 2002; Mayer, 1995; Sprague & Walker, 2000; Walker, Colvin, & Ramsey, 1995) Early onset antisocial development can lead to decreased self esteem, academic failure, peer rejection, negative interactions with teachers and delayed social development. This has led to increasing recognition that adult conduct problems are almost always preceded by elevated rates of antisocial behaviour in childhood. It is important therefore, that we address early signs of antisocial development at the youngest possible age in order to prevent antisocial behaviour from becoming entrenched. Intervening when children are in preschool, kindergarten or Year 1 has the potential to prevent delinquency and other negative outcomes (Gettinger & Stoiber, 2006).

Traditional Views of Antisocial Development

Elevated rates of antisocial behaviour in the early years is most commonly referred to as Oppositional Defiance Disorder. ODD is a leading cause of referral to child mental health services (Nock, Kazdin, Hiripi, & Kessler, 2007). In the Diagnostic and Statistical Manual of Mental Disorders 4th edition, text revision (DSM-IV-TR) Oppositional Defiant Disorder is included under the heading of disruptive behaviour disorders and the diagnostic features are clearly defined. These include a recurrent pattern of negativistic, defiant, disobedient, and hostile behaviour toward authority figures that persists for at least 6 months. Diagnosis also requires frequent occurrence of at least four of the following behaviours: losing temper, arguing with adults, actively defying or refusing to comply with the requests or rules of adults, deliberately doing things that will annoy other people, blaming others for his or her own mistakes or misbehaviour, being touchy or easily annoyed by others, being angry and resentful, or being spiteful or vindictive (American Psychiatric Association, 2000).

To be diagnosed with ODD the behaviours must occur more frequently than is normal in children of comparable age and developmental level and these behaviours must lead to significant impairment in social or academic functioning (American Psychiatric Association, 2000). Commonly occurring negativistic behaviours include stubbornness, resistance to directions and an unwillingness to compromise, give in, or negotiate with adults or peers. Defiance may also include deliberate or persistent testing of limits, usually by ignoring directions, arguing and failing to accept responsibility for misdeeds. The central feature of ODD is conflict with authority and this conflict usually occurs with those in charge and often quickly degenerates into a control struggle. Conflict can seem to be over trivial things but for the children a perceived threat to their autonomy and control are critical issues (Dulcan, 2009). ODD tends to be associated with substantial risk of mood, anxiety, impulse-control and/or substance use disorders (Nock, Kazdin, Hiripi, & Kessler, 2007).

Onset and Diagnosis

Elevated rates of antisocial behaviour usually become evident before the age of 8 years but caution should be exercised in making the diagnosis of ODD in preschool children as transient oppositional behaviour is very common during this developmental period (American Psychiatric Association, 2000). Onset of ODD usually occurs gradually and first appears in the home setting. The prevalence of the disorder is reported as between 2% and 16% (American Psychiatric Association, 2000). Other studies report a prevalence of between 7% and 20% of preschool and early school aged children with rates as high as 35% for the children of low-income welfare families (Webster-Stratton, 2001).

The Diagnostic And Statistical Manual of Mental Disorders – Fourth Edition is the most widely used nosological system for children. However, a majority of the disorders in the childhood disorder section of DSM-IV have been based on samples of school aged children

and adolescents and this raises questions about the validity of using these constructs to describe behaviours demonstrated by preschool aged children (Keenan & Wakschlag, 2002). During the preschool period the distinction between normative and antisocial behaviour is not clear cut. This is mostly due to the fact that, at this stage of development, children are developing increasingly sophisticated independent skills while at the same time adults are imposing limits and rules as a natural part of the socialisation process (Keenan & Wakschlag, 2002). There is a debate in the literature about the appropriateness of applying diagnoses of ODD to preschool aged children as noncompliance and aggression are more common in this developmental period and it is possible that the operational definitions of the symptoms in the DSM-IV are simply describing normal behaviours for this age group (Keenan & Wakschlag, 2004). For example, Keenan points out that most toddlers engage in some form of aggression and noncompliance as they begin to test the limits of their guardian's control and this leads to frequent clashes and upsets. There is also debate over whether the atypical behaviours of preschool children should be considered a disorder of the child but rather a disorder of parenting or of the parent-child relationship (Keenan & Wakschlag, 2002).

Alternative Conceptualisations

Evidence suggests that caution should be taken in diagnosing ODD in preschool aged children. Because of the difficulty of distinguishing between normative and problematic behaviours, the use of the term ODD is not widely used with children of this age. Other terms which have been used include antisocial behaviour, behaviour difficulties, behaviour problems and inappropriate behaviours (Church, 1999, 2004, Hixson, 2004, Ingvarsson, Hanley, & Welter, 2009, Webster-Stratton, 1997.)

Studies of behaviour problems in preschool-aged children report tantrums and non-compliance as common problems in preschools (Hixson, 2004). Similarly Wilder and Atwell

(2006) report non-compliance as one the most common behavioural concerns among parents and teachers. Ingvarsson and colleagues report escape-maintained behaviour to be the most common problem behaviour in preschools (Ingvarsson, Hanley, & Welter, 2009). Aggression that is not indicative of normal developmental differences has also been reported as an increasingly common behavioural problem in preschool aged children (Stormont, Covington-Smith, & Lewis, 2007).

Etiology, Risk Factors and the Maintenance of Child Antisocial Behaviour

The developmental changes occurring during the early childhood and preschool years underscore the potential for children to set out on a positive or adaptive developmental course or to begin on an antisocial developmental trajectory. There is a growing body of evidence that suggests that severely antisocial adolescents have a history of problems that begin in the preschool years (Campbell, 1995).

The etiology and risk factors associated with ODD have been well studied and include both biological and environmental factors. The predominance of males with ODD suggests that biological and genetic factors may play an important role in the development of conduct problems. Research using twin and adoption designs has suggested that up to 40% of the variance in antisocial behaviours may be genetic in origin (Goldstein, Prescott, & Kendler, 2001). Temperament has often been used to explain difficult behaviours in children (Dulcan, 2009) but evidence for this is mixed and it is thought that behavioural difficulties are more strongly influenced by environmental factors. The influence of attachment relationships has also been studied, and a relationship between ODD and insecure attachment found in school aged but not in preschool aged children (Dulcan, 2009).

Environmental factors associated with increased risk of ODD include low socioeconomic status, parental discord, domestic violence, low family cohesion, child abuse

and parental mental disorder (Dulcan, 2009). However none of these factors have been found to be common to all children who develop severe behaviour difficulties (Church, 2003). The Christchurch Health and Development study describes a number of contextual factors which contribute to the development of antisocial behaviour in New Zealand. These include poverty, poor educational opportunities and social problems such as parental substance abuse, mental health problems and limited social support (Fergusson, Horwood, & Lynskey, 1994).

A detailed analysis of the origins of antisocial behaviour and its development course has been undertaken by researchers at the Oregon Social Learning Centre. These researchers have attributed the origins of severe and persistent behaviour difficulties to a breakdown in the child's normal socialisation process during the child's first four years (Patterson, 1982). The child who is developing behaviour difficulties continues to use coercive behaviours because they generate more reinforcement than prosocial behaviours. They discover that taking what they want has immediate rewards and eliminates the need for waiting, sharing or co-operating (Patterson, 1982). When the child engages in disobedient or antisocial behaviour, the parents and teachers of severely antisocial children threaten but do not punish and as a consequence antisocial behaviour is not suppressed and internalised controls over this type of behaviour are not developed (Patterson, 1982).

Antisocial behaviours can be reinforced through both negative and positive reinforcement processes. A behaviour is said to be negatively reinforced when the behaviour results in the removal of something from the child's environment and the behaviour begins to be used more often (Church, 1999). Negative reinforcement processes include getting out of following instructions by throwing tantrums. Common ways in which parents negatively reinforce their child's behaviour is when they give up on making a request or when they complete the "difficult" task for the child. This is referred to as a 'negative reinforcement trap', the child escapes the demand or request made by the parent and by giving in, the parent

escapes the child's arguing or tantrum (Patterson, Reid, & Dishion, 1992). This interaction is maintained because the child learns that it is more rewarding and beneficial to use these behaviours than to respond appropriately and the parent is likely to comply again in the future when the child whines or throws a tantrum (Patterson, Reid, & Dishion, 1992).

The same process can occur at school. A comprehensive review of the functional analysis literature undertaken in preschool settings has shown that, 'escape from demands' or negative reinforcement, is a common maintaining consequence for typically and atypically developing preschoolers and is a primary factor in maintaining problem behaviour (Hanley, Iwata, & McCord, 2003). An example of this is removal of a command or instruction when a child throws a tantrum. Wilder and colleagues undertook a functional analysis of non-compliant preschool children. They found that problem behaviours occurred most often when children were instructed to stop a preferred activity and non-compliance with this instruction ensured continued access to the activity thereby demonstrating that negative reinforcement is another way in which problem behaviour is maintained (Wilder, Harris, Reagan, & Rasey, 2007).

A behaviour is said to be positively reinforced when the behaviour results in an addition of something to the child's environment and the behaviour is used more often (Church, 1999). Common ways in which inappropriate behaviours are positively reinforced include giving in to the child's request, providing attention to misbehaviour, comforting the child after a tantrum and sympathising with the child over a difficulty they have had with a sibling or friend. Dulcan (2009), states that most developmental theories propose that parental response to normal oppositional behaviour in toddlers is central in shaping either adaptive social skills or coercive skills.

When children with elevated rates of antisocial behaviour are introduced into a preschool environment they continue to use these learned behaviours. Teachers often recognise the need to manage or change these behaviours but due to large numbers of children and ineffective management strategies they often inadvertently positively and/or negatively reinforce these behaviours. Positive reinforcement occurs when teachers attend to the child's inappropriate behaviours more frequently than the child's appropriate behaviour, thereby teaching the child that inappropriate behaviour is effective in gaining teacher attention (Church, 1999). Teachers tend to become discouraged and therefore abandon their attempts to get the child to complete the tasks which other children are required to complete (Carr, Taylor, & Robinson, 1991). Antisocial children receive many more disciplinary reprimands than normally developing children and because of their frequency the child is often labelled a trouble maker. This can lead to a negative interaction pattern between the child and teachers which may reduce the willingness of teachers to work with the child (Walker, Shinn, O'Neill, & Ramsey, 1987).

When these children reach school they bring with them the behaviours which they have learned in another setting but which are inappropriate in the classroom setting. Church (2003) argues that the failure to set limits and to enforce compliance with the limits that have been set, results, by the time of school entry, in a non-compliant child who has a short attention span, lacks social skills and engages in elevated rates of coercive and antisocial behaviour. All children regardless of ability level, must acquire the prerequisite skills that will enable them to take advantage of the educational opportunities offered in the classroom (Cobb & Hops, 1972). These skills include attending and complying with teacher instructions. To be effective, therefore, remedial behavioural interventions must take place as early as possible, preferably during the preschool years and no later than the early primary school years (Church, 2003).

Stability of Antisocial Behaviours

A number of studies have assessed the stability of antisocial behaviours beginning in the early childhood years. Campbell (1995) reported that stability over a one to two year period is remarkably high. Longer term follow up studies have also found relatively high stability in antisocial behaviour over periods ranging from three to seven years (Campbell, 1995). A supporting study by Campbell, Spieker, Burchinal, and Poe (2006) found that high and stable levels of aggression during the early childhood years were associated with externalising difficulties and decreased academic functioning as reported by teachers at ages 9 through 12 years. It was also found that even low levels of aggression may lead to continued adjustment problems during later school years (Campbell et al., 2006).

Longitudinal research suggests that current social conditions are producing a group of life course persistent antisocial children who go on to become delinquent youth and then adult offenders (Church, 2003). Researchers from the Christchurch Health and Development Study analysed their data and identified five developmental trajectories for children displaying antisocial behaviour. The antisocial groups included, (a) a low risk, early onset adolescent limited group, (b) an intermediate onset adolescent limited group, (c) a late onset adolescent offenders group and (d) a chronic offenders group. Chronic offenders were described as children who engaged in high rates of antisocial behaviour from their early years and throughout childhood, this trajectory was followed by 9.4% of boys and 2.1% of girls (Fergusson & Horwood, 2002). Similar results were found in the Dunedin Multidisciplinary Health and Development Study. This study identified three developmental trajectories, an early onset life course persistent group, an adolescent limited group and a group who engaged in few antisocial behaviours during both childhood and adolescence (Moffitt, 1993). In this study 12.9% of boys repeatedly obtained high scores on the Antisocial Subscale of the Rutter Child Scales at ages 5, 7, 9 and 11. Of these boys 7% displayed high rates of antisocial

behaviour during adolescence and the remaining 6% at age 26 had become low level chronic offenders with mental health, financial and work problems. These findings highlight the importance of targeting interventions for the early onset life course persistent group at the earliest opportunity, before the antisocial behaviours become well learned and entrenched.

The Teaching Needs of Children with Behavioural Difficulties

Without intervention the gap between children with behavioural difficulties and normally developing children continues to widen. This is due to a lack of opportunities to practise prosocial behaviour and to be reinforced for it. Because the prosocial behaviour of oppositional children generates less reinforcement than coercive behaviour there is little motivation for these children to use prosocial behaviours and skills (Dishion & Patterson, 1997). The learning processes that need to be targeted in any attempt to teach prosocial skills are the positive and negative reinforcement processes which teach, strengthen and maintain the inappropriate behaviour displayed during interactions with parents, teachers and peers (Church, 2003). In order to encourage appropriate behaviour these contingencies need to be changed so that engaging in appropriate behaviour becomes more reinforcing and beneficial for the child than engaging in inappropriate behaviour.

Church (1999) argues that in order to motivate appropriate behaviour two essential teaching conditions must be met. These are to increase the reinforcement for behaving or responding appropriately and to decrease the reinforcement for behaving inappropriately. The two main strategies for increasing reinforcement for behaving appropriately are reinforcing with positive attention or reinforcing with contingent rewards. The simplest and most convenient way of reinforcing a desired behaviour is to react with praise when it occurs. For this to be effective the praise statement must be specific, contingent on performing an

appropriate behaviour, it must be given immediately and used often. When the inappropriate behaviour is long standing or continues to generate reinforcement, and when teacher or parent attention is not particularly reinforcing to the learner, reinforcement with contingent rewards may be necessary (Church, 1999). This often involves the use of a good behaviour chart or good behaviour contract whereby appropriate behaviour gains access to rewards which the child personally finds highly motivating. These rewards usually take the form of access to preferred activities or tangible rewards such as food.

The second step in increasing appropriate behaviour and decreasing inappropriate behaviour is to reduce the reinforcement currently generated by the inappropriate behaviour. If a child is continuing to use inappropriate behaviour then it is almost certain that this behaviour is still generating reinforcement even if the teacher or parent is unaware of this. Often the consequence which is maintaining the inappropriate behaviour is the attention it generates from adults and peers. Therefore simply ignoring the inappropriate behaviour is one method for decreasing reinforcement. It is essential that the ignoring is done immediately, is obvious and is consistent (Sanders, Markie-Dadds, & Turner, 2007). When the inappropriate behaviour stops, the appropriate behaviour should be praised straight away. However there are some behaviours which cannot be simply ignored and these include behaviours such as aggression where there is a threat to other children or adults and property destruction. In these circumstances it may be difficult to find an appropriate behaviour which is more powerful in generating what the child wants, because aggression and violence will generate what the child wants most of the time. Therefore it is essential to use a negative punishment process where the display of violent behaviour causes something to be removed from the child's environment and causes the behaviour to be used less often (Church, 1999). This process often takes the form of time out from reinforcement where the aggressive or

violent behaviour is confronted immediately and the child is taken to time out for 30 seconds to 8 minutes depending on their age.

Interventions That Have Been Found to be Effective For Young Children Who Engage in High Rates of Antisocial Behaviour For Their Age

Young children tend to spend the majority of their time in the home environment particularly during the preschool years and it is here that the shaping of children's prosocial or antisocial behaviour first occurs (Patterson, 1982). It follows that parents have the most potential as teachers of their children because the majority of the young child's learning interactions are with their parents (Marchant & Young, 2004). This is the rationale behind the extensive research into parent management training, (often referred to as behavioural family therapy).

