Managing aggression and non-compliance in child care centres Charles Swart

The trajectory of aggressive and disruptive behaviour can impact the child, their family, and the community if left untreated, incurring psychological, emotional, and social costs. Untreated externalising behaviours increase the chance of a child maladjusted behaviour developing in adulthood (Lochman, 2003; McCabe & Frede, 2007; Reid, Littlefield, & Hammond, 2008). Thus early intervention is important. The following discussion aims to present the current interventions for reducing aggressive noncompliant behaviours in and the preschool setting. These interventions are into behavioural, grouped social psychological and cognitive perspectives. Specifically discussed is an effective evidenced-based treatment, designed to increase prosocial behaviour.

Behaviour Interventions

In the elimination of unwanted behaviours, the different tools and strategies employed by intervention programs fit into two behaviour categories 1) enhancement and 2) behaviour reduction strategies, strategies (Papatheodorou, 2005). Common behavioural enhancing techniques are praise and token economies. They aim to reinforce behaviour. Commonly prosocial used behavioural reduction techniques include timeout and negative reinforcement. Both enhancing and reduction techniques are useful in the classroom setting, for managing a variety of problem behaviours across all age groups (Atwater & Morris, 1988; Nelson & Rutherford, 1988; Wheldall & Merret, 1992; all cited by Papatheodorou 2005).

Time-Out (TO)

One of the most widely applied behaviour strategies aimed at reducing disruptive target behaviours is *timeout (TO)* (Everett et al., 2007; Sterling & Watson, 1999). This process can be conceptualised as time away from reinforcing events, contingent upon the presentation of an unwanted behaviour (Everett et al., 2007). In its simplest form TO, is seen as a punishment procedure revoking the chances for reinforcement, based on a response-consequence contingency. TO is most effective for behaviours that are maintained by attention, tangible reinforcers, and when there is high discriminability between time-in and timeout (Sterling & Watson, 1999).

Research has shown that timeout can effectively reduce aggressive and noncompliant behaviour (Everett et al., 2007; Fabiano et al., 2004; Mace et al., 1988; Sterling & Watson, 1999). For example, Fabiano et al. (2004) compared the effectiveness of three TO procedures on a sample of 71 children diagnosed with ADHD who exhibited aggressive and noncompliant behaviours. The authors used a fixed 5 and 10 minute TO phase, and an escalating/de-escalating 5, 10, 15 minute TO phase. The results showed that all three TO conditions performed significantly better than the no TO condition, and were effective in significantly reducing the frequency of intentional aggression, and repeated noncompliance, regardless of the child's age (Fabiano et al., 2004). Time Out as a punishing procedure has been used to reduce unwanted behaviour for decades.

TO can also serve as a negative reinforcer (Everett et al., 2007). For example, a student who has poor maths skills acts out in class because he is unable to complete the work. The teacher asks him to stay focused, but after numerous occasions of noncompliance the teacher sends him out of class (TO) (Alsop, 2009a). In behavioural terms, the difficult maths work acts as an aversive stimulus, TO then functions as a negative reinforcer as it takes the student away from the aversive stimulus. As such, some researchers have suggested that timeout cannot be used to decrease escape

maintained behaviours (Shriver & Allen, 1996; Sterling-Turner & Watson, 1999; Taylor & Miller, 1997; all cited Everett et al., 2009). However in a clever variation, Everett et al., (2009) using two variations of TO (timeout with/without escape extinction) reduced the behaviour of four with children escape-maintained noncompliance. The escape extinction strategy required the adult to repeat the command that resulted in TO in the first instance until compliance was achieved. The analysis indicated that TO with escape extinction was effective in significantly reducing noncompliant behaviour.

