Using Peer Mediated Interventions to Enhance the Social Skills of Pupils with Autistic Spectrum Disorder

In this literature review, the author first explores various types of peer led interventions used to enhance the social skills of pupils with Autistic Spectrum Disorder (ASD), and the benefits of combining different teaching methods with peer led interventions. Then, while investigating the criteria that must be considered when choosing an appropriate, neuro-typical pupil to participate in the intervention, the author examines the results of such studies and explores the limitations of using peer led interventions to enhance social skills for children with Autistic Spectrum Disorder. Finally, recommendations are offered for teachers who wish to use a peer mediated approach as a strategy to enhance the social skills of pupils with ASD.

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INTRODUCTION

In his book, 'The Presentation of Self in Everyday Life', Goffman (1959) introduces the Concept of Social Performance. This draws comparisons between our social interactions and a performance at the theatre. He likened our interactions with each other to an acting performance, and the social setting in which these take place, to a stage. He noted that we tend to modify our 'performance' to the particular 'stage' on which we find ourselves. By extension, neuro-typical people also use a 'back stage' and a 'front stage' depending on how public or private our interactions are. Instinctively, we know which 'performance' is suitable for each 'stage'. Pupils with Autistic Spectrum Disorder (ASD) tend to be unable to grasp this concept. They often cannot marry the appropriate behaviour with the particular social situation in which they find themselves. It was noted by The National Autistic Society (2015) that this requires explicit and specific teaching. This is usually an adult led exercise but alternatively it can also be led by their peers. According to Korkiamaki (2011), children are able to support, control and build on their own capacities and by extension, those of their peers.

This literature review will explore various types of peer led interventions used to enhance the social skills of pupils with ASD, and the benefits of combining different teaching methods with peer led interventions. It will also investigate the criteria that must be considered when choosing an appropriate, neuro-typical pupil to participate in the intervention. It will examine the results of such studies and explore the limitations of using peer led interventions to enhance social skills for children with Autistic Spectrum Disorder. Finally it will offer recommendations for teachers who wish to use a peer mediated approach as a strategy to enhance the social skills of pupils with ASD.

TRAINING FOR PEER-LED INTERVENTIONS

Children's friendships and mutual networks are important providers of social resources according to Korkiamaki (2011) who conducted a study in West Finland, examining how children provide and receive emotional support to and from each other. The data used in the study was collected from 29 interviews with boys and girls between the ages of 13 and 15 from two higher comprehensive schools between 2006 and 2007. The analysis showed that when children's mutual networks are explored, children appear active in constructing support and control through modes and strategies of their own.

According to Shamir and Lazerovitz (2007), the training of peers for their role in peer learning appears to be essential for the method's effectiveness among students with special educational needs. However, a study carried out by Morrison, Kamps, Garcia and Parker (2001), which endeavoured to improve initiations and social skills of children with ASD, chose not to train the peers beforehand. Instead it was decided to choose the target skill the focus child needed to work on and teach it to the group of four children together. Four focus children – three boys and one girl were chosen, ranging in age from 10 to 13. All four pupils were considered to have a diagnosis of mild to moderate autism. The findings from this study were that teaching social skills using peer mediation, self-monitoring, peer-monitoring, and reinforcement was effective in increasing initiations by students with ASD to their peers during game play. Another positive to be remarked upon was that pupils with ASD were able to monitor and use appropriate social skills during play with very little involvement from an adult. A similar method of intervention was conducted by Kamps, Thiemann-Bourque, Heitzman-Powell, Schwartz, Rosenberg, Mason and Cox (2015) with Kindergarten and 1st grade pupils. As with the research conducted by Morrison et al. (2001), the peers were not coached prior to the intervention. Instead the children were split into groups of four, each

group containing one pupil with ASD, and taught the target skill in an adult led discussion. This was followed by games and the closure of the lesson involved reinforcement. It was reported by the teacher that those pupils who engaged in the intervention group, demonstrated improved social skills and classroom interaction skills compared to the non-intervention group.

By contrast, a number of interventions carried out to improve social interactions during yard time consisted of direct, explicit training of the peers. A study conducted by Kasari, Rotheram-Fuller, Locke and Gulsrud (2012) involved the explicit training of the peers to engage the children with ASD to socially interact and role play. They were also taught how to prompt participants to respond or initiate a communication. The skills selected were skills the target students struggled with. In a study by Owen-DeSchryver, Carr, Cale and Blakely-Smith (2008) the peers were firstly read a story about a child with autism which explained to them the characteristics displayed by children with ASD. They were then taught how to respond to the initiations of the particular pupil with autism and to consider their interests when playing. Gonzalez-Lopez and Kamps (1997) taught the peers to give clear instructions and to model appropriate social skills. All three studies showed improvements in various areas including popularity with peers, decreased isolation in the playground, decreases in disruptive behaviours and improved frequency in appropriate social behaviours.