There are several examples of well researched family based interventions for young children and several of these were reviewed by McMahon, Wells, and Kotler (2006). Helping the Noncompliant Child (HNC) parent training program was developed by Forehand and McMahon for parents of three to eight year olds. Through didactic instruction, modelling and role playing, parents are taught to change maladaptive patterns of interaction with the child. Studies of this intervention have found setting generalisation, long term effects, sibling generalisation and improvement in other behaviours (McMahon et al., 2006). A treatment derived from HNC is Parent-Child Interaction Therapy (PCIT), also designed for parents with children in the two to eight year age range. This intervention is reported to be more explicit in its focus on enhancing and nurturing the parent-child relationship and has produced results similar to those produced by HNC (McMahon et al., 2006)

The Incredible Years program was developed by Webster Stratton (2001). The BASIC component of this program teaches parents interactive play and reinforcement skills,

nonviolent discipline techniques, logical and natural consequences and problem-solving strategies. These strategies are taught through the presentation of 250 video vignettes followed by group discussion undertaken throughout an eighteen week programme. Participants practise their new skills through role-play and homework activities which contribute to the effectiveness in improving child behaviour (Webster-Stratton, 2001). Early evaluations showed that this training programme produces large increases in maternal positiveness and a reduction in aversive child behaviours, maintained at a one year follow up (Blissett et al., 2009).

Another internationally recognised programme is the Triple P-Positive Parenting Program developed by Sanders and colleagues in Australia. This is a multi level program with interventions that range from broad parent information delivered through pamphlets, advertisements and tip sheets through to individualised programs for the parents of children with serious conduct problems. Triple P aims to enhance family protective factors and to reduce risk factors associated with severe behavioural and emotional problems in preadolescent children. This is done through enhancing the knowledge, skills, confidence, self-sufficiency and resourcefulness of parents and promoting nurturing, safe, engaging, non-violent and low-conflict environments for children (Sanders, Markie-Dadds, & Turner, 2007). Most of the randomised control trials of the effects of Triple P with the parents of preschoolers have produced similar results. A study by Sanders, Markie-Dadds, Tully, and Bor (2000) assessed interactions between 3 year olds and their parents in a structured task. Total child negative behaviour was found to be considerably lower following the programme and improvements observed at the 1-year follow up were maintained at a 3-year follow up (Sanders et al., 2000).

Parent management training - Oregon Type or OSLC parent training, was developed by Gerald Patterson and colleagues in the 1960's. This program was designed for

preadolescent children aged three to twelve years, who engage in overt conduct problems. The programme is designed to teach parents to pinpoint and track problem behaviours and to assist parents in establishing a positive reinforcement system (McMahon et al., 2006). The programme uses the insights from social learning theory to develop interventions designed to prevent, treat, and reverse antisocial development in children and adolescents. Research into OSLC is more extensive than any of the other empirically supported parent training interventions. Although not designed specifically for preschool aged children, reports from one study concluded that significant improvements were made in maternal involvement and child disruptive behaviour for children aged 3-4 years, compared with controls. The efficacy of the standard programme has been replicated in various studies including clinic referred children displaying high rates of antisocial behaviour, parents of chronic delinquents and teenage offenders in foster care settings. Successful randomised control trials have also been undertaken by independent teams (Blissett et al., 2009).

One local home and school intervention which was found to be effective in reducing the development of antisocial behaviour was *The Early Social Learning Project* described by Ewing and Ruth (1997). This study was completed with the aim of implementing a behavioural system targeting children aged 3 to 6 years in the Christchurch area who were displaying signs of well entrenched antisocial behaviours (Ewing & Ruth, 1997). This individualised intervention procedure included; structuring the child's day, teaching new skills, differential attention, reinforcement of prosocial behaviours and warnings and time out for antisocial behaviours. In a follow up two years after the study was completed it was found that 85% of 55 contacted children were generally described as compliant and not behaving aggressively (Ewing, 1999).

Why There is a Need For Behaviour Management Studies In Preschools

Although the efficacy of parent training programs has been well studied and the positive effects have been replicated a number of times, there are certain barriers which prevent the parents and children who have the greatest need for these programs from taking part. The success of parenting programs depends on the programs ability to engage and retain parents (Calam, Sanders, Miller, Sadhnan,i & Carmont, 2008). It is the parents with the highest levels of dysfunctional parenting and lowest self-efficacy who are at the greatest risk of not completing parenting interventions (Calam et al., 2008). Even when parents do attend programmes they do not always adopt the changes or maintain their skills (Bidgood & van de Sande, 1990). It is often the case that parents do not see the need to take part in these programs, they do not think their child's behaviour warrants such an intervention and some parents believe that it is up to the preschool or school to manage their child's behaviour. Effective parenting programmes have limited impact if they are unable to reach, engage and retain the parents and children who are most at need of intervention (Calam et al., 2008)

Another barrier to intervention is that the inappropriate behaviours which are displayed in the preschool environment are often thought not to be of a sufficient severity to warrant referral to the Special Education (SE) division of the Ministry of Education. Therefore it is often up to the teachers in the preschool to intervene and shape the prosocial and appropriate behaviour expected at school entry.

Intervention Research at the Preschool Level

Teachers spend less time teaching children who display problem behaviours compared with children who do not display such behaviours (Carr, Taylor, & Robinson, 1991). Research observations indicate that children with challenging behaviour receive more reprimands than praise (Jack et al., 1996). It has also been observed that when children with behaviour difficulties do comply with teacher requests, they are very rarely praised for their

compliance (Stormont, Covington-Smith, & Lewis, 2007). Carr and colleagues examined how the behaviour of antisocial children influenced adults. Results showed that adults engaged in teaching activities with prosocial children more than with antisocial children and when an adult did work with an antisocial child, the breadth of instruction was more limited and involved tasks associated with lower rates of behaviour problems. It is suggested that problem behaviour may be better understood when it is conceptualised as involving a process of reciprocal influence between adult and child (Carr et al., 1991).

Using a disruptive behaviour to escape from demands is a common behaviour problem in preschool aged children (Ingvarsson et al., 2009). A common treatment for escape-maintained behaviour is escape extinction. Escape extinction is the process of removing the contingency between the problem behaviour and escape from the adult's demand by refusing to allow the child to escape from the demand. This can be achieved by continuing to prompt the child or by using guided prompts. Escape extinction is commonly used in combination with differential reinforcement of alternative behaviour where the child is given the reinforcer that was maintaining the problem behaviour contingent on an alternative appropriate response (Ingvarsson et al., 2009). For example, if getting out of completing a task was maintaining non-compliance, then a break from demands could be given for compliance, while non-compliance resulted in re-presentation of the demand (Ingvarsson et al., 2009). There are several problems with using escape extinction. These include temporary increases in the problem behaviour, persistence of the behaviour and the fact that physical guidance is unacceptable in most New Zealand preschools (Ingvarsson et al., 2009).

Reinforcement can be provided in the absence of escape extinction which, given the undesirable aspects of using escape extinction, may be more acceptable for use in preschools (Ingvarsson et al., 2009). Two studies compared the use of positive reinforcement for

appropriate behaviour compared to negative reinforcement for appropriate behaviour. Neither of these studies were conducted in preschools but both support the use of reinforcement without escape extinction. Lalli and colleagues (1999) studied this comparison with five participants ranging in age from 3 to 21 years, and found that positive reinforcement produced more compliance and lower rates of problem behaviour, despite the absence of escape extinction (Lalli et al., 1999). DeLeon and colleagues also found positive reinforcement to be more effective in reducing escape-maintained behaviour (DeLeon, Neidert, Anders, & Rodriguez-Catter, 2001). These studies support the use of positive reinforcement for appropriate behaviour rather than negative reinforcement for appropriate behaviour.

The previous studies support the use of reinforcement which is contingent on a desired alternative behaviour. Praise remarks which are used in contingent reinforcement can also be used by teachers as conversational remarks such as “that’s a pretty dress”. These remarks are not contingent on a certain behaviour and are therefore are not reinforcing. Praise remarks which are not specific and do not praise the desired behaviour have the benefit of being easy to implement as a child’s behaviour does not need to be closely monitored. Therefore it is thought that the use of this form of praise would be of benefit to teachers who often deal with escape-maintained problem behaviour. This type of praise is also useful if at the start of an intervention a child rarely complies or behaves appropriately. Studies comparing these conditions, have reported mixed results. Ingvarsson and colleagues (2009) compared the effects of edibles contingent on task completion and edibles provided non-contingently in three preschool children who displayed demand-related disruptive behaviour. Results showed that noncontingent reinforcement was equally effective as contingent reinforcement in reducing problem behaviour and increasing compliance in a demand context. It was concluded that this procedure may be valuable for instances in which compliance with demands is initially low

however the researchers stated that noncontingent reinforcement should only be used temporarily and should be replaced by contingent reinforcement of compliance. It was emphasised that the delivery of noncontingent tangible reinforcers without escape extinction is not sufficient for all individuals who display escape-maintained problem behaviour as the disruptive behaviour of only one of the three participants was reduced to a clinically acceptable level and other interventions should be added (Ingvarsson et al., 2009). Goetz, Holmberg, and le Blanc (1975) found that contingent praise increased the compliant behaviour of a non-compliant three year old, while teacher remarks which consisted of general pleasantries and which were not contingent on compliance decreased compliance (Goetz et al., 1975).

Vicarious reinforcement is a behavioural management method whereby it is thought that appropriate and prosocial behaviour is increased when a child sees their peers being praised. The effects of seeing others being praised has been well studied as evidence suggests that children are influenced when they see their peers receiving rewards or reprimands for their performance (Kazdin, 1981). If successful, the benefits of using this method of reinforcement in preschools would be great as opportunities for seeing others being praised are much more prevalent than the opportunities for direct reinforcement (Kazdin, 1981). But research in preschools suggests that preschool aged children require direct reinforcement as seeing others being praised has not been shown to affect the compliance levels of peers (Weisberg & Clements, 1977).

Guided compliance was first described in 1975 by Horner and Keilitz, and while the number of steps in the procedure can differ, it typically involves the delivery of progressively more intrusive prompts following child noncompliance. The procedure is widely referred to as 'increasing assistance' and involves firstly providing the child with an instruction. Following noncompliance the teacher obtains eye contact with the child by touching them on the chin. If the child again fails to comply the teacher re-presents the instruction while

simultaneously modelling the desired behaviour. Contingent on noncompliance the teacher re-presents the instruction while guiding the participant to perform the desired behaviour, if the child resists physical guidance, the teacher continues to physically guide the child (Wilder & Atwell, 2006). Wilder and Atwell completed the first study of its kind, using this procedure with typically developing non-compliant preschool children. The study achieved mixed results with the procedure increasing compliance levels for four out of the six children and leading the authors to conclude that the procedure may be effective for many but not all non-compliant preschool children (Wilder & Atwell, 2006). The authors reported that they could not be sure of the behavioural mechanisms responsible for the effects of guided compliance. This procedure has not been researched with children with behavioural difficulties and is not appropriate in centres that have a “hands-off” policy, which would prevent implementation of the third step in the process (Wilder & Atwell, 2006).

The Use of Positive Reinforcement as a Behavioural Intervention in Preschools

Positive reinforcement for appropriate behaviour is one of the essential teaching conditions for a change from inappropriate to appropriate behaviour (Church, 1999). One of the most effective ways of building prosocial behaviour is to reinforce behaviour which competes with antisocial behaviour. This is achieved through using differential attention which involves attending to and praising children when they are behaving appropriately, more often than telling them off. Differential attention involves four important parts, (a) consistent monitoring of the child so that both appropriate behaviours and inappropriate behaviours are noticed when they occur, (b) a greatly increased rate of use of descriptive praise for all desired behaviours such as complying, following behavioural rules, staying on task and using recently required skills, (c) the consistent ignoring of misbehaviours which do not disrupt the activities of other children or pose a threat to their safety and (d) consistent

delivery of sanctions immediately following defined inappropriate behaviour (Ewing & Ruth, 1997).

One of the components of differential attention and one of the simplest ways in which to reinforce a child's appropriate behaviour is to provide the child with descriptive or behaviour specific praise. Descriptive praise involves catching the child being good and stating approval. While general approval is an acceptable form of praise, descriptive praise which clearly states the behaviour that the teacher approves is a more powerful learning tool (Sanders, Markie-Dadds, & Turner, 2007). When beginning to use descriptive praise it is essential to respond immediately and often to small improvements in the child's behaviour, gradually phasing out the frequency of descriptive praise comments (Sanders et al., 2007). Praise effects depend on the relationship between the child and the person providing praise. To be reinforcing and therefore effective, there must be an interpersonal relationship between the child and the person providing praise. The use of praise as a reinforcer has been extensively studied in school classrooms and when used appropriately, has been shown to reduce many common classroom behaviour problems. In a study by Lampi and colleagues (2005) the effects of praise was investigated on; out-of-seat behaviour, noise making, talking, noncompliance, disrespect and aggression. All of these behaviours were found to be reduced through use of praise for appropriate behaviour (Lampi et al., 2005).

Ignoring of inappropriate behaviour is an important component of the differential attention behaviour management strategy. This component is referred to as planned ignoring and involves the deliberate withdrawal of attention when minor problem behaviours occur (Sanders et al., 2007). The essential steps in using planned ignoring effectively include; ignoring immediately, the removal of all verbal and non-verbal attention and being consistent, where the inappropriate behaviour is ignored every time it occurs (Church, 1999). As planned ignoring is a component of differential attention, when the inappropriate

behaviour stops it is important to wait a few seconds and then provide the child with praise for behaving appropriately. .

Concrete reinforcement or positive reinforcement with tangible reinforcers is by far the most common reinforcement procedure used with both school and preschool aged children. This involves the use of a good behaviour chart or good behaviour contract whereby appropriate behaviour gains access to rewards which the child finds highly motivating. This reinforcement procedure is useful when teacher attention is not particularly reinforcing for a child, the inappropriate behaviour is long standing, or when the inappropriate behaviour continues to generate reinforcement (Church, 1999). Preschool studies using this procedure have had good results. Use of tangible rewards in a differential reinforcement procedure involving contingent access to coupons which can be exchanged for desired gifts or access to preferred activities, increased compliance of two 3-year old children (Wilder et al., 2007). Bucher and Okovita (1977) compared compliance for hard and easy tasks and found that compliance for hard tasks was only maintained with specific task reinforcement using tangible rewards. Often teachers in both schools and preschools are apprehensive about using this procedure. This was evidenced in a dissertation study completed by McCallum (2007), in this study it was noted that teachers were concerned about the appropriateness of providing target children with rewards if the child had been misbehaving prior to mat-time. It was concluded that this attitude suggested a lack of understanding of the fundamental principles of behaviour change (McCallum, 2007).

The increasing trend in the number of hours that young children spend in preschool care as opposed to at home care, highlights the need to evaluate the behaviour management techniques which preschools use to encourage appropriate and prosocial behaviour, particularly for children who require extra assistance with their social development. Although

the use of praise as a behaviour management strategy has been widely studied in the school setting, the use of praise for appropriate behaviour as the main strategy in preschools has not been widely researched as a behaviour management strategy.

Treatment fidelity or adherence refers to the extent to which an intervention is accurately implemented. The success of an intervention is dependent not only upon its effectiveness but also upon its precise delivery by a clinician and the consistency with which parents or teachers implement the treatment with all its essential features (Allen & Warza, 2000). However few studies have investigated treatment fidelity in the same way that treatment effectiveness has been investigated. Examples of studies for which treatment fidelity has been reported include a study by Skinner and colleagues which reported that teachers could maintain procedural fidelity of an intervention with minimal training (Skinner, Veerkamp, Kamps, & Andra, 2009). However the researchers reported that the teacher involved in the study was highly trained and experienced and the results may have been different with less experienced teachers. The outcomes of the study by McCallum (2007) highlighted the difficulties that kindergarten teachers had in implementing the intervention and the corresponding difficulties with treatment fidelity. McCallum concluded that the teachers' implementation of the intervention suggested that despite their willingness their theoretical understanding of the procedures that were introduced was lacking. It was also concluded that teachers lacked awareness that in order to change behaviour teachers need to be prepared to respond to appropriate and inappropriate behaviours differently.