The research by Fabiano et al. (2004), Everett et al. (2009), Mace et al. (1986), and other researchers established TO as a prominent tool for reducing behaviours maintained by both positive and negative reinforcers in a wide range of settings. But there are some potential caveats in using TO. For example: the potential loss of time; lack of universal learning effectiveness; and not being constructive (Alsop, 2009a). For example, with regard to pre-school children, time out takes them away from opportunities to learn social play, and interpersonal interactions. In answer to these assertions, Morgan (2009) explains that if the child was behaving in a way that resulted in time out, then the child was not learning anything in the first place. Variations can be made to the TO procedure to maximise the advantages, whilst aiming to minimise the disadvantages. For example in the Everett et al. (2007) study mentioned above, they added an escape extinction paradigm which worked effectively in decreasing escape maintained noncompliance. Although TO is widely used by preschool teachers, it is not always properly implemented (Sterling & Watson, 1999). This may be due to a lack of knowledge of the parameters and procedures that need to be applied alongside TO to result in effective implementation (Sterling & Watson, 1999).

The use of social reinforcement, for example, approval and praise, is reported to be one of the most widely used and effective behaviour enhancing techniques by early childhood teachers (Papatheodorou, 2005). According to the behavioural literature, effective application of praise has the potential to act as a positive reinforcer, and has been shown to reduce disruptive behaviours in class, and promote learning (Harris, Wolf, & Baer, 1967; Madsen, Becker, & Thomas, 1968; O'Leary, & O'Leary, 1977; all cited Corpus & Lepper, 2007). In contrast, the social-cognitive literature has shown praise to not only be ineffective, but detrimental to the cognitive functioning of the individual (Corpus & Lepper, 2007). However the research has now differentiated between types of reinforcement and their effects on the longterm motivation of the individual. Praise can be person focused, or process focussed (Corpus & Lepper, 2007; Mueller & Dweck, 1998). Research suggests that person-praised individuals show greater attributions to their personal self-worth, compared to individuals who are process-praised. Subsequently when person-praised individuals experience failure they are more likely to attribute the failure to reflecting their self-worth, instead of on their effort (process-praised individuals) (Mueller & Dweck, 1998).

The effective use of praise has also been shown to reduce instances of aggressive behaviour. For example, Scott, Burton, and (1967) changed unprovoked Yarrow behaviour aggressive characterised bv physical assault, verbal threats, and aggressive derogatory demands in a four year old boy into more prosocial behaviour. Functional analysis revealed the aggressive behaviour was being maintained by the teachers through, more often than not, giving attention to the aggressive behaviour of the child, and less for his prosocial behaviours (Scott et al., 1967). Through using social reinforcement effectively, prosocial behaviour increased when adult (teacher) approval was given, contingent

upon the demonstration of socially acceptable behaviour.

In the classroom setting, a child's good behaviour should always be reinforced through praise that is honest, genuine, spontaneous, but most importantly descriptive in nature (Morgan, 2009). Examples of descriptive praise would be: "thank you for helping the old lady cross the road safely", or, "thank you for using your manners, you are very polite". In contrast to using qualitative statements, such as "well done" or "good job", using descriptive praise helps the child understand what they were praised for. The use of such contingent praise reinforces good behaviour, but also has positive effects on the child's selfesteem (Morgan, 2009).

Token Economies

Token economies are another widely applied method for reinforcing good, prosocial behaviour in children. A typical token economy system in the classroom setting basically involves rules for earning or losing tokens (McLaughlin & Williams, 1988; Naughton & McLaughlin, 1993; all cited by Klimas & McLaughlin, 2007). The tokens that are awarded for positive behaviours, can then be 'banked', and saved up so the child can select from a choice of main rewards (Morgan 2009). For example, Klimas & McLaughlin (2007) used a token economy system on a 6 year old girl who was noncompliant to requests to do school work. The study was an ABC design (baseline, 3 token system, 5 token system), and was implemented over the course of 15 school days. The overall results indicated that in both 3 and 5 token systems the time to complete school work decreased, the number of completed work sheets increased. the frequency of and noncompliant behaviours decreased (Klimas and McLaughlin, 2007)