A combination of both methods, namely training the peers prior to the intervention and teaching the desired skills during the intervention, was employed by McFadden, Kamps and Heitzman-Powell (2013). Four children with ASD and their classmates received training in four key skills. These were: 1) playing together 2) complimenting and encouraging each other 3) talking about what they were doing and giving ideas and 4) using names and getting attention. A token system was used during break time to reinforce the skills learned. It was reported that initiations and responses to peers increased for all four children with ASD.

It would appear that each method of coaching the peers, whether they were coached before the intervention, during the intervention or using a combination of both yielded positive results. This allows a great deal of choice when choosing a particular peer training style.

Choosing a Peer
Based on practical experience, Odom and Strain (1984) outlined basic criteria for selecting appropriate peers. It was recommended that the children be of similar age to the target child, have a record of good school attendance and age appropriate social skills. Many studies have adhered to these guidelines but more have

prioritised certain skills depending on the needs of the target pupil. Universally, it was considered crucial that the researchers had the consent of the child's parents. For the intervention for Kindergarten and First Grade pupils, Kamps et al. (2015) also chose children who had high social status within the class and were willing to participate. For a playground intervention, Harper (as cited by Watkins, O'Reilly, Kuhn, Gevarter, Lancioni, Sigafoos, et al., 2015) cited a history of volunteering to help as a selection criteria. In a study to enhance social skills in the classroom and cafeteria, Hughes (as cited in Watkins et al., 2015) selected pupils who were interested in interacting with pupils with disabilities. In a study to promote inclusivity in the classroom, Jung (as cited in Watkins et al., 2015) stated that a peer's ability to consistently follow instructions was important. The variable in all the studies mentioned above was the age of the focus pupils, ranging from five years to 21 years. It appears that when considering an appropriate peer to participate in the mediation, it is important to consider carefully what requirements a peer should have, in order to yield the best result. Overall, it would seem very important that such peers would have a sense of empathy for others, as well as a willingness to become involved and be happy to comply with any instructions given.

Teaching Strategies Implemented with Peer Mediation
The following studies outline the various teaching strategies that have been employed during the implementation of peer mediation sessions involving children with ASD. Many researchers have observed that the strategies of modelling, prompting and reinforcing are vital in peer mediation (Morrison et al., 2001). It has been reported that the use of direct instruction coupled with peer mediation approaches show marked improvements in children's communication with their peers (Kamps, as cited in Shamir et al., 2007). Some studies used what is termed 'the intervention package'. This consisted of several components including pre-teaching, priming, prompting and reinforcement (Mason, Kamps, Turcotte, Cox, Feldmiller, and Miller, 2014). The study by Shamir et al. (2007) involved using self-regulated strategies such as self-monitoring and peer-monitoring. Self-monitoring involved all the students in the group using a tick box system to get a tangible reward when the target social skill was carried out. This made them conscious of performing the skill and the reward gave them the motivation to do so. The peer-monitoring strategy involved the pupil identifying when their partner had performed the skill and documenting it. Games and the use of toys are also an important strategy in practising certain social skills such as turn taking or requesting (Mason et al., 2014).

Measurement of the Outcomes
A review of the literature revealed a number of positive outcomes in terms of social development for students with ASD. However, the measure of success

varied widely and this is no surprise, as the starting points in each case were different. In the study by Morrison et al. (2001), the treatment concluded when the appropriate skill had been observed and maintained for three consecutive sessions with the target student. Other studies, such as that by Banda (as cited in Watkins, 2015) required two consecutive initiations and responses to be deemed successful. Harper (as cited in Watkins, 2015) required a number of turn taking exchanges and attempts to gain attention. Katz and Giorlametto (as cited in Watkins, 2015) observed three instances of extended interactions and deemed that enough to be successful. These studies were evaluated and scored highly in the Evaluative Method for Determining Evidence-Based Practices in Autism (Reichow, Volkmar and Cicchetti, 2008). They are therefore deemed reliable.