Aims of the Investigation

The present study had two aims. The first was to evaluate the use of differential attention as a behaviour management strategy in a preschool setting, to assess its effectiveness in encouraging prosocial behaviour in seven 3-4year old children who required

extra assistance with their social development. The focus was on encouraging prosocial behaviour during structured mat time and an eating time. The second aim was to evaluate how the intervention was implemented by the teachers. This was achieved by observing the reinforcement contingencies being employed by the teachers to manage the participants disruptive behaviour, prior to and following introduction of the intervention.

CHAPTER 2

METHOD

Participants

Recruitment and screening. This project was approved by the Educational Research Human Ethics Committee of the University of Canterbury. Following Ethics Committee approval, centre recruitment began in July. From an expression of interest in the project four early childhood centres were recruited by the researcher after visiting nine potential centres in the Mid Canterbury area. The owners of the centres or the managers were first phoned by the researcher and then personally visited to discuss the project, answer any questions and to identify any children at the centre who would most likely benefit from inclusion in the project. Each centre was provided with the Information sheet reproduced in

Appendix 1 which outlined the purpose, aims and general procedures of the project. The five centres that declined to participate in the project did so for a variety of reasons including; failure to obtain head office approval, resistance to asking teachers to change their behaviour, the end of the year being a busy time or a lack of suitable children for the study. In the centres that agreed to participate, head teachers were specifically asked to refrain from discussing details of the intervention with staff so as to ensure accurate and representative baseline observations.

Following confirmation of the individual centres involvement in the project, the head teacher was asked to undertake two tasks. The first task involved the head teacher completing a Teacher Nomination Form where she was asked to select up to four children aged three or four years who were attending for at least two days a week and who met the definition of 'Children with Behaviour Difficulties'. This form is reproduced in Appendix 2. The second task involved the head teacher providing a list of inappropriate and unacceptable child behaviours at the centre. This was to cover all behaviours including both failure to comply with a request and behaviours which were themselves inappropriate such as talking on the mat, touching or hurting other children and failing to choose a healthy food option during the eating period.

The screening and selection of participants involved the following two tasks. Firstly, all nominated children were observed by the researcher for approximately one hour over one session, at a time of the day where they were required to comply with teacher instructions and to take part in a structured activity such as mat time or lunch time. Secondly, one or two participants who met selection criteria were then selected by the researcher. The selection criteria included; (a) displaying an elevated level of inappropriate behaviour and (b) receiving more teacher attention for inappropriate behaviour than for appropriate behaviour. The head teacher was then asked to complete a Social Development Scale (Church & Tyler-Merrick,

2005) for each of the two participants who met the above selection criteria. The cut off on the Social Development Scale was set at 113 points or less out of a possible 150 (Church, Tyler-Merrick & Haywood, 2006). Seven children from four centres qualified as participants by scoring 113 points or less on the Social Development Scale and by meeting the direct observation criteria described above.

Following the screening process and prior to starting the project, written consent was obtained from the centre owner/manager, the parents of the selected children (Appendix 3) and as requested by the College of Education Human Ethics Committee, the children themselves.

Centre 1 participants and setting. Participants A and B were both enrolled at Centre 1, a small community based mid-Canterbury preschool. The centre catered for up to 26 children aged between six months and five years. Up to six of the children attending the centre could be aged under two years. The ratio of staff to children was one teacher to eight children aged between 2-5 years. Under Schedule 2 of the Education (Early Childhood Education) Regulations (2008), the Ministry of Education requires that centres catering for between 21 and 30 children aged over two years must have a minimum of three staff allocated to this group of children at any one time. Participant A was a female aged 2 years 11 months who attended the centre two days a week for the full eight hours each day. During the initial direct observation by the researcher, Participant A met the screening criteria, although she was rated as scoring 123 on the Social Development Scale. She was also aged under three years. However, on the basis of an elevated rate of non-compliance and the majority of teacher attention being directed towards inappropriate behaviour Participant A was included in the study. Participant B was a male aged 4 years 11 months who attended the centre three days a week for 8 hours each day. He was given a rating of 63 on the Social Development Scale - a score which indicates high levels of antisocial behaviour.

Inappropriate behaviours reported by the head teacher included disrupting others play, saying things that indicated he didn't care about the consequences, throwing tantrums and acting violently towards others. However, the head teacher reported that Participant B did come to the mat as soon as he was asked and did associate with a range of typically developing peers. Participant B left the centre to start school after only two intervention observations.

Centre 1 had eight full time staff who worked on the two days the researcher attended the centre. Only one staff member was untrained in early childhood education. The seven trained staff had a Bachelor of Teaching and Learning degree and the manager had an Associate Teacher's Certificate, allowing for undergraduate early childhood education students to undertake placements at the centre. During the research period two students were on placement at the centre.

Centre 2 participants and setting. Centre 2 was a privately owned mid-Canterbury preschool. The centre catered for a maximum of 30 children aged between 6 months and 5 years of age. The ratio of staff to children was one teacher to every eight children. Participant C was a boy aged 4 years 10 months who attended Centre 2, three days of the week on Tuesdays, Wednesdays and Thursdays for six hours each day. He attended another centre one day a week. Participant C scored 87 on the Social Development Scale. The head teacher reported that appropriate behaviours which Participant C most commonly displayed included persisting with tasks when left unsupervised and taking his turn when others were waiting. Reported inappropriate behaviours most commonly displayed by Participant C included ignoring initial requests even when heard, blaming others when reprimanded, acting violently and shouting at others when he disagreed with them. Direct observation identified a second participant in Centre 2 who met the selection criteria. However, the child's parents declined permission to participate in the study.

Six full time staff worked at Centre 2 and, during the present study, the same two relieving teachers filled in on a number of days. Four of the staff at Centre 2 were trained in early childhood education and held a Bachelor of Teaching and Learning degree. The remaining two were untrained. One of the relievers was untrained while the other was in the process of studying towards the degree.

Centre 3 participants and setting. Centre 3 was a large privately owned mid-Canterbury preschool. The centre catered for a maximum of 34 children aged between two and five years and 20 children aged under two years. The centre consisted of two buildings, one for the over 2-year old children and one for the under 2-year old children. The ratio of staff to children in the over twos area was one teacher to every eight children. Under Schedule 2 of the Education (Early Childhood Education) Regulations (2008), the Ministry of Education requires that centres catering for between 31 and 40 children aged over two years must have a minimum of four staff allocated to this group of children at any one time.

Participant D was a male aged 3 years 6 months who attended the centre three days a week for 8 hours each day. He was given a score of 104 on the Social Development Scale. The head teacher reported that the appropriate behaviours which Participant D most commonly displayed included responding appropriately when other children tried to interact with him socially and showing interest in what others were saying during conversations. Reported inappropriate behaviours included blaming others when reprimanded for behaving inappropriately, ignoring initial requests, reacting in cheeky or impertinent ways to adults requests and interrupting or annoying others.

Participant E was a male aged 3 years 4 months who attended the centre four days a week for 8 hours each day. He scored 89 on the Social Development Scale. The head teacher reported that the appropriate behaviours most commonly displayed by Participant E included

showing interest in what others were saying during conversations and joining adult directed activities as soon as asked. Reported inappropriate behaviours included ignoring initial requests and directions, reacting in a cheeky or impertinent ways to adult requests, interrupting and annoying others and continuing to behave in inappropriate ways after being reprimanded or asked to stop.

Fourteen different staff and four relieving staff worked at Centre 3 during the period in which the study took place. Of the ten full time staff in the over twos area, four held a Diploma of Teaching in Early Childhood Education and one was untrained. The remaining nine staff were at various levels of training, working towards the Diploma of Teaching in Early Childhood Education.

Centre 4 participants and setting. Centre 4 was a community based mid-Canterbury preschool. The centre catered for a maximum of 50 children with spaces for 10 children aged under two and 40 children aged between two and five. The ratio of staff to children was one teacher to every seven children in the over twos area. Under Schedule 2 of the Education (Early Childhood Education) Regulations (2008), the Ministry of Education requires that centres catering for between 31 and 40 children aged over two years must have a minimum of four staff allocated to this group of children at any one time.

Participant F was a male aged 3 years 10 months who attended Centre 4 five days a week for nine hours each day. He was rated as scoring 85 on the Social Development Scale. The appropriate behaviours which Participant F most commonly displayed included knowing and complying with centre limits and boundaries and associating with a range of typically developing peers. Reported inappropriate behaviours included failing to comply with teacher instructions, using demands where others would use requests, pleading and nagging after his request has been refused and ignoring initial requests even when heard.

Participant G was a male aged 3 years 10 months who attended the centre four days a week, two of which he attended for nine hours and two of which he attended in the afternoon for four hours. He was given a score of 98 on the Social Development Scale. The head teacher reported that the appropriate behaviour most commonly displayed was associating with a range of typically developing peers. Reported inappropriate behaviours included; failing to use polite requests to gain attention, using demands where others would use requests and blaming others when reprimanded for behaving inappropriately.

Nine full time staff worked at Centre 4 over the period the study took place and, due to staff shortages, six different relieving teachers filled in on various days. Four of the full time staff at Centre 4 had a Bachelor of Teaching and Learning degree and four had a Diploma of Teaching in Early Childhood Education. Only one teacher was untrained.

Observation Procedures

Direct observations of the seven participants and their teachers were conducted throughout the study by the researcher. Observations occurred at a time of the day where children transitioned from free-play to taking part in a structured activity such as mat time followed by an eating time. These were occasions where the participant's were required to comply with a number of teacher instructions. At each centre, both Baseline and Intervention observations occurred during the same time period. Observation sessions ranged in time from 30 to 50 minutes. Where two participants attended the same centre they were observed concurrently. An event recording procedure was used and recording occurred in the following situations: (a) a teacher provided attention to a participant, (b) the participant behaved appropriately or inappropriately and a teacher attended to this behaviour, (c) the participant behaved appropriately or inappropriately and teachers failed to attend, and (d) a teacher provided the participant with an instruction. A direct observation recording form was

developed by the researcher and used for both Baseline and Intervention sessions. This form is reproduced in Appendix 4. On this form the activity the child was involved in was first recorded followed by any teacher instructions provided. Teacher instructions were recorded as; requests, questions given, signals or disciplinary instructions and if the instruction was provided to both participants this was recorded. A shorthand description of the child's appropriate or inappropriate behaviour was also recorded. Whether teacher attention was or was not provided by a teacher following the recorded behaviour was then recorded. The 4 classes of behaviour recorded were; (1) rate of child appropriate behaviour, (2) rate of child inappropriate behaviour, (3) rate of teacher attention for appropriate behaviour and (4) rate of teacher attention for inappropriate behaviour. Child appropriate behaviour was defined as; complying with teachers request/instruction within 10 seconds, taking part in an activity which is expected, engaging in socially appropriate interactions with peers, ceasing a behaviour disapproved of in the setting, engaging in appropriate interactions with staff and attending to the teacher when on the mat. Child inappropriate behaviour was defined as; one of the inappropriate behaviours listed by the centre manager as disapproved of in the centre, failing to comply, failing to attend, failing to start or engage in the activity expected and engaging in antisocial behaviours with peers or teachers such as shouting or hitting. Teacher attention to appropriate and inappropriate behaviour took the form of; encouragements/praise, discouragements and prohibitions. Encouragements were defined as a positive reaction to a participant's behaviour and the positive affect could be given by the tone of the statement or the content or an approving stare. Discouragements were defined as a negative reaction to a participant's behaviour and the negative affect could be provided by either the tone of the statement or the content or a subtle stare. Prohibitions were defined as a statement which restricted or stopped what a child was doing, usually in response to misbehaviour and

delivery was usually in an assertive tone. The method of recording is described fully in the coding manual in Appendix 5.

Experimental Design

The present experiment took the form of an AB design replicated across four centres and seven children.

Experimental Procedures

Each experiment consisted of two phases: a Baseline phase and an Experimental phase.

Baseline phase. During baseline sessions the teachers continued to respond to the participating child's behaviour and to carry out their daily activities as they normally did. Only the head teacher at each of the four early childhood centres was aware of what the researcher was observing. The researcher observed, coded and recorded child inappropriate and appropriate behaviour, the type of teacher request and the attention they gave the participant, as described in the Coding Manual in Appendix 5. Any attention directed toward a participant and all instances of appropriate and inappropriate behaviour was recorded. Baseline recordings took place over four sessions for each participant.

Teacher intervention training. Following completion of the Baseline observations, the head teacher was provided with one copy for each staff member, of a training sheet describing Differential Attention and its use in behaviour management, along with the answers to several frequently asked questions. Differential Attention requires teachers to attend to and praise children when they are engaged in appropriate behaviour and to decrease attention for inappropriate behaviour by ignoring children when they are behaving inappropriately. This training sheet is reproduced in Appendix 6. The Differential Attention

handout was distributed among all staff members at the centre and read prior to meeting with the researcher. The researcher then met with all the teachers to explain the intervention and to discuss how it would be implemented. This discussion involved going over all the details provided in the training sheet and answering questions the teachers had. Meetings with staff occurred at a time that was suitable for the centre and involved either talking to staff at a staff meeting or speaking individually to staff if a meeting with everyone was not practical. Meetings with all staff took place in the evening and lasted about 40 minutes. Individually talking to all the staff required the researcher to go into the early childhood centre on a day where no observations were being conducted and individual meetings were conducted over a one to two hour period, with approximately 10 to 15 minutes spent with each staff member. All staff at each of the four centres agreed to implement the intervention with their participating children.

Intervention phase. During the intervention phase teachers were trained to employ the use of Differential Attention, that is, to increase attention and praise for appropriate behaviour and to decrease attention for inappropriate behaviour, over the whole day, every day that the participant attended the centre. A prompt was provided for one hour each day that the observer was in the centre. This prompt to the form of a counter. One teacher was assigned to each participant and given a wrist counter on which to count the number of times the participant was praised by any staff member. Every instance of praise from any teacher in the centre was counted and this was then recorded at the end of the 1-hour session on a Praise Recording Form. All centres were provided with this form which was kept in a place that was easily accessible to all teachers. If the teacher assigned to use the wrist counter was unable to monitor the child for the whole one hour period, the wrist counter was passed on to another teacher. Teachers agreed, as part of their training, to actively look for moments when the participant was displaying appropriate behaviour or complying with requests and to praise the

child at this time. Teachers were instructed to use behaviour specific praise e.g “I like the way that you are helping to pack up the toys” or, “thank you for listening to me (childs name)” or, “I really like the way you washed your hands and went straight to the table for lunch, well done” . Teachers were instructed to ignore all instances of inappropriate behaviour (unless the child was at risk of harming themselves, others or property).

At the beginning of each intervention observation period the researcher asked the teachers how the intervention was proceeding and answered any questions. The researcher then observed, coded and recorded child behaviour and teacher attention using the same procedures as had been used during the baseline observations. Intervention observations occurred over six sessions for each participant unless the participant left the centre or was absent for any reason. In consultation with the centre manager, centres were provided with a list of days that the researcher would be observing in the centre.

Schedule of Events

Centre 1. Direct observations occurred on Thursdays and Fridays between 11.30am and 12.30pm, covering mat time and lunch time. The four baseline observations took place on the 5th, 6th, 12th and 13th of August. Intervention training was then conducted with the eight individual staff members, with staff receiving a copy of the Differential Attention training sheet in their pigeon holes. The researcher then approached each staff member to explain the intervention training, speaking with each staff member for approximately 10 to 15 minutes. Intervention observations took place over a three week period and occurred between August 19th and September 9th.

Centre 2. When Centre 2 was approached the head teacher could not think of any specific children and asked the researcher to observe the following day. Four possible participants were identified and Social Development Scales completed for these four

children. Due to staff shortages and two other internal management issues, the research period at Centre 2 occurred over an extended period of time, taking 10 weeks to complete. Observations took place between 11.30am and 12.30am and included mat time and lunch time. Baseline observations occurred from September 23rd to September 30th. The Differential Attention Information sheets were delivered to the centre and distributed to all staff by the centre manager. Due to the manager being busy and not having time to read the information sheet herself, the researcher conducted intervention training two weeks later. Intervention training was conducted with all staff members individually, with discussions taking between 10 and 15 minutes. The training was then discussed at a subsequent staff meeting, with the centre manager making sure that all staff understood the intervention. Intervention observations occurred over a five week period from October 21st to November 25th.