Reitman, Murphy, Hupp, and O'Callaghan, (2004) found supporting evidence for the use of a token economy system for three boys displaying aggressive and noncompliant behaviour. In this study Reitman et al. (2004) compared the level of acceptable behaviour in a group reward system and an individual reward system. Results showed that the group reward contingency was just as effective as the individually based reward contingency (Reitman et al., 2004). Filcheck, McNeil, Greco, and Bernard (2004) have, however, reported some potential detrimental effects. For example, multiple students in a class would require multiple reward charts, children without the reward program will not have the same opportunity to gain reward, and children who are on the behaviour program may be singled out as having a problem. To overcome these limitations, Filcheck et al. (2004), examined the effects of a whole class token economy system (The Level System), and Teacher-Child Interaction Therapy, on a preschool class labelled as "out of control" (Filcheck et al., 2004, pp. 353). Results from the effects of the token economy showed that there was a significant decrease in disruptive wide) after behaviour (class the implementation of the whole class token economy system. Results from the interaction therapy will be elaborated on later in this report. There are typically three major reinforcement contingencies that control the operant behaviour of a child: 1) access to tangible reinforcements, 2) access to attention, and 3) escape from task demands (Sterling & Watson, 1999). This approach requires the continual measurement of the performance of the intervention throughout the whole process (formative assessment). This means that the behaviour program can be altered if it is unsuccessful (Papatheodorou, 2005). It requires teachers, parents, and professionals who are working with children to be aware of the establishing operations that could be involved, with a particular behaviour, for example, sleep deprivation or hunger (Alsop, 2009b; Hanley, Iwata, & McCord, 2003). Greater emphasis is thus placed on the classroom environment. Morgan (2009)

accentuates that the success of reinforcements, rewards, and reprimands are all dependent on the quality of the class environment, and its congruence with good behaviour practice.

Other interventions: The cognitive affective approach

In contrast to behaviourism, the cognitive focuses affective approach on the relationship between thought, emotions and behaviour, and its interventions are mainly emotionally cognitive and oriented (Papatheodorou, 2005). It acknowledges the fact that nursery and preschool children are at a developmental age where their cognitive abilities are still limited. Consequently they may be unaware of behaviour that is inappropriate (Papatheodorou, 2005). Interventions employed by the cognitive affective approach aim to develop the cognitive ability of the child, thereby increasing self-control over their own behaviour (Bronson, 2000; Carpenter & Apter, 1988; all cited by Papatheodorou, 2005). In contrast, typical behaviour approaches aim to control the child's behaviour through external means (Bronson, 2000; Carpenter and Apter, 1988; all cited by Papatheodorou, 2005).

Social skills training (SST)

This cognitive behavioural technique has four core aims for the child: i) to interpret social cues from others and the social context, ii) develop social skills, iii) be able to identify problems, predict solutions, generate alternatives, and select and plan appropriate responses, and iv) use selfinstruction and self-verbalisation (Spence, 2005; cited by Papatheodorou, 2005).

The empirical evidence for the effectiveness of SST is inconsistent (Spence, 2003). For example in one review of 79 controlled outcome studies, SST produced an effect size of .40 (Schneider, 1992; cited by Spence, 2003), and in a different metaanalysis of SST, Quinn et al. (1999, cited by Spence 2003) reported an effect size of only .199. However there are some positive findings. For example, in a meta-analysis by Beelmann et al. (1994; as cited by Spence, 2003), there was a bigger effect size of monomodal behavioural SST (for example teaching appropriate eye contact and facial expression, through the use of either role-playing/behavioural modelling. rehearsal, or feedback) on social interaction skills (.61) than on social-cognitive measures (.13). These effects were found to be greater for preschool children (.96), than for adolescents (.38) (Beelmann, 1994; cited in Spence, 2003). There was also a moderate effect size of .48, of the effectiveness of SST as an intervention for children with externalising behaviours (Beelmann, 1994; cited in Spence, 2003), and an effect size of .37, in children with aggression (Schneider 1992; cited in Spence, 2003).