Limitations of Such Studies
Overall, a limitation of these studies appears to be the lack of data examining whether or not the progress observed at the end of the intervention was maintained after a six month or one year period. Mason et al. (2014) has noted that the lack of such maintenance data prohibits analysis of whether the communicative behaviours continued after the intervention concluded. Only one study noted that the progress made after the intervention was not sustained with   pupils requiring booster sessions to relearn the skills previously acquired. (Morrison et al. 2001). According to Goldstein (as cited in Kamps et al. 2015), children with ASD have a restricted range of communication skills which render initiating interactions, maintaining reciprocity and responding to others very difficult. It is widely known that such difficulties can lead to withdrawal and isolation, making integration into school and community difficult (Bellini, as cited in Kamps. 2015). Due to the fact that these are the social deficits that children with ASD display, coupled with the importance of repetition and reinforcement, it is surprising that the success of such studies is only measured after the intervention is finished and not at regular intervals for a sustained period afterwards.

Many of the studies above involved adult led interventions with the peers acting as mediators. A limitation that has been noted by Mason et al. (2014) is that the adult acting as the interventionist can have a negative impact on the overall success of these interventions. The interventionist provided a discriminative stimulus for all the students to interact with each other. Once again, due to the lack of continued research it is unclear whether the use of the targeted social skills continued after the period of these interventions.

As demonstrated in the studies discussed above, research is showing that peer mediation is yielding positive results with regard to social inclusion for children

with ASD. These include increases in participation and appropriate behaviour during social interactions within the school setting (Carr and Darcy, as cited in Morrison et al., 2001), increases in initiations (Jung, as cited in Watkins, 2015), mastery of specific skills necessary for successful social interactions such as sharing, requesting and commenting (Morrison et al., 2001) and decreased isolation during yard time (Kasari et al., 2012). The use of peers as mediators, coupled with other strategies such as direct instruction, modelling, reinforcing, self and peer monitoring are all proving to be worthwhile endeavours. It is, however, unfortunate that there is little research to determine whether the success attained after the intervention is sustained after a prolonged period. This is an area of extreme importance because, in essence, the objective of such interventions is to equip pupils with ASD with the tools necessary for appropriate social interactions, not just in the short term but ultimately for their adult lives.

Recommendations for Peer Mediated Interventions in Schools
Before a peer mediated intervention can take place, the concept must be fully outlined for the target pupil's parents or guardians. When considering such an intervention, it would be paramount that the teachers involved are very familiar with the target pupil and the class as a whole. This ensures that firstly, the skills chosen are those that the pupil with ASD finds the most challenging and secondly, the correct peers are selected. Interventions are usually carried out over a period of six to eight weeks at a time deemed favourable by both the teachers and pupils. The selection of appropriate peers is a vital part of the process. However, each case will require different criteria to be met, depending on the specific objective of the intervention. In order to promote a positive environment for those involved, the peers must be willing participants taking part with the consent of parents or guardians. It would also be advantageous if such peers had a history of showing empathy towards others as they would be more likely to create a positive, safe environment for the target pupil. Much of the peer selection will depend on the judgement of the teacher who must consider the ages of the pupils involved, the skills being targeted and the cohort of peers available for selection at the time.

The training of peers before the intervention, during the intervention or a combination of both has all yielded favourable results. Many studies chose not to address the fact that the target pupil has ASD but the study by Owen-DeSchryver, Carr, Cale and Blakely-Smith (2008) chose to explain the characteristics of ASD to the target peers and taught them how to respond to such pupils. This method could cause difficulty in certain instances as the target pupil may not yet be aware that they have autism. Their parents may not wish for that fact to be disclosed to the child's peers. It is important to address such matters when consulting with the family of the target pupil.

Research suggests that the strategies of modelling, prompting and reinforcing are necessary for the teaching of social skills. Incorporating the self-regulation strategies of self-monitoring and peer-monitoring are a useful addition. Encouraging the pupils to record each time they carry out the target skill makes them aware of the objective of the intervention. Allowing them to monitor others enables them to recognise correct social behaviour. This explicit and deliberate observation of others will hopefully act as a learning tool for the target pupil.

The measurement of success is very subjective and will vary from group to group. It is important to note the pupil's ability in the target area at the beginning and the end of the intervention. While there is little research to examine whether the progress made during such interventions was sustained, one study noted that the pupil needed booster sessions at intervals afterwards. Given the nature of autism, this is hardly surprising and teachers should organise such sessions at intervals after the actual intervention has concluded.

Using a peer mediated approach to enhance the social skills of pupils with ASD is a wonderful way of promoting inclusivity within our schools. It provides greater opportunities for engagement between children with ASD and their neuro-typical contemporaries. The target pupil is enabled to build relationships with the selected peers and this in turn can provide a greater support network for the pupil within the school setting. In order for a child to progress in the school environment, it is important for them to be happy. By equipping them with the social skills necessary to have their needs met and to interact successfully we are helping them to access the curriculum in a holistic manner. This sequentially builds their self-confidence and self-esteem as they progress through our education system and on into adulthood.

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