Centre 3. When Centre 3 was approached the staff manager reported participants D and E as being suitable for the study. Direct observation supported the inclusion of both children as participants. Following screening, both were selected to be included in the study. Observations at Centre 3 took place between 9.30am and 10.30am covering mat time and morning tea. The first observation of both participants D and E was completed on September 23rd, following this participant E was away from the centre for the school holidays so the next three baseline observations took place separately for each participant. Intervention training was conducted with all staff members at the beginning of a staff planning meeting. All staff from the over twos area were present at the meeting, which took 40 minutes. All staff were provided with the Differential Attention training sheet, the sheet was discussed, and the researcher answered a number of teacher questions. Intervention observations took place over a three week period between November 2nd and November 25th.

Centre 4. When Centre four was approached the centre manager agreed to speak with the head teacher in order to discuss suitable participants. One week later the head

teacher identified participants F and G as being suitable for the study. Direct observation supported the inclusion of both children as participants. These two children also met criteria during the screening process. Observations at Centre 4 took place between 2.30pm and 3.30pm during mat time and afternoon tea. Baseline observations were undertaken from November 29th to December 6th. The Differential Attention training sheets were delivered to the centre and distributed to all staff by the centre manager following the completion of baseline observations. Two days later the researcher went back to Centre 4 and intervention training was conducted with all staff members individually, with discussions taking between 10 and 15 minutes per staff member. Not all staff were present when the researcher conducted intervention training with individual staff members. However, the absent staff had received the Differential Attention training sheet and were instructed by the centre manager to direct any questions to the researcher. Intervention observations took place over a two week period between December 8th and December 22nd.

CHAPTER 3

RESULTS

The total number of times that any teacher provided attention for appropriate behaviour and the total number of times that any teacher provided attention for inappropriate behaviour was converted to a rate of attention per hour for appropriate behaviour and inappropriate behaviour for each participant. This was graphed for each Baseline and Intervention session. The total number of times that each child displayed appropriate and inappropriate behaviour during each session was also converted to a rate per hour and graphed for each child for each session in both conditions. The total number of times that teachers reported praising each participant during the intervention condition was graphed for each participant.

Centre 1 Participant A

The results for Centre 1 Participant A are shown in Figure 1. Figure 1 shows that during the baseline condition Participant A engaged in inappropriate behaviour on average 23 times per hour and appropriate behaviour on average 11 times per hour. During this condition

teachers at Centre 1 provided Participant A with attention for inappropriate behaviour on average 19 times per hour while they only provided attention for appropriate behaviour on average twice per hour. In other words, Participant A received attention for inappropriate behaviour 83% of the time while appropriate behaviour received attention only 18% of the time. With the introduction of the Differential Attention intervention there was a decrease in teacher attention to inappropriate behaviour to a mean of 5 times per hour and the mean number of times per hour that Participant A engaged in inappropriate behaviour also decreased to 7 times per hour. At the same time attention to appropriate behaviour increased to a rate of 27 times per hour on average and the number of incidents of appropriate behaviour also increased to an average of 28 behaviours per hour.

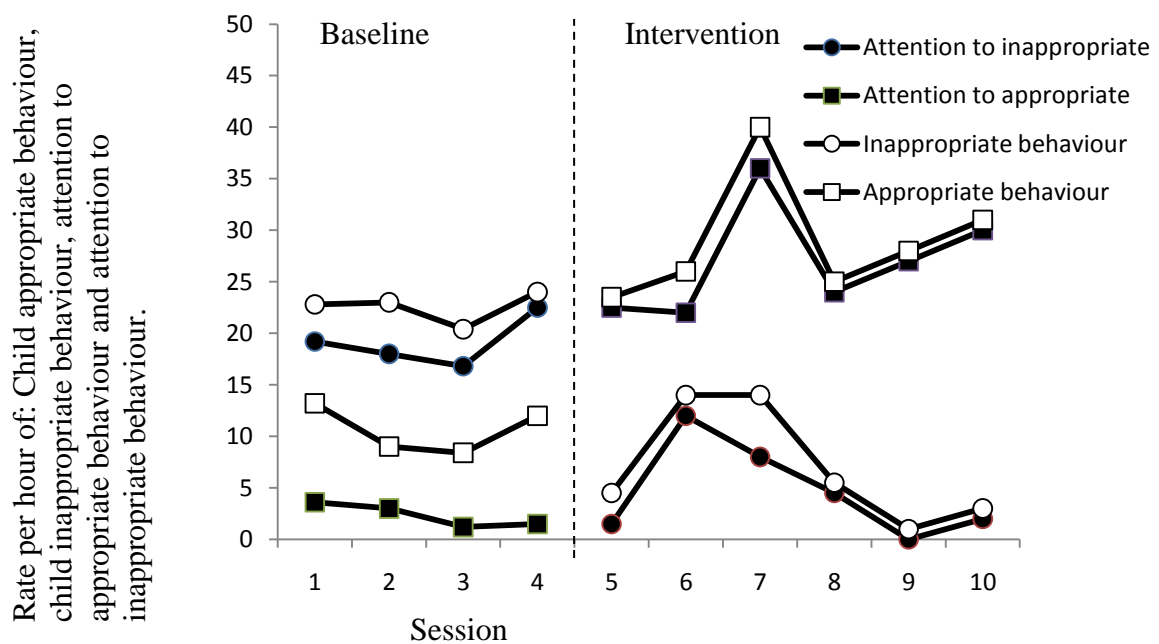


Figure 1. The number of times per hour that Participant A engaged in appropriate and inappropriate behaviour and the number of times per hour that teachers at Centre 1 provided attention to inappropriate and appropriate behaviour, per session, during Baseline and Intervention conditions.

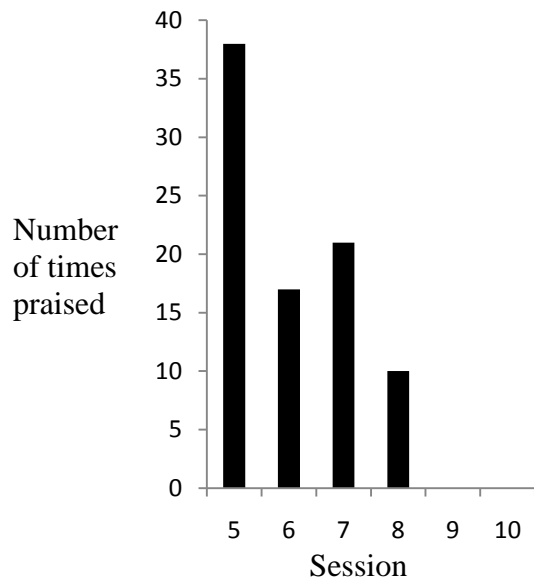


Figure 2. The teacher recorded frequency with which all teachers praised Participant A over a one hour period during each Intervention session.

Figure 2 shows that during the Intervention condition the Centre 1 teachers recorded the number of times they praised Participant A, as ranging from 10 to 38 times during the one hour session, with a mean of 14.3 times per hour.

On the first session of the intervention (Session 5) the teachers at Centre 1 applied differential attention as instructed. On Session 6 a teacher who had not been at the centre during Session 5 provided attention to 12 out of 14 instances of inappropriate behaviour. However, the majority of instances of appropriate behaviour were praised. It was noted that during this session there were limited teachers on the floor. On Session 7 six out of fourteen instances of inappropriate behaviour were ignored. Following this session and during Sessions 8, 9 and 10 the rate of instances of inappropriate behaviour decreased. All instances of appropriate behaviour were praised during Sessions 8, 9 and 10. On Sessions 9 and 10 the centre manager was absent and no teachers used the wrist watches or recorded the number of times that Participant A was praised.

Centre 1 Participant B

The results for Centre 1 Participant B are shown in Figure 3. Participant B left Centre 1 to begin school after only two Intervention sessions. Figure 3 shows that during the Baseline condition Participant B received more attention for inappropriate behaviour than appropriate behaviour with mean rates of 14 and 2 times per hour respectively. Participant B engaged in inappropriate behaviour on average 15 times per hour and appropriate behaviour on average 5 times per hour. Participant B received attention for inappropriate behaviour 93% of the time while appropriate behaviour received attention only 40% of the time. Following the introduction of the intervention, the teachers at Centre 1 increased their attention for appropriate behaviour to a mean rate of 13 times per hour and Participant B engaged in appropriate behaviour 15 times per hour on average. Attention for inappropriate behaviour decreased to a mean rate of 5 times per hour and Participant B decreased the number of times that he engaged in inappropriate behaviour to a mean rate of 6 times per hour.

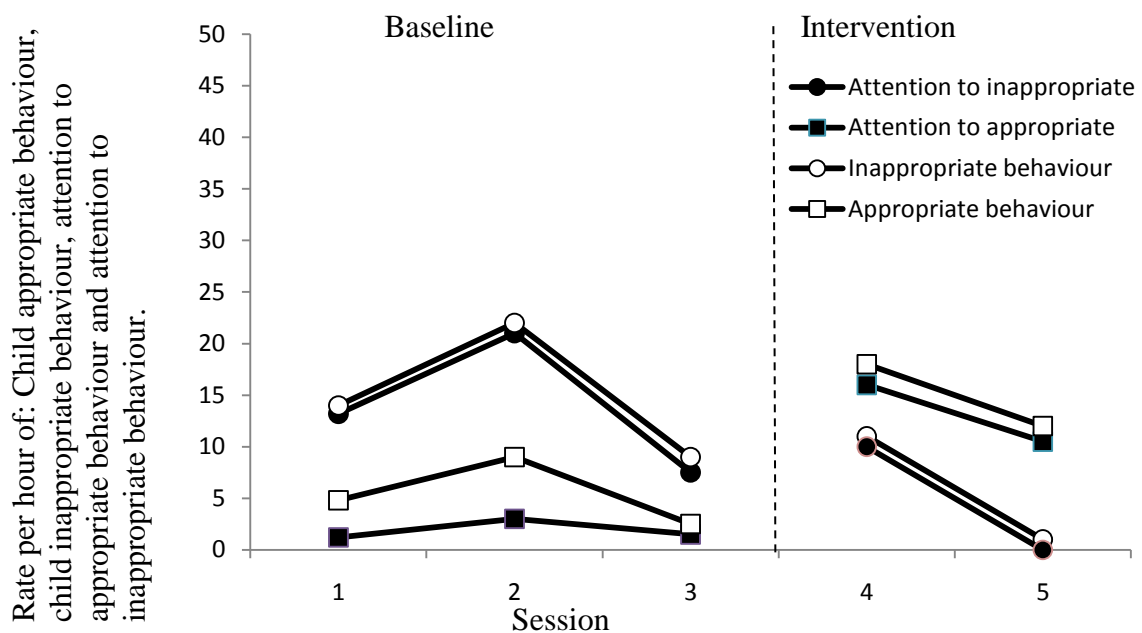


Figure 3. The number of times per hour that Participant B engaged in appropriate and inappropriate behaviour and the number of times per hour that teachers at Centre 1 provided attention to inappropriate and appropriate behaviour, per session, during Baseline and Intervention conditions.

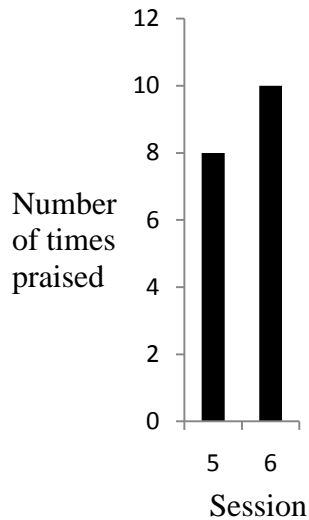


Figure 4. The teacher recorded frequency with which all teachers praised Participant B over a one hour period during each session in the Intervention condition.

Figure 4 shows that during the Intervention condition teachers at Centre 1 reported that they praised Participant B 8 times during Session 5 and 10 times during Session 6.

On the fourth session of the Baseline condition at Centre 1 Participant B was absent on a before school visit therefore only 3 observations were completed under Baseline conditions. During Baseline, teachers provided attention to every instance of inappropriate behaviour but failed to provide attention to all instances of appropriate behaviour. Following introduction of the intervention, teachers still provided attention to all instances of inappropriate behaviour. However it was observed that teachers provided Participant B with an increased amount of attention and therefore increased their attention to appropriate behaviour.

Centre 2 Participant C

The results for Centre 2 Participant C are shown in Figure 5. Figure 5 shows that during the Baseline sessions Participant C engaged in inappropriate behaviour 30 times per

hour and received attention for this 14 times per hour on average. He engaged in appropriate behaviour 18 times per hour but only received attention for it 5 times per hour on average. Therefore appropriate behaviour received teacher attention 28% of the time while inappropriate behaviour received attention 47% of the time. Following introduction of the intervention, teachers at Centre 2 decreased their attention to inappropriate behaviour to 7 times per hour and increased attention to appropriate behaviour to a rate of 26 times per hour on average. At the same time, the rate per hour of inappropriate behaviour decreased to 11 times per hour while the rate of appropriate behaviour increased to 34 times per hour on average.

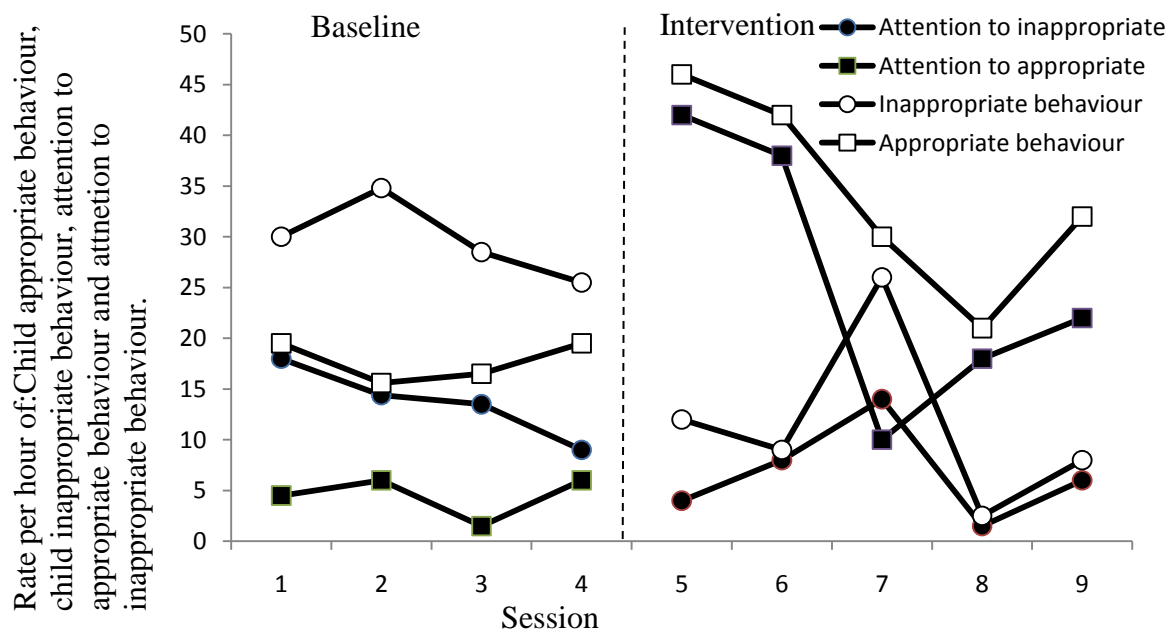


Figure 5. The number of times per hour that Participant C engaged in appropriate and inappropriate behaviour and the number of times per hour that teachers at Centre 2 provided attention to inappropriate and appropriate behaviour, per session, during Baseline and Intervention conditions.

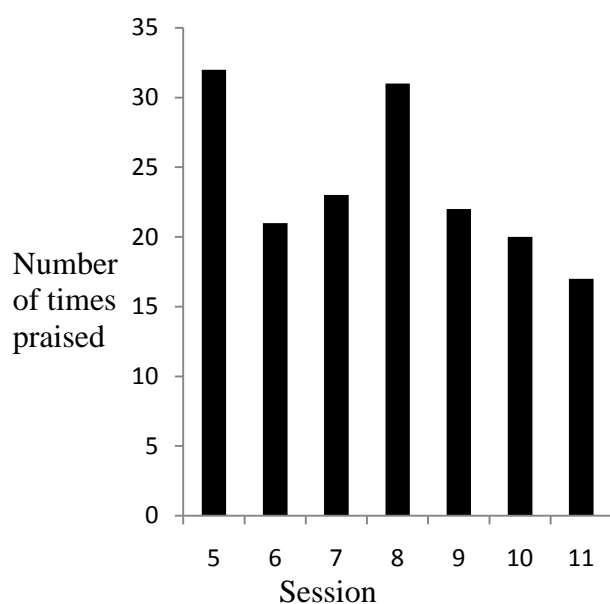


Figure 6. The teacher recorded frequency with which all teachers praised Participant C over a one hour period during sessions in the Intervention condition.