Nevertheless there is now general acceptance among researchers of the limitations of SST as a sole intervention for emotional and behavioural disorders, but it has found a place among multi-method interventions (Spence, 2003). Spence (2003) proposed several methods that can be employed to enhance the efficacy of SST. Among these are several suggestions of pure behavioural strategies; for example, token economy systems and other contingency management methods to facilitate the acquisition process of the social skills, the of teachers/parents role to model appropriate behaviour, and serve as antecedent cues for socially appropriate behaviour, and lastly the inclusion of socially competent peers to model appropriate behaviour (vicarious learning) (Spence, 2003).

Interpersonal Cognitive Problem Solving (ICPS)

The ICPS approach has three main objectives: i) To teach children how to think, not what to think, regarding problem solving abilities with peers and adults, ii) To reduce and prevent high risk behaviours such as aggression, impatience (frustration), and social withdrawal, and iii) To help teachers/parents/caregivers apply a problem solving style of communication

(Shure, 2001). The core tenant of ICPS is that children who display behavioural difficulties have a limited repertoire of interpersonal cognitive problem solving skills. In contrast, the child who is able to conceptualise a variety of solutions to interpersonal problems, who can recognise possible consequences of their actions, and who can envision prior causal dynamics of interpersonal events is less likely to express difficult behaviours (Shure, 2001).

ICPS has shown itself to be useful in promoting individual expression of prosocial behaviour, and reducing impulsive and inhibited behaviours (characterised by levels of emotionality, impatience, and dominance-aggression; Shure, 2001; Shure & Spivack, 1982). The program is aimed at 4 to 12 year old children, and consists of sequenced games and dialogues around three levels of language and thinking skills (Shure, 2001; Shure & Spivack 1980). The first level aims to increase the childrens' problem solving vocabulary through games and dialogues, the second level is focused on vocabulary that describes how people feel, and the third level consists of applying "problem solving skills [as] learned solutions to a problem and consequences to an act" (Shure, 2001, pp. 6).

To establish which of the ICPS skills were behavioural mediators, Shure and Spivack (1980) conducted a study using 219 African American boys and girls between 4 and 5 years of age. Over the course of 2 years they implemented the ICPS program with 113 nursery school children, with 106 controls who did not receive ICPS training. In their experiment there were substantial attrition rates due to a lengthy school strike. Final results showed that 36% of children who were trained were rated as adjusted (not impulsive or inhibited) and 47% of controls were *adjusted*; following intervention, 71% and 54% respectively were adjusted. Of 44 children who exhibited impulsive behaviour (characterised by high levels of emotionality, impatience, dominance-aggression), after intervention 22 (50%) were rated as adjusted (Shure and Spivack, 1980). At a one year follow up, 70% (n = 30) of trained children retained their adjustment behaviour, compared to 30% (n = 27) of the nontrained children (Shure, 2001).

Analysis of the ICPS skills and IQ (a possible confounding factor) found that the relationship between the ICPS skills and adaptive behaviour increase in was independent of IQ (Shure & Spivack, 1980). The program can be easily implemented in the preschool and kindergarten environments, for example during story time, or whenever the children are together. It is recommended to complete at least one 20 minute session daily for four months (Shure, 2001).

Extent to which other successful treatments are "behavioural".

Teacher Child Interaction Therapy (TCIT)

TCIT is an intervention program that has evolved from the original Parent Child Interaction Therapy (PCIT; Filcheck et al., 2004; McIntosh et al., 2000). The PCIT is a 12 week treatment program for children who are 1 - 7 years of age, and who are displaying problem behaviours (including aggression and noncompliance; Filcheck et al., 2004, McIntosh et al., 2000). The efficacy of PCIT is well supported, and therefore the move into the educational setting is not surprising. The principles and goals of TCIT are exactly the same as for PCIT, the only difference is the setting in which the intervention occurs, for example in the clinical setting for PCIT, and classroom for TCIT (Filcheck et al., 2004; McIntosh et al., 2000). The program consists of two phases: i) Child-Directed Interaction (where the focus is on training the teacher, and establishing rapport with the child), and ii) Teacher Directed Interaction (characterised by a more authoritative and directive approach by the teacher/parent; Filcheck et al., 2004; McIntosh et al., 2000).