Figure 6 shows that teachers in Centre 2 recorded the number of times they praised Participant C over a one hour period for seven days following the introduction of the intervention. The number of times they praised ranged from 32 to 17 times.

During both Baseline and Intervention conditions one teacher often took mat time without a supporting teacher which made it hard for this teacher to praise Participant C. Teachers' attempts to praise often appeared awkward or were not genuine. During Session 5 Participant C was flooded with praise, at a rate of 42 times per hour. The centre manager reported that they were attempting to praise Participant C before he had a chance to behave inappropriately. The centre manager also reported that the centre had taken the intervention on as a centre wide initiative and were increasing praise towards all children at the centre. Following Session 5 the researcher explained to the manager the importance of behaviour specific praise, in order to encourage appropriate behaviour.

On Session 7 the centre manager was absent and it was observed by the researcher that no teacher was using the wrist counter to record praise. During this session Participant C received more attention for inappropriate behaviour than for appropriate behaviour and the majority of instances of appropriate behaviour went unnoticed. The appropriate behaviours that went unnoticed included sitting on the mat quietly and listening to the story, both of which all teachers had reported as behaviours they wanted to increase during the intervention training.

On Session 8 the centre manager had returned and teachers at Centre 2 returned to using differential attention and providing more attention to Participant C when he was engaged in appropriate behaviour. The centre manager reported that they had decreased the use of praise as they had noticed an improvement in Participant C's behaviour and she also reported using praise more evenly throughout the day rather than just for the one hour time period in which they had been recording. The researcher discussed with the centre manager the importance of praise throughout the day and explained that the one hour time segment in which praise was counted, was intended to be representative of every hour over the whole day.

On Intervention Sessions 8 and 9 it was observed that teachers at Centre 2 had increased their praise towards Participant C when he complied with requests. However, they generally did not increase the rate of praise when Participant C was engaged in behaviours that the teachers expected from him, such as listening to stories on the mat, sitting still and eating lunch quietly.

Centre 3 Participant D

The results for Centre 3 Participant D are shown in Figure 7.

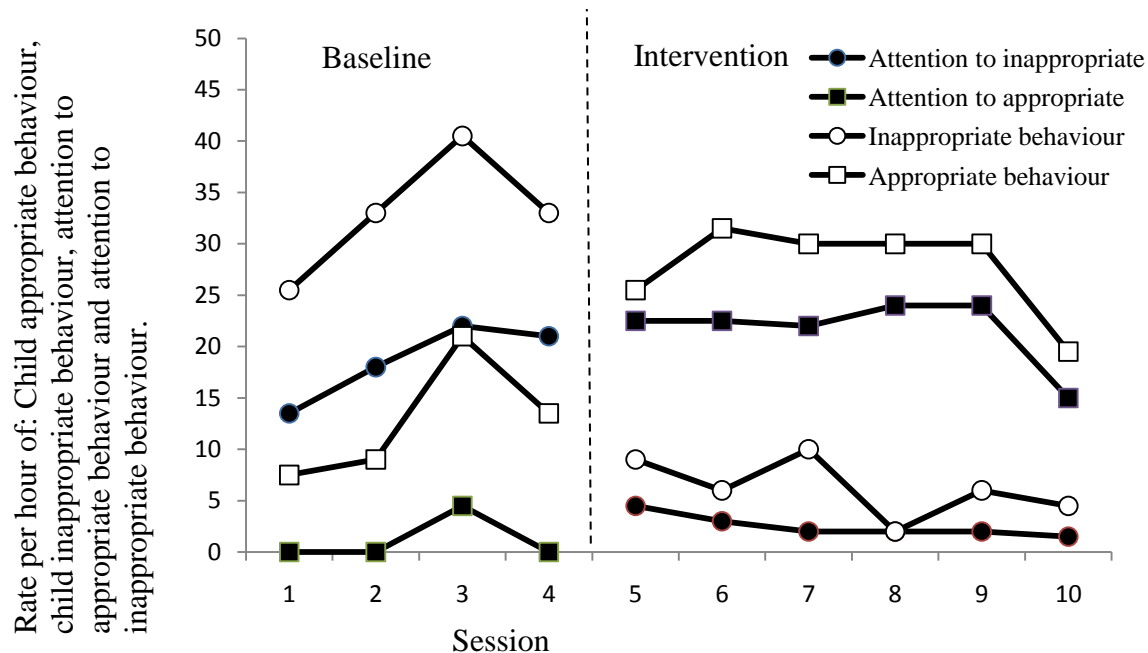


Figure 7. The number of times per hour that Participant D engaged in appropriate and inappropriate behaviour and the number of times per hour that teachers at Centre 3 provided attention to inappropriate and appropriate behaviour, per session, during Baseline and Intervention conditions.

Figure 7 shows that during the Baseline condition Participant D engaged in inappropriate behaviour at a rate of 33 times per hour on average and gained attention for this behaviour a mean of 18 times per hour. In other words, inappropriate behaviour succeeded in gaining teacher attention 55% of the time. Appropriate behaviour was engaged in on average 13 times per hour and received teacher attention on average only once per hour. Therefore appropriate behaviour gained teacher attention only 8% of the time. Following the introduction of the intervention, teacher attention for inappropriate behaviour decreased to less than 3 times per hour on average and the rate of child inappropriate behaviour also decreased to a mean of 6 times per hour. Attention to appropriate behaviour increased to an average rate of 22 times per hour and child appropriate behaviour increased to an average rate of 28 times per hour.

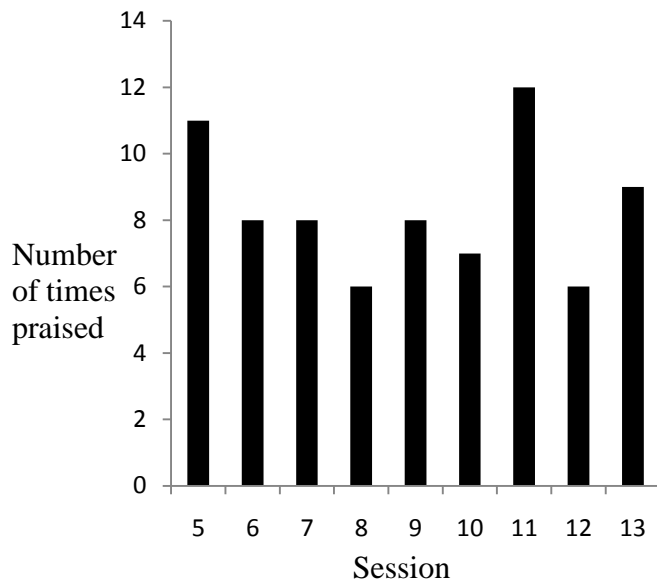


Figure 8. The teacher recorded frequency with which all teachers praised Participant D over a one hour period during sessions in the Intervention condition.

Figure 8 shows that during the Intervention condition teachers at Centre 3 recorded praising Participant D an average of 8.3 times over the one hour period covering mat time and morning tea time.

During Baseline conditions Participant D was receiving more attention for inappropriate behaviour than appropriate behaviour. However, many instances of inappropriate behaviour went unnoticed by teachers for example, when Participant D was asked to comply with an instruction and did not comply, he was ignored. During Session 4 teachers were observed to ignore Participant D and during mat time they interacted with cooperative children who they invited to sit on their laps.

On Session 5 the head teacher approached the researcher to voice concerns from other teachers, that the intervention would require them to constantly follow Participant D around, leaving them unable to do their job. At the beginning of mat time there was only one

teacher trying to get all the children on the mat, leaving no opportunities to provide Participant D with praise.

At the beginning of the intervention during Sessions 5 and 6 the praise comments used often seemed awkward and were only used when Participant D complied with instructions. Praise was rarely used when Participant D was participating, sitting on the mat quietly or ignoring others around him, all of which were examples of appropriate behaviours that teachers had reported wanting to encourage. However, on Session 7 there was a different combination of teachers working during the observation period and attention was provided (in the form of specific praise), when participant D was engaging in such behaviours. During this session teachers had further decreased their attention to inappropriate behaviour by ignoring Participant D's attention seeking during mat time and instantly praising him when he engaged in appropriate behaviour.

On Sessions 9 and 10 Participant D was rewarded for appropriate mat behaviour by being asked to be one of the 5 helpers up the front. Participant D had not been observed by the researcher to have had the opportunity to be a helper previously.

Centre 3 Participant E

The results for Centre 3 Participant E are shown in Figure 9.

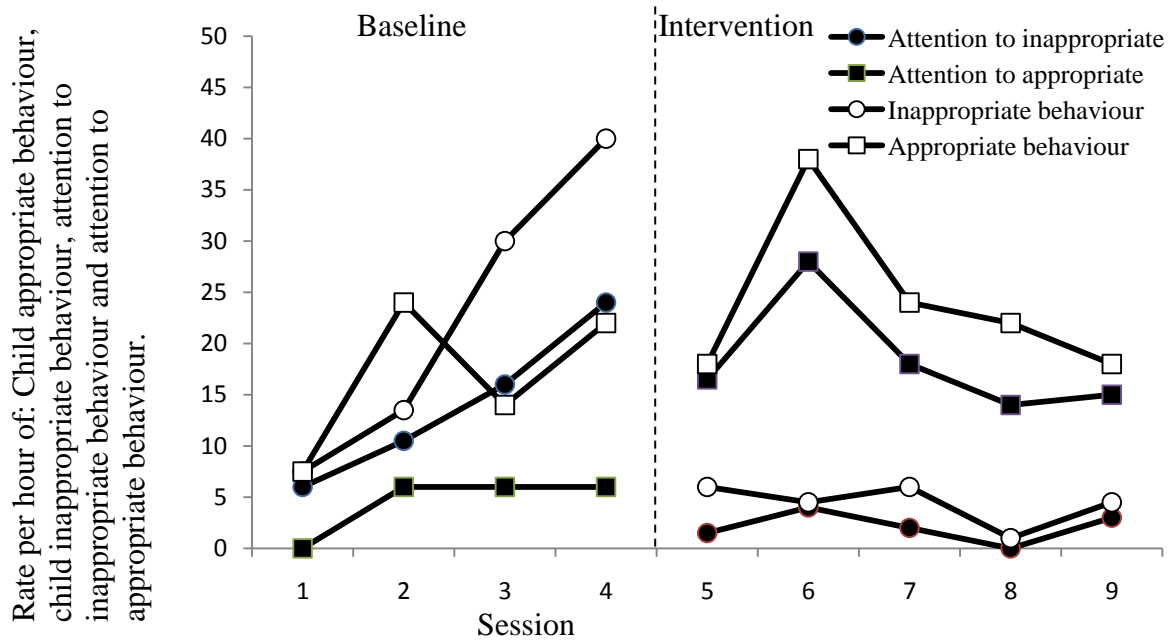


Figure 9. The number of times per hour that Participant E engaged in appropriate and inappropriate behaviour and the number of times per hour that teachers at Centre 3 provided attention to inappropriate and appropriate behaviour, per session, during Baseline and Intervention conditions.

Figure 9 shows that during the Baseline condition Participant E received attention for inappropriate behaviour 14 times per hour and engaged in inappropriate behaviour 23 times per hour on average. During this condition there was an increasing trend in inappropriate behaviour and attention for inappropriate behaviour. Participant E engaged in appropriate behaviour 17 times per hour and received attention for this less than 5 times per hour on average. Therefore inappropriate behaviour gained attention 61% of the time as compared to appropriate behaviour which gained teacher attention only 29% of the time. Following introduction of the Differential Attention intervention, attention for appropriate behaviour increased to a mean rate of 18 times per hour and the rate that Participant E engaged in appropriate behaviour also increased to a mean rate of 24 times per hour. Attention for inappropriate behaviour decreased to a mean rate of 2 times per hour and the rate at which Participant E engaged in inappropriate behaviour decreased to a mean rate of 4 times per hour.

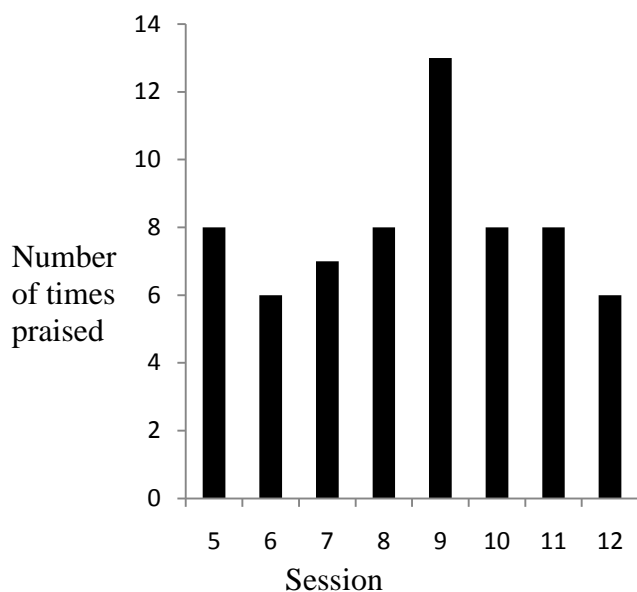


Figure 10. The teacher recorded frequency with which all teachers praised Participant E over a one hour period during each session in the Intervention condition.

Figure 10 shows that teachers at Centre 3 reported providing Participant E with praise on average 8 times over the one hour session covering both mat time and morning tea time during the Intervention condition.

During Session 2 of the Baseline condition Participant E was observed to engage in appropriate behaviour more often than inappropriate behaviour however, he received more attention from teachers when he displayed inappropriate behaviour. During the session Participant E was often ignored. When he asked to sit on the support teacher’s knee during mat time he was ignored. He was observed to engage in rough play fighting during mat time which the teacher leading mat time reprimanded him for but when he was listening and sitting quietly he was not praised by the support teacher sitting close to him.

On Session 3 and 4 of the Baseline condition the amount of attention directed towards Participant E’s inappropriate behaviour increased as compared to Sessions 1 and 2. This attention was observed to consist of nagging and many disciplinary signals including

using Participant E's name with an angry tone. During Session 4 Participant E was left in the bathroom where he proceeded to play instead of coming to the mat, this was either not acknowledged by the three teachers on the mat or they were unaware that he was not on the mat. When he shouted from the bathroom one of the support teachers went to get him, following this he was unsettled and engaged in poking and hitting other children. Participant E was also observed to be reprimanded when he shouted the karakia, even although all children were doing this.

On Session 5 after the introduction of the intervention, the support teacher at mat time appeared to be focussed on encouraging Participant E to participate in the songs by providing him with many praise statements for taking part and doing the correct actions. On Session 6 Participant E was settled at mat time and ignored others who were play fighting next to him. This was acknowledged by the teacher who was taking mat time and he was provided with praise for this. However, the support teacher did not ignore instances of inappropriate behaviour. On both Sessions 8 and 9 Participant E was rewarded for listening during mat time by going up the front as a helper and helping the lead teacher to hold a book.

Towards the end of the intervention the rate of attention to appropriate behaviour decreased and the researcher felt that the teachers were still reluctant to provide Participant E with too much praise. As the number of incidents of inappropriate behaviour decreased, attention to appropriate behaviour also decreased.

Centre 4 Participant F

The results for Centre 4 Participant F are shown in Figure 11.

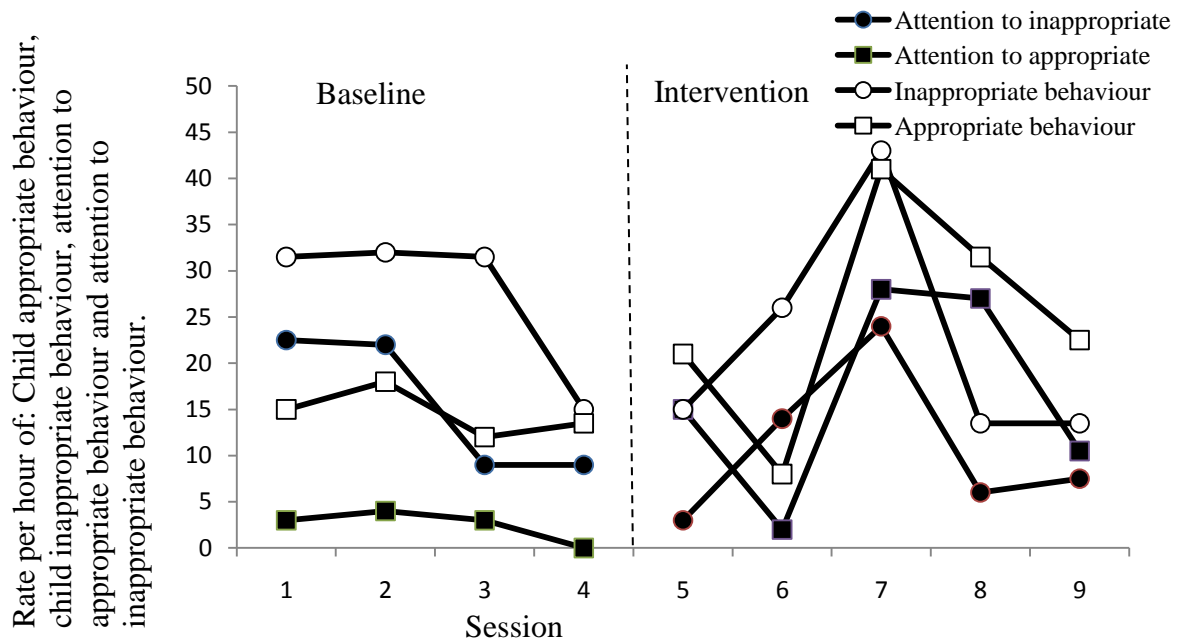


Figure 11. The number of times per hour that Participant F engaged in appropriate and inappropriate behaviour and the number of times per hour that teachers at Centre 4 provided attention to inappropriate and appropriate behaviour, per session, during Baseline and Intervention conditions.

Figure 11 shows that during the Baseline condition Participant F engaged in appropriate behaviour on average 15 times per hour. However, teachers at Centre 4 provided attention for appropriate behaviour less than 3 times per hour on average, with the result that appropriate behaviour succeeded in gaining attention only 20% of the time. Inappropriate behaviour was engaged in at a mean rate of 28 times per hour and teachers at Centre 4 provided attention to this behaviour on average 16 times per hour, with the result that inappropriate behaviour gained teacher attention 57% of the time. Following introduction of the intervention, attention for appropriate behaviour increased to a mean rate of 17 times per hour and the rate of child appropriate behaviour increased to 25 times per hour on average. Teacher attention for inappropriate behaviour decreased slightly to a mean rate of 11 times per hour and the rate that Participant F engaged in inappropriate behaviour also decreased slightly to 22 times per hour on average.

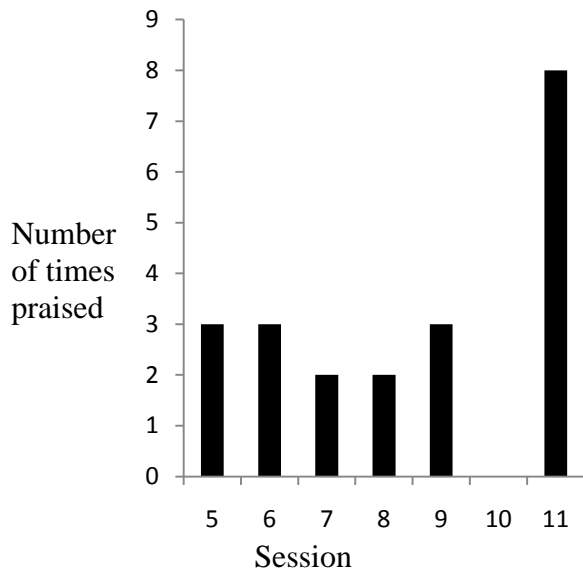


Figure 12. The teacher recorded frequency with which all teachers praised Participant F over a one hour period during each session in the Intervention condition.

Figure 12 shows that following the introduction of the intervention the teachers at Centre 4 recorded praising Participant F on average 3 times per hour in the one hour period covering mat time and afternoon tea time.

During Sessions 1 through 4 in the Baseline condition Participant F received many instructions and, after failing to comply was often given a warning where one of the teachers told him it was his last chance. This did not result in compliance and subsequent requests were made.

On Session 5 one of the supporting teachers was observed making a contingency error. She praised Participant F for cleaning up toys before mat time when he had not cleaned up any toys. The head teacher reported that there were staff shortages on the day and they were finding it difficult to begin the intervention that day. During mat time the children had to practice a song for the Christmas play. One teacher was observed to say that Participant F should not have a part as he had been silly.

During Session 6 the over two year olds were taken to a local park to fly kites instead of mat time. During the observation period Participant F engaged in inappropriate behaviour more frequently than appropriate behaviour and received more attention for it. When a request was made of Participant F he did not comply and the teacher left him thereby reinforcing noncompliance.

On Session 7 the head teacher informed the researcher that a boy with whom Participant F often misbehaved was away so they had had a better day with him. During the observation period the support teacher did increase attention to Participant F when he was engaged in appropriate behaviour on the mat and praised him for using manners and complying with requests. However, Participant F was provided with almost the same amount of attention for inappropriate behaviour and therefore continued to engage in this behaviour.

On Session 8 Participant F was engaged in a cleaning activity with one of the teachers prior to mat time, he received a lot of praise for this and this was the most attention that he received over the observation period. During mat time the teacher played a very long and complex audio story, many of the children were distracted and Participant F was reprimanded for failing to listen.

During Session 9 Participant F received an increased amount of attention during a one on one interaction with a teacher before mat time. During mat time there were opportunities to praise Participant F when he was listening and complying with whole class instructions but these were missed. Participant F was taken away to get changed during afternoon tea time.

Centre 4 Participant G

The results for Centre 4 Participant G are shown in Figure 13.

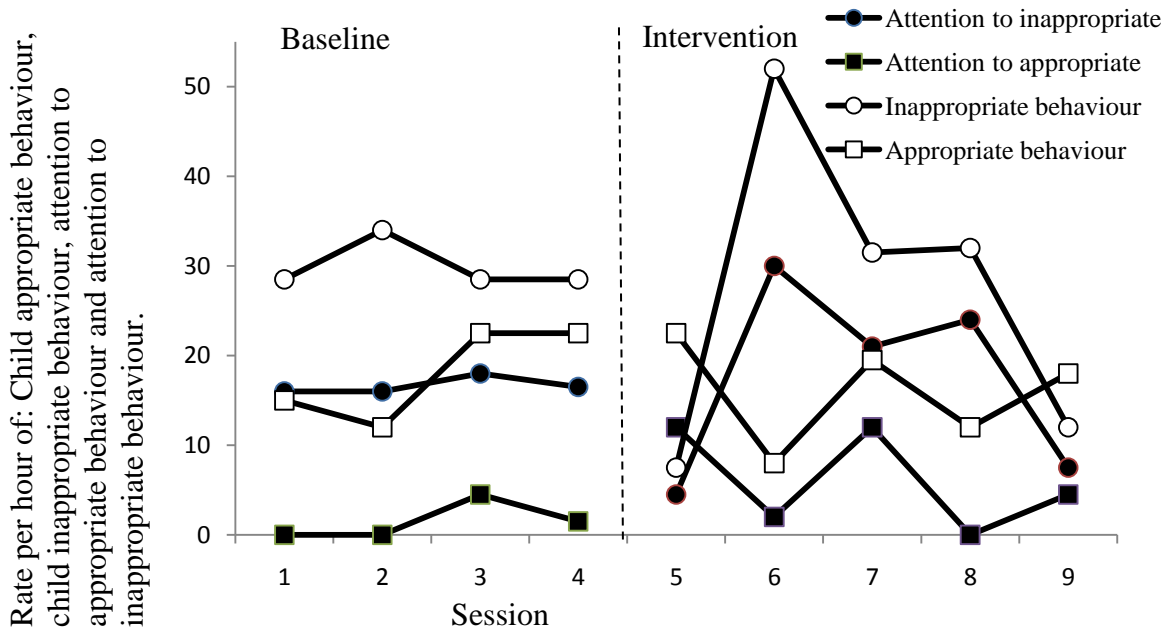


Figure 13. The number of times per hour that Participant G engaged in appropriate and inappropriate behaviour and the number of times per hour that teachers at Centre 4 provided attention to inappropriate and appropriate behaviour, per session, during Baseline and Intervention conditions.

Figure 13 shows that during the Baseline condition Participant G engaged in inappropriate behaviour on average 30 times per hour and appropriate behaviour on average 18 times per hour. Teachers at Centre 4 provided attention for inappropriate behaviour 16 times per hour as compared to attention for appropriate behaviour which they provided attention for less than 2 times per hour on average. With the result that inappropriate behaviour succeeded in gaining teacher attention 53% of the time while appropriate behaviour only succeeded in achieving attention 11% of the time. Following the introduction of the Differential Attention intervention, attention for appropriate behaviour increased slightly to a mean rate of 6 times per hour while the number of times that Participant G engaged in appropriate behaviour actually decreased to 16 times per hour on average. Attention to inappropriate behaviour increased very slightly to a mean rate of 17 times per

hour and the mean rate at which Participant G engaged in inappropriate behaviour decreased very slightly to 27 times per hour. Therefore following the intervention inappropriate behaviour succeeded in gaining attention 63% of the time, as compared to appropriate behaviour which only succeeded in gaining attention on average 38% of the time. Figure 14 shows that following the introduction of the intervention, teachers at Centre 4 recorded providing Participant G with praise for appropriate behaviour on average 2 times per hour in the one hour period covering mat time and afternoon tea time.

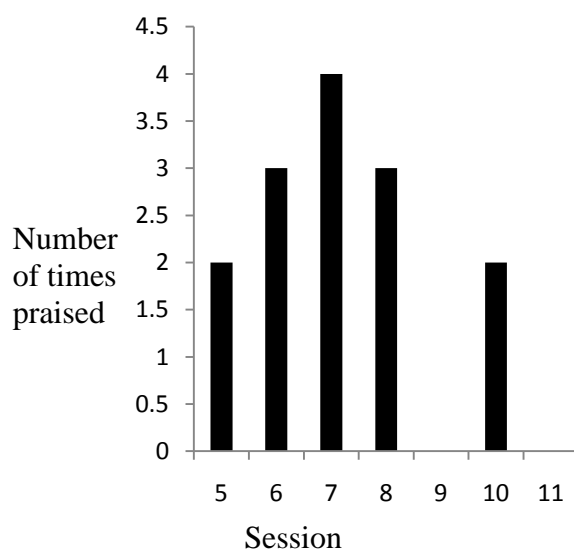


Figure 14. The teacher recorded frequency with which all teachers praised Participant G over a one hour period during each session in the Intervention condition.

Figure 14 shows that following the introduction of the intervention, teachers' at Centre 4 recorded providing Participant G with praise for appropriate behaviour on average 2 times over the one hour observation period covering mat time and afternoon tea time.

During the Baseline condition Participant G was most commonly ignored. He displayed many incidents of antisocial behaviour pushing and hurting other children and this had the effect of generating teacher attention. Although he was observed to engage in appropriate behaviour he was rarely praised for it. During Session 4 of the Baseline condition

Participant G asked politely to have his banana opened and was reprimanded for interrupting a teacher while she was talking to another child.

During the first Intervention session (Session 5) teachers at Centre 4 appeared confused by the requirements of the intervention. Although praise and attention towards appropriate behaviour did increase as compared to the Baseline condition the researcher counted seven further opportunities for which participant G could have been praised.

On Session 6 the over two year old children were taken to the park to fly kites. Participant G was very active running around and trying to catch the kite. He was reprimanded for this behaviour and after failing to comply he was reprimanded many times. There were four opportunities counted by the researcher for which participant G could have been praised for appropriate behaviour but three of these were either missed or not acknowledged by the teachers present.

On Session 7 it appeared that the teachers working on this day did not grasp the concept of providing Participant G with more praise than reprimands. He received multiple instructions to come to the mat, and after failing to comply further disciplinary instructions were provided. When Participant G came to the mat he settled down and listened to the story, however, he did not receive any attention or praise for this and at the end of mat time he had to wait until last for his name to be called out in order to wash his hands for afternoon tea. It appeared that the teacher who had taken mat time was punishing him for his non compliant behaviour at the beginning of mat time. Participant G sat quietly during afternoon tea and did not receive any attention.

On Session 9 it was noted that teachers at Centre 4 continued to miss opportunities for which to praise Participant G during mat time. He was reprimanded for not listening to the story and following compliance he was ignored. During this session teachers continued to

provide Participant G with more attention for inappropriate behaviour than for appropriate behaviour.

CHAPTER FOUR

DISCUSSION

Aims and Overview of Results

The present study had two aims. The first was to evaluate the use of differential attention as a behaviour management strategy in a preschool setting and to assess its effectiveness in encouraging prosocial behaviour in children who require extra assistance with their social development. The second was to assess the extent to which groups of Early Childhood Education teachers were able to implement differential attention during structured mat times and eating periods.

The present study demonstrated three results. Firstly, when the teachers in a centre succeeded in increasing their rate of attention to appropriate behaviour to a level greater than their rate of attention to inappropriate behaviour, the child's behaviour changed with appropriate behaviour increasing and inappropriate behaviour decreasing in frequency. This occurred with 6 out of 7 children. Secondly, the target child's behaviour only changed when the teacher's behaviour changed. This was on the first day of the intervention for Participant A to D, on the second day of intervention for Participant E and the fourth day of intervention for Participant F. Thirdly, the change in child behaviour was only maintained in those cases where the change in the teachers' behaviour was maintained, that is, for Participant A and Participant D.

Observations made during Baseline conditions were consistent with previous research. When the participants were praised it was for appropriate behaviour outside of mat time such as taking off their shoes inside or completing a nice drawing. Participants were generally not praised when they displayed appropriate behaviour during mat time and

observations made at these times led the researcher to conclude that inappropriate behaviour gained reprimands most of the time while appropriate behaviour, because it was expected, produced little or no praise. These observations are consistent with those of Jack et al. (1996) and Stormont et al. (2007), who found that children who engage in challenging behaviour receive more reprimands than praise, and when they do behave appropriately and comply with teacher requests, are very rarely praised for their compliance. Baseline observations were also consistent with those reported by Carr et al. (1991) who found that teachers spend less time engaged in teaching activities with antisocial children than they do with children who do not engage in problem behaviours.

Results obtained following introduction of the Differential Attention intervention support the results obtained by Lampi et al. (2005), who found that praise for appropriate behaviour was effective in reducing a number of problem behaviours including non-compliance and aggression. In contrast to the results of Bucher and Okovita (1977), the results of the present study show that appropriate behaviours including compliance can be increased without the need for tangible reinforcers or time out. The variability in implementation of the intervention displayed by teachers and centres is consistent with the results obtained by McCallum (2007), who found that kindergarten teachers had difficulty in implementing a good behaviour board and incentive scheme with uncooperative kindergarten children.

The Measurement of Behaviour Change

To measure the implementation of differential attention by teachers and its effects on child behaviour, direct observations were made of the rate of child appropriate and inappropriate behaviour and the rate of teacher attention following both appropriate and inappropriate child behaviour before and after introduction of the differential attention

intervention. In addition the researcher collected information on the number of trained and untrained teachers at each centre and also recorded other changes in child behaviour together with any difficulties encountered by teachers in their attempt to implement the intervention.

It should be noted that measures of interobserver agreement were not obtained in the present study. The reason for this was because the study was undertaken outside the Christchurch city area. This made recruitment of a second observer difficult. The lack of interobserver agreement data raises unanswered questions about the consistency of the observational records collected by the researcher.