In the Child Centred Interaction (CDI), the teacher is taught how to implement the non directive PRIDE skill base, for example, using *labelled praise, reflecting* the child's

statements, *imitating* the child in a play scenario, description of the child's play, and enthusiastically interacting with the child (Bagner, Fernandez, & Eyberg, 2004; Filcheck et al., 2004). The goal is for the teacher to follow the child's lead in the play, and to practice avoiding criticism, questions, and commands which will take control away from the child (Bagner et al., 2004). They are also taught how to respond to appropriate behaviour and how to ignore inappropriate behaviour (Bagner et al., 2004; Filcheck et al., 2004; McIntosh et al., 2000). Research indicates that the effective use of PRIDE skills decreases inappropriate child behaviour such as non-compliance and aggression (Filcheck et al., 2004).

During the TDI phase, which starts after about 5 - 7 sessions of CDI, the teacher is taught how to give effective instructions, using two choice statements, and implementing a TO procedure accurately (Filcheck et al., 2004). A typical TDI phase lasts for around 5 - 7 sessions (McIntosh et al., 2000).

A closer observation of the program reveals that this program relies on the effective use of behavioural principles. For example, in the CDI phase, the teacher is taught how to use labelled praise, which is synonymous with performance praise. It is a constructive positive reinforcer, and its use has been empirical validated through research discussed earlier (Corpus & Lepper, 2007; Mueller & Dweck, 1998). Other positive reinforcers are also present in this phase; for example, if the teacher enthusiastically, without criticism, plays with the child, this activity would reinforce their appropriate behaviour. Consequently, if the teacher effectively ignores inappropriate behaviour, then through extinction that behaviour would cease.

In the TDI phase, there is also a behaviour influence. For example, if the child is noncompliant, then the teacher is taught the appropriate use of a TO intervention. Again the efficacy of this procedure has been empirically validated. Additionally, in the TDI phase the teachers are taught appropriate use of instructions; for example, to give a description of the command, not just a directive, for example: "Don't touch that". These techniques can be seen as altering the antecedents, thereby more likely to elicit prosocial behaviours than aberrant ones.

Important Behaviour Components applied in Successful Treatments

The behaviour model is concerned with the observation of human behaviour and how it is learned (Papatheodorou, 2005). Therefore the behaviour model would define the problem behaviour of a child as, i) being controlled by the consequences of the behaviour, and environmental contingencies of reward and punishment, and ii) that the behaviour is learned through observing the consequences of other people's behaviour (Papatheodorou, 2005). Premack defined reinforcement as the likelihood of one behaviour recurring being dependent upon it being followed by a higher probability behaviour (Alsop, 2009b).

The framework of this model provides one with the fundamental tools to explain why some behaviours are maintained, and others not, and why some behaviours are expressed and others not. With regard to reward and contingencies, punishment these behavioural concepts are applied in the processes of praise, and TO respectively. Similarly token economies are applied in classroom settings to shape prosocial behaviour through positively reinforcing some behaviours and not others. In addition there are other moderating factors that influence the effectiveness of

some reinforcers. For example, response cost plays a big role in a token economy type system. Response Cost is defined as the withdrawal of conditioned reinforcers contingent upon a response of undesirable behaviour (Alsop, 2009a).

Conclusion

It is clear that aggressive and non-compliant childhood behaviour in early is unfavourable. It can adversely affect not only the individual's future, but also impact on inter-relationships with others and functioning in society in general. It is therefore important that behaviours such as non-compliance aggression and are terminated at an early age. Accordingly, the literature discussed above provides intervention strategies from both the behavioural and cognitive schools of thought, illuminating the richness and variety of this particular field of research.

Behaviour strategies in particular play a influential role in decreasing heavily aggressive and non-compliant behaviour in the preschool population. A number of prominent techniques are used to eliminate disruptive behaviours; for example, TO, praise, and the contingent reinforcement of attention. The research indicates that when behaviour techniques are used effectively, they are powerful in shaping the mind and behaviours of young children for the better. However, when the interventions are disorganised, inconsistent, or not properly implemented, the negative consequences can be significant.

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