The measurement procedure used in the present study was an event recording procedure where the four target behaviours were recorded over a 30-40 minute period and converted to a rate per hour. The fact that only one or two participants were observed concurrently meant that the researcher was able to consistently identify each successive instance of teacher attention to target child behaviour. One of the weaknesses of this recording procedure was that it functioned to cue teacher behaviour. For example there were a number of occasions in Centre 2 and 4 where the teachers stopped praising when the observer stopped recording. It seems likely, therefore, that some of the positive and negative attention rates recorded during the direct observation sessions may be overestimates of the actual rate of attention directed towards the participant during the rest of the day.

The definitions used during the study were sufficient to enable consistent classification of each instance of child appropriate and inappropriate behaviour and teacher attention to either appropriate or inappropriate behaviour. However, the recording sheet did not allow for the recording of praise for a behaviour which was neither appropriate nor inappropriate but neutral. All praise remarks were recorded as praise for appropriate

behaviour. This too may have resulted in an overestimate of teacher positive attention to appropriate child behaviour.

In each Centre one of the teachers also recorded the number of times each participant was praised by any teacher during the nominated one hour observation periods. One of the aims of these recordings was to remind teachers to increase their rates of praise. An analysis of the praise records made by teachers while the researcher was present, show that the teachers recorded fewer examples of praise than the researcher did. This may have been due to the fact that teachers were often busy with other jobs during the observation period and may have missed instances of praise provided to participants by other teachers.

The observation procedure used in the current study was adequate for the purpose and was appropriate to the aims of the experiment. However, there are ways in which it could be improved in future studies of teacher-child interactions in ECE centres. Firstly, observations could take place over two half hour visits instead of one. This would increase the sample (and the representativeness) of the recording intervals. Secondly, the observation recording sheet, could include an additional column in which to record contingency errors. Contingency errors are errors which are made when a teacher or parent provides either; (a) positive attention following misbehaviour and/or (b) negative attention following desired behaviour. Thirdly, future studies must train more than one observer, so that interobserver agreement data is collected.

Reasons for Variability in Child Behaviour

The results of the present study show variability between and within the child behaviour changes which were observed. It is important to consider whether this variability

was due to shortcomings in the definitions and/or recording procedures used or whether it was due to variability in the way in which different centres and different teachers implemented the differential reinforcement procedure.

Variability in implementation of the intervention was observed in all four centres. In Centres 1 and 2, the teachers implemented the intervention on the first day of the Intervention condition and maintained it across the entire intervention period. In Centre 2, the teachers achieved high levels of differential attention but only on four out of the five days on which observations were made. In Centre 4 the teachers achieved adequate levels of differential attention only on some days and not on others.

There were other sources of variability in teacher behaviour which were not captured by the event recording procedure. For example, teachers varied in their ability to ignore instances of inappropriate behaviour which could have been ignored. For example the teachers at Centre 3 continued to reprimand rather than to ignore Participants D and E when they were being silly on the mat on day 6. A teacher at Centre 2 continued to reprimand rather than to ignore Participant C for talking and not singing the group song correctly.

Secondly, contingency errors were often observed. For example, in Centre 4 a teacher was observed providing negative attention following a desired behaviour. Participant G asked a teacher to peel his banana for him. Although he said “excuse me”, the teacher reprimanded Participant G for interrupting her. Teachers were also observed to provide positive attention following misbehaviour from time to time. For example teachers were observed attempting to frame reprimands in a positive way. Such as by saying “I like how you are touching your friend nicely on the mat”, when the Participant was obviously hurting the other child on the mat. Given both the recorded and unrecorded variability in the teacher’s

attempts to introduce and maintain the differential attention procedure, it is not surprising that there was some variability in the target childrens' responses to their attempts.

While teachers generally increased their attention to appropriate behaviour, what they praised tended to be quite variable. Some were mostly observed to praise appropriate behaviour that involved responding to and complying with teacher requests. Some did and some did not consistently praise participants for the behaviours which they had stated that they expected such as listening quietly to a story on the mat, taking part in songs, or behaving politely at meal times.

It seems fairly clear from the data paths in Figures 1, 3, 5, 7, 9, 11 and 13 that the variability in child appropriate behaviour was closely correlated with variability in the teachers' implementation of the differential attention procedure rather than in shortcomings in the procedures used to record behaviour change. This conclusion is supported by the fact that when the differential attention procedure was implemented as intended it had the effect on child behaviour which has been observed by previous researchers.

Sources of Variability in Teacher Implementation of the Differential Attention Procedure

Although most teachers attempted to increase their attention to appropriate behaviour, the extent to which they did so and the extent to which they ignored inappropriate behaviour varied greatly across centres. The variability in the response to implementing the differential attention procedure also extended to differences across teachers within centres. While some teachers attempted to use differential attention others were observed not to use it at all. This could be seen from the teacher names on the recording forms. Generally between one and three teachers were recorded as providing a participant with increased attention for appropriate behaviour and this included the teacher who was wearing the wrist counter and

was responsible for monitoring praise and the head teacher. In Centre 3, for example, some teachers were never recorded on the observation form having provided a participant with attention for appropriate behaviour.

There are many possible sources of the observed variability in teacher implementation of the differential attention procedure. One possible reason for variability in implementation may be due to the willingness of individual teachers to take part in research activities. In Centre 3, for example, some teachers were concerned that constantly following Participants D and E around would be too time consuming. In Centre 4 several teachers appeared to be uninterested in implementing the intervention as they did not interact with either participant but simply carried on as normal.

A second possible reason for the variability in teacher implementation is that working in Early Childhood Education is a demanding occupation. Issues such as centre funding, staff shortages and the realities of catering for a large number of children of different ages, all operate to reduce the time that teachers have to devote to individualised behaviour management interventions. A child to teacher ratio of one teacher to eight children makes it difficult to interact with and accurately monitor the behaviour of a single child in a centre. Early Childhood Education teachers have a number of tasks to attend to including organising activities and getting ready for meal times. Teachers are also actively involved in constantly cleaning up. This has the effect of leaving fewer teachers available for teacher-child interactions and therefore fewer opportunities to provide attention to children when engaged in appropriate behaviour.

In addition, role rotation is common in Early Childhood Education centres. In all centres teachers rotated through a number of different responsibilities on different days. For example the teachers taking mat time changed daily and those looking after the children

during meal times also changed from day to day. The remaining teachers were engaged in other jobs that did not involve interaction with the children. The difficulties experienced in getting teachers to implement a set of strategies for an individual child on top of an already busy schedule has been noted in previous studies (e.g. Ewing & Ruth, 1997., McCallum, 2007). A number of relieving teachers were also observed to work in each of the four centres during the intervention period and as they were only in each centre for a short period they may not have been as committed in accurately implementing the intervention as the full time teachers.

A third possible reason for the variability in teacher implementation is the variability in teacher beliefs about how children learn and develop, about limit setting and about appropriate behaviour management practices. For example, the teachers at Centre 3 were concerned that ignoring misbehaviour would allow Participants D and E to ‘get away with’ inappropriate behaviour. The teachers at Centre 2 were concerned that increasing praise toward Participant C would be unfair on other children who always behaved. Many of the teachers at Centre 4 continued to reprimand misbehaviour, possibly reflecting a belief that failing to reprimand inappropriate behaviour would serve to encourage this behaviour in the future.

Following the introduction of differential attention and a marked change in child behaviour, the teachers in Centre 2 began to reduce their attention to appropriate behaviour. In fact the head teacher at Centre 2 reported that they had noticed a change in Participant C’s behaviour and were decreasing their use of praise. The belief that once a child’s behaviour changes the change will be permanent (and the behaviour management strategy can therefore be abandoned) is a widely held belief and may account for the failure to maintain the differential attention procedure. The belief that once the child is behaving appropriately the teacher can carry on as before has been observed in other implementation studies. Ewing and

Ruth (1997) also reported that some teachers chose to stop praising participants because they felt that the child's problem behaviour had been "fixed".

A fifth possibility is that the variability in teacher implementation is a function of variations in teacher knowledge of the principles of behaviour change. Prior to introduction of the present intervention, all centres reported that their teachers understood the importance of praise in Early Childhood Education and the centre managers all reported that the use of praise was a high priority in their centres. At Centre 1 the manager and two of the teachers reported to the researcher that they provided three praises for every reprimand. However, all the baseline observations of each of the seven participants demonstrated that all were receiving significantly more attention for inappropriate behaviour than for appropriate behaviour. Individual teachers also raised a number of issues about the use of individualised differential attention that suggested a general lack of understanding of the role of reinforcement in the maintenance of child behaviour. This discrepancy between teacher reported knowledge and teacher behaviour suggests that there is considerable variability amongst teachers with respect to their theoretical understanding of the fundamental principles of behaviour change.

A sixth possibility is that qualified and unqualified teachers varied in their ability to implement the intervention. The results of the present study suggest that there was no difference between qualified and unqualified teachers' ability to implement differential attention. In general the head teachers at each of the centres (apart from Centre 4) accurately implemented the intervention. These teachers were all qualified. However, the other teachers who experienced difficulty in implementing the intervention included qualified as well as unqualified teachers. Some of the teachers who resisted implementing the intervention were not only qualified but had years of experience in Early Childhood Education. Teachers who

voiced their concerns to the researcher regarding the use of differential attention included qualified as well as unqualified teachers.

Implications

The variability in teacher implementation of the differential attention procedure has implications for both initial teacher education and the mentoring and supervision of teachers within individual ECE centres. The present study assumed that teachers understood the basic principles of behaviour change especially the fact that increased appropriate behaviour depends on increasing the reinforcement for responding appropriately and decreasing the reinforcement for behaving inappropriately. Skinner, Veerkamp, Kamps, & Andra, (2009) reported that teachers could maintain procedural fidelity of an intervention with minimal training. However, in the present study although the intervention training handout clearly explained these principles and explained in detail how to apply differential attention, there was great variability across both centres and teachers in the ability to accurately implement the intervention. This raises the question of whether pre-service training in behaviour management is sufficient to enable teachers to effectively encourage the development of prosocial behaviour in children who require extra assistance with their social development.

It also raises that question of how to support teachers for whom brief instructions and requests to respond differently are insufficient. There are a number of possible solutions to this problem. Firstly, the intervention training could be longer. It could be stipulated that at the start of the study when managers first agree to take part, they will organise intervention training sessions at a time when all staff can attend. This training could involve video examples of people using differential attention and also include role plays to give teachers a chance to practise the intervention and to ask questions. Secondly the training could be

delivered by the most senior teacher in charge of the centre so that teachers were able to develop a commitment to a “new way of responding to misbehaviour”.

A number of authors (e.g. Mihalic, Fagan, Irwin, Ballard, & Elliot, 2002) have noted that the skills, attitudes and values of staff delivering an intervention play a critical role in effective implementation and that successful interventions require organisational structures that support staff in the implementation of the intervention. In the present study there were several occasions when the head teacher was not present and the teachers did not use the wrist counters or did not implement the differential attention intervention. There are several mentoring and supervision strategies which can be used to ensure teachers are supported throughout a change in practice. Following initial training, the head teacher can assume responsibility for conducting observations and providing feedback. They can spend time observing each teacher and then providing them with feedback on how accurately they are using differential attention. Another option is to get all teachers to wear wrist counters so that they can self-monitor their behaviour. With self-monitoring feedback is immediate.

Achievement with respect to key behaviours (such as praise) can be posted on a whiteboard in the staffroom to encourage all teachers to become involved and to motivate everyone to keep the intervention going. Appropriate behaviour change contingencies can be added. For example, a special morning tea could be used to celebrate occasions when every teacher meets a particular behaviour change target.

The Difficulties of Conducting Research in Early Childhood Education Centres

The first difficulty encountered in the present study was that of organising training within individual ECE centres. Finding a time to provide intervention training to all teachers at the same time proved to be almost impossible. Only Centre 3 had a staff meeting which the researcher was able to attend. The other centres required the researcher to conduct

intervention training with individual staff members across several days. At all three centres where individual training occurred, the teachers were delivered the intervention training at the side of the room while they were working. This made it difficult for the researcher to ensure that all teachers accurately understood the intervention and was at the same time very time consuming. Ensuring comprehensive intervention training could involve specifying a time to meet with all staff to conduct intervention training, when the centre agrees to take part in the study.

Another difficulty encountered in the present study was managing the differences between manager expectations and teacher expectations. The managers of all four centres included in the study were all very keen to take part in the research and were keen to try out new behaviour management strategies that may have been beneficial in their centres. An example of this was the manager of Centre 4 who was keen to be included in the study and was open to changing behaviour management practices. However, the head teacher and the other teachers at the centre appeared not to be interested in accurately implementing the intervention. The managers of ECE centres are often restricted to the day to day running of a centre and are possibly unaware of the differences between their expectations and those of the teachers, about what is required in partaking in a research intervention and they possibly do not communicate their expectations clearly.

A further issue concerns variations in child attendance patterns. In the present study it was difficult to select participants that met the criteria for inclusion in the study and who also attended the centre for a similar number of days per week. Therefore, the days that the participants attended the centres varied and this increased the time spent in some centres. For example Participant A only attended Centre 1 two days a week and therefore the study was conducted over a longer period at this centre. In the centres where the participants only attended for 2 days of the week, it meant that the teachers were required to consciously

implement the intervention over a longer time as compared to centres where participant attendance was greater. These factors may have contributed to variability in the effects of the intervention across the participants in the different centres in the present study.

There are other difficulties which can occur when research is conducted over a long period of time. These include unforeseen circumstances which effect participation. In discussing the results of the present study it is useful to examine issues which may have influenced the outcomes of the study. Firstly the Christchurch earthquake on September 4th occurred in the middle of the intervention condition at Centre 1. This was disruptive for both teachers and children at the centre as the buildings required inspection and earthquake safety lessons were given to the children. Participant A was reported to be very frightened after the earthquake and frequently sought comfort and reassurance from teachers. Delays caused by the earthquake meant that data collection in the 4th centre took place in the period just prior to Christmas. This was a busy time of year for Centre 4 as they had to organise a Christmas production and clean up the centre before the holiday period. This reduced their commitment to the intervention. At the beginning of the intervention condition at Centre 2, the centre was audited, meaning that the manager was busy during this time and communication with other staff regarding the study was limited. These are all factors which cannot be planned for at the beginning of a study.

Conclusion

The aims of the present study were successfully achieved and the results of the study show that the use of differential attention as a simple behavioural intervention for seven preschool children was successful in decreasing rates of inappropriate behaviour and successful in increasing rates of appropriate behaviour for six out of the seven participants. The results also show that generally teachers at the four centres increased their attention for

participants' appropriate behaviour and decreased their attention for participants' inappropriate behaviour. However, the results of the intervention are shown to vary greatly between participants and also within individual participants. The fact that the results of the study support those of previous research studies and the many observations of variable implementation made throughout the study support the conclusion that the variability in child behaviour was almost certainly a function of variability in implementation of the differential attention procedure

Treatment fidelity was an important issue in the present study and there was observed to be great variability in both centres and teachers responses to the request to introduce the differential attention intervention. The possible reasons discussed for this include variability in the willingness of teachers to take part in the research, the demands of ECE teaching, variability in teacher beliefs about how children learn and develop and the variability in the understanding of the principles of behaviour change. There are two main implications of this variability for future research including conducting more in depth intervention training and introducing mentoring and supervision of changes in teacher behaviour within individual ECE centres. There were also a number of difficulties discussed in conducting research in ECE centres. These included difficulties in organising training, differences between manager expectation and teacher expectations, differences in child attendance patterns and the unforeseen difficulties that effect commitment to the intervention.

The role of a preschool is no longer that of a babysitting service and the responsibility that teachers have in guiding children's development becomes critically important. Research highlights the importance of addressing early signs of antisocial development at the youngest possible age. Intervening when children are in preschool, kindergarten or Year 1 has the potential to prevent delinquency and other negative outcomes (Gettinger & Stoiber, 2006). Understanding and effectively implementing a simple

intervention such as that in the present study has the benefit of guiding all children's social development and preventing antisocial behaviour. However future research will need to address ways in which to reduce the variability in implementation across centres and teachers.

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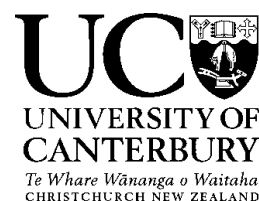
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APPENDIX 1



The initial and generalised effects of Differential Attention on the cooperative behaviour of eight preschool children

Teacher Information Sheet

My name is Jacqui Giller and I am currently undertaking my Masters Thesis as part of my study towards a Postgraduate Diploma in Child and Family Psychology. For my research project I am attempting to provide a simple training package which will show teachers and parents how to use Differential Attention. Differential Attention involves providing specific praise and attention to children when they are engaged in appropriate behaviour and decreasing the use of discouragements for inappropriate behaviour.

Teachers who agree to assist with this small research project will be asked to:

- Nominate children in their centre who would benefit from increased encouragements and positive attention
- Attend a short 30 minute training session including video modelling, describing the project. This will be run at a time which is convenient for all staff members
- Use the Differential Attention strategies on a daily basis with the nominated children
- Use a wrist counter to count the number of encouragements given to the participant
- Allow the researcher to directly observe the teachers use of Differential Attention, the nominated children's behaviour and record the nominated children's response and your response.

It is envisaged that the researcher will spend three to four weeks in the centre with observations occurring at the most, 4 times a week for approximately 1 to 2 hours a visit, at structured times of the day such as mat time and lunch time. The resulting report will not contain any identifying details about you, the centre, the children or the parents. Results of the study may be submitted for publication to national or international journals, or presented at educational conferences, due to this you may at any time ask for additional information or results from the study. At the completion of the project a summary of the overall findings will be sent to your supervisor.

Care will be taken to ensure the confidentiality of all data gathered, the anonymity of participants and the centre in all publications of the findings. All data is to be securely stored in password protected facilities and/or locked storage at the University of Canterbury for five years following the study, following which it will be destroyed. Please note that participation in the study is voluntary. If you do participate, you have the right to withdraw from the

project at any time. If you choose to withdraw, I will use my best endeavours to remove any of the information relating to you from the project, including any final publication, provided that this remains practically achievable.

Thank you for taking time to consider my request. If you would like to know more about this project, please feel free to contact either myself or one of my supervisors.

Yours sincerely
Jacqui Giller

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The initial and generalised effects of Differential Attention on the cooperative behaviour of eight preschool children

Parent Information Sheet

My name is Jacqui Giller and I am doing a study at the University of Canterbury. As part of my study I am attempting to provide a simple training package which will show teachers and, if required, parents how to use Differential Attention. Differential Attention involves providing encouragement and attention to children when they are engaged in appropriate behaviour and decreasing the use of discouragements for inappropriate behaviour.

I will be providing the teachers at your child's Early Childhood Education Centre with a simple training package which will describe the use of Differential Attention. I will be visiting the centre at the most 4 times a week, 1 to 2 hours per visit, to make brief observations of the teachers using Differential Attention and observing the type of instruction the teacher gives your child, your child's behaviour following the instruction and the teacher's response. I will also request the teachers to complete a small questionnaire about your child's social development.

As part of the study I may wish to observe your child in their home setting to see if using Differential Attention in the centre affects their behaviour at home. If this is required, I will demonstrate to you how to use Differential Attention. With your permission, I will visit 2 times a week, at a time to suit your family. Your child will not be asked to do any special task at the centre or at home; it is expected that everything will carry on "as normal".

Please note that participation in the study is voluntary. If you do participate, you have the right to withdraw from the project at any time. If you choose to withdraw, I will use my best endeavours to remove any of the information relating to you from the project, including any final publication, provided that this remains practically achievable. Please be assured that particular care will be taken to ensure the confidentiality of all data gathered for my study and your anonymity and the centres will occur for any publications of the findings. Results of the study may be submitted for publication to national or international journals, or presented at educational conferences, due to this you may at any time ask for additional information or results from the study. All information is to be securely stored in password protected facilities and/or locked storage at the University of Canterbury for five years following the study, following which it will be destroyed.

My project is supervised by Dr John Church and Gaye Tyler-Merrick. If you have any questions about the project please do not hesitate to contact me or my supervisors.

Yours sincerely
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APPENDIX 2



Social Development Scale

To be completed by the teacher. Use this scale for 3 and 4 year old children

Kindergarten:	Childs Initials:	Gender: Girl Boy
DOB:	Age: yrs months	Ethnicity
Number of hours per week child attends centre:		
Does this child have a disability?		Yes No
If yes, name the disability		
Has the Early Childhood Education Centre received any extra assistance for this child within the past 12 months?		Yes No
Does this child receive any teacher aide assistance?		Yes No
For how long have you had day-to-day contact with this child?		Weeks:
This scale completed by:		Date:

Teacher Nomination Form

Early Childhood Education Centre: _____

Teachers Initials:

Today's date:

Instructions:

1. Please read the definition of “children with behaviour difficulties” below and write down the names of any children in your centre who qualify as “children with behaviour difficulties”. Either in rank order or random selection.

Definition – Children with behaviour Difficulties

Please list any children in your centre who (a) comply with teacher instructions much less frequently than other children of the same age and any children who (b) engage in inappropriate behaviour much more frequently than other children of the same age.

	<i>Nominated Child</i>
1	
2	
3	
4	

APPENDIX 3



The initial and generalised effects of Differential Attention on the cooperative behaviour of eight preschool children

Teacher Consent Form

I have read and understood the attached information sheet and I have been given an opportunity to ask the researcher questions about what is involved in my participation.

I understand that participation is voluntary and that I have the right to withdraw from the project at any time.

I understand that any information I provide will be kept confidential to the researcher and that any published or reported results will not identify me, the centre, the parents or the children.

I understand that all data from this research will be stored securely at the University of Canterbury for five years following the study and then destroyed.

I understand that my Supervisor will receive a report on the findings of this study and that I can view this from her.

By signing below, I agree to participate in this research project.

Name: _____

Signature: _____

Date: _____

Address for Results or additional information to be sent to:

Thank you for your contribution to this study.

Jacqui Giller

The initial and generalised effects of Differential Attention on the cooperative behaviour of eight preschool children

Parent/Caregiver Consent Form

I give permission for _____ to participate in the study described in the information sheet.

I have read and understood the attached information sheet and I have been given an opportunity to ask the researcher questions about what is involved in my participation.

I understand that participation is voluntary and that I have the right to withdraw from the project at any time.

I understand that any information or opinions I provide will be kept confidential to the researcher and that any published or reported results will not identify me or my child, teachers or centre.

I understand that all data from this research will be stored securely at the University of Canterbury for five years following the study.

I understand that I will receive a report on the findings of this study and have provided my email details below for this purpose.

By signing below, I agree to participate in this research project.

Name: _____

Date: _____

Signature: _____

Address for Results or additional information to be sent to:

Thank you for your contribution to this study.

Jacqui Giller

**The initial and generalised effects of Differential Attention on the cooperative behaviour
of eight preschool children**

Consent Form for Children

My teacher has told me about the research project.

I am happy for a visitor to come to (Centres Name) and record my teachers and possibly me.

I know that any information collected about me will be stored away in a locked filing cabinet at the University and any report will not have my name or my teachers names or the name of my Centre on it.

I understand that I can change my mind about being in this project and no-one will mind.

I know that if I have any questions I can ask my Mum or Dad or my teachers.

My name is: _____

Teacher's Signature: _____

Date : _____

Please return this form to your teacher

APPENDIX 4

Baseline/Intervention	Session no.:	Child A:	Child B:
Preschool:	Teachers and codes:	Date: / /	
Start Time:	Stop Time:		

Activity Changes	Teacher Instruction Type		Childs response/behaviour		Teachers Attention		Teacher
	Child A or B	A + B	Appropriate	Inappropriate	Child A	Child B	
	R Q S D				√ X	√ X	
	R Q S D				√ X	√ X	
	R Q S D				√ X	√ X	
	R Q S D				√ X	√ X	
	R Q S D				√ X	√ X	
	R Q S D				√ X	√ X	
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	R Q S D				√ X	√ X	
	R Q S D				√ X	√ X	
	R Q S D				√ X	√ X	

Inappropriate Behaviours at Centre:

APPENDIX 5

The initial and generalised effects of Differential Attention on the cooperative behaviour of eight preschool children

Coding Manual

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Step 1: Selection of Students

The head teacher of the preschool will be given the Teacher Nomination Form and select up to four children at their centre who meet the definition of Children with Behaviour Difficulties

These children will then be observed over one session, at a time of the day where they are required to comply with teacher instructions and to take part in a structured activity such as matt time and lunch time.

The Head teacher will be asked to provide a list of inappropriate and unacceptable behaviours at the centre. These behaviours are to cover all behaviours for which to not comply would be inappropriate and those behaviours which are themselves inappropriate.

Following this observation two children that meet the following criteria will be selected:

- 1) Must display an elevated level of inappropriate behaviour (According to the list of behaviours gathered from the head teacher).
- 2) Must gain more attention for inappropriate behaviour than for appropriate behaviour.
- 3) Must attend preschool at least two days of the week.
- 4) Must be 3 or 4 years of age.

Step 2: Social Development Scale

The head teacher will complete one Social Development Scale for each of the selected children.

Make sure that:

- 1) The cover sheet is completely filled out with all of the student's details.
- 2) The instructions on the second page are discussed and understood.
- 3) All of the scale questions have been filled out and responded to on both pages.

Step 3: Observation Period

The period in which the children are observed must be at a time of the day where they are required to take part in a structured activity such as matt time and lunch time.

All observations in both Baseline and Intervention Conditions must occur during the same period. The times for observation may range from 30 minutes through to one hour.

Recording Form

A new recording form will be used for each day, one of the sheets must be headed with the section in which to fill out date, child and teacher information. Subsequent sheets will be the plain version.

Instructions:

- 1) Fill in all the details in the top box
- 2) Get a list of all teachers who will be on the floor during the observation period
- 3) Make sure that Child A and Child B are defined
- 4) Start recording immediately after the top box has been filled in and the children have been located
- 5) Record the following information in the provided columns:
 - **Column 1:** Each time the task/activity changes write in the new task/activity
 - **Column 2:** Record the type of teacher instruction provided these are:
 - **R= Request:** eg. Can you please pick the toys up and put them away.
 - **Q= Question Given:** eg. Will you please....., Would you like to.....
 - **S= Signal:** eg. Clapping, hands on head, using a bell, hands in the air.
 - **D= Disciplinary Instruction:** eg. If you don't do this now....., child's name repeated more than once, quiet please(with tone), do it now please, look at me etc.
 - **A + B:** Is for a centre instruction meaning that both of the children are required to perform the same activity. eg. Everyone tidy up, everyone sit on the mat. This requires a tick in this box.
 - **Column 3:** In this column all appropriate and inappropriate behaviours that each of the selected children display are recorded. These behaviours are recorded in the appropriate column and include:
 - **Appropriate Behaviour:**
 - Complying with teachers request/instruction within 10 secs

- Starting the activity within 10 seconds and doing the activity which is expected
- Engaging in socially appropriate interactions with peers
- Ceasing a behaviour disapproved of in this setting
- Engaging in appropriate interactions with staff on the floor
- Attending to the teacher when on the mat

These behaviours are recorded in the inappropriate column and include:

- **Inappropriate Behaviour:**
 - Inappropriate or Disruptive behaviour or the behaviours listed as disapproved of in this setting
 - Failing to comply
 - Failing to attend
 - Failing to start or engage in the activity expected
 - Engaging in antisocial behaviour with peers or teachers (shouting, hitting etc...)
- **Column 4:** In this column whether the teacher attends or does not attend to either appropriate or inappropriate behaviour displayed by the target child will be recorded. This will be coded as follows:

- **Attention to Appropriate Behaviour or to Inappropriate Behaviour**

The tick (√) will be circled

Teacher attention may take the form of:

- *Encouragements/Praise:* An encouragement is a positive reaction to a child's response or behaviour. The positive affect can be given by the tone of the statement or the content of a subtle stare.
- *Discouragements:* A discouragement is a negative reaction to a child's response or behaviour. The negative affect can be given by either the tone of the statement or the content or a subtle stare.
- *Prohibitions:* A statement to restrict or stop what a child is doing, usually in response to misbehaviour and delivery is usually in an assertive tone.
- **Failure to attend to Appropriate Behaviour or to Inappropriate Behaviour**
The (X) will be circled

- **Column 5:** In this column the teacher providing the attention will be recorded by entering their first initial or the short code designated to each teacher.

6) Recording will occur in the following order for the following situations:

➤ **Teacher provides attention to target child:**

- Teachers code is recorded in column 5
- Tick (√) is circled in column 4
- Whether the child`s behaviour is Appropriate or Inappropriate is recorded in column 3
- Then if the teacher subsequently provides an Instruction MOVE DOWN A LINE and record the instruction type in column 2
- In the same line record the child`s response in column 3
- Record whether the child receives attention or fails to receive attention for this response.

➤ **Child Behaves Appropriately or Inappropriately and teacher attends:**

- Record child`s behaviour in column 3
- Tick (√) is circled in column 4
- Teachers code is recorded in column 5
- Then if the teacher subsequently provides an Instruction MOVE DOWN A LINE and record the instruction type in column 2
- In the same line record the child`s response in column 3
- Record whether the child receives attention or fails to receive attention for this response.

➤ **Child Behaves Appropriately or Inappropriately and teacher fails to attend:**

- Record child`s behaviour in column 3
- Cross (X) is circled in column 4

➤ **Teacher provides child with an Instruction:**

- Instruction type is recorded in column 2
- Childs response is recorded in column 3
- Record whether the child receives attention or fails to receive attention for this response.
- If a subsequent instruction is provided MOVE DOWN A LINE and repeat steps i-iii

➤ **Multiple requests for the same behaviour:** will be recorded as 1 request

➤ **Multiple requests for different behaviours:** will be recorded as separate instructions and require the recorder to move down a line

- 7) Continue as above until the allocated time period is over
- 8) Repeat the above instructions when recording during both Baseline and Intervention sessions
- 9) Store completed recording forms in a safe place

Teacher Recording

During the intervention phase make sure that the teachers recording the number of times they praise the target child, know where the sheet is and record this figure every day.

APPENDIX 6

Differential Attention

‘Differential Attention is basically attending to and praising children when they are behaving appropriately – 4 times more than telling a child off. Decreasing attention for inappropriate behavior by ignoring children when they are behaving inappropriately.’

Why use differential Attention?

- Anti-social or inappropriate behaviour is strongly reinforcing - as it is a very efficient way of getting teacher attention
- Anytime that a child receives attention for inappropriate behaviour it becomes more likely that they will continue to use it in order to gain what they want
- Also working to avoid punishment leaves children feeling anxious and motivates them to look for ways to avoid the situation – this is not what we want to encourage.
- This leads to teachers and the child getting caught in a ‘**Coercion Trap**’= the worse their behaviour becomes the more attention they get and the more attention they get the worse their behaviour becomes!

What can we do to avoid coercion traps?

“Use Behaviour Specific Praise!”

- The most efficient way of building prosocial/appropriate behaviour is to reinforce the behaviours which compete with the inappropriate behaviours ie. the behaviours which we want to see!
- But the Praise must be Specific and contingent on the child behaving appropriately – we can’t just praise for no reason as this is not the same.

So how do I use Behaviour Specific Praise?

- **Be Specific:** The most powerful praise is specific. *Describe what the child has done that pleased you:*
“Martin thank you for washing your hands as soon as I asked you to”
This is different to just saying “good boy”.
- **State your Feelings:** State your feelings about the behaviour:
“I like you picking up all those toys”
- **Attend Immediately:** give praise as soon as you notice the desirable behaviour – if not other behaviours may occur in between that cause you to withhold your attention.
- **Attend to Improvements:** Give praise to improvements not just perfect performances.
- **Avoid the Criticism Trap:** Don’t say things such as “I like the way you came to the mat but can you do it quicker next time” – Children may give up trying so as to avoid the criticism.

Most Importantly: Attend Often! : At the beginning give praise **EVERYTIME** appropriate behavior occurs. This will mean that with a difficult child you will have to *catch them being good!* YES IT TAKES EFFORT. But later less attention will be required to maintain improvements.

Common Questions:

- *Why should I increase praise for a difficult child when other children behave without praise?*

Research shows that children with behavioural difficulties receive many more reprimands compared to praise while other children are praised much more frequently.

- *What should I do if I can't ignore inappropriate behaviour?*

If a child is at risk of hurting themselves or others it is important that you do NOT ignore this behaviour and attend to it immediately. Make the child aware of the reasons why this behaviour is inappropriate and then as soon as possible praise them for appropriate behaviour.