

COMMUNICATION

# Using the Picture Exchange Communication System with families of children with autism

Cooper L (2017) Using the Picture Exchange Communication System with families of children with autism.

Learning Disability Practice, 20, 4, 22-25. Date of submission: 6 February 2017; date of acceptance: 23 March 2017. doi: 10.7748/ldp.2017.e1842

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**Peer review**

This article has been subject to external double blind peer review and has been checked for plagiarism using automated software

**Conflict of interest**

None declared

**Abstract**

Children with autism experience difficulties with communication and interaction, and these impairments are most problematic for children who are non-verbal.

The Picture Exchange Communication System (PECS) is an intervention strategy that aims to improve communication for people with autism.

Using PECS in the family environment can be challenging in the initial stages. The specific needs of individual families should be considered and a whole family approach adopted. With appropriate support and a consistent approach, using PECS can help to improve communication and reduce challenging behaviours that might be exacerbated by the frustration of miscommunication.

**Keywords**

autism, communication, family, picture exchange communication system

AUTISM IS a lifelong neurodevelopmental condition (Boucher 2009). Children diagnosed with autism experience impairments in social interaction and communication, and they also have restrictive interests, behaviours or activities as well as sensory processing problems (Boucher 2009). Other characteristics children with autism present with include fixated thought processes and insistence on routines (Roth 2010). Children with autism will have difficulty interacting with others and may struggle to have insight into how others think and feel (Roth 2010).

Communication difficulty is a significant problem for children with autism and their families, and it is a considerable factor in the presentation of challenging behaviours (Hartley et al 2008). It is therefore important that parents are effectively supported to meet their child's communication needs.

**Functional communication**

Wodka et al (2013) highlight that about 20% to 30% of people diagnosed with autism will never be able to develop speech. It is therefore essential that alternative functional communication is developed for these children (Flippin et al 2010). One intervention strategy that has been identified as beneficial for people with autism is that of the Picture Exchange Communication System (PECS) developed by Frost and Bondy (2002).

PECS has been widely used and requires the person with communication difficulties

to exchange a picture for a highly preferred object. For example, if a child is highly motivated by biscuits then they would be encouraged to exchange a picture card of a biscuit for the actual biscuit or piece of biscuit. Implementing PECS consists of six phases (Frost and Bondy 2002). The first phase needs two adults. One adult acts as the physical prompter for the child to help them pick up the picture and give it to the other adult who is the receiver (Figure 1).

The receiver is the communicative partner whose role is to receive the picture and immediately give the child what was requested, for example a biscuit. The physical prompts are gradually faded and during phase 2 the child is encouraged to use a PECS book comprising picture cards attached to pages using an adhesive fabric fastener. The child

Figure 1. Picture card being received



picks up the picture and travels towards the communicative partner. Picture discrimination is taught in phase 3 and a sentence strip is introduced in phase 4 (Bondy and Frost 2011). This phase requires the child to place the card with the words 'I want' onto the strip alongside their preferred item or food request (Figure 2).

In the more advanced stages of PECS the child is encouraged to comment and answer questions (Bondy and Frost 2011). Implementation of PECS requires a consistent and procedural approach with strict adherence to the PECS training manual (2002).

### Implementing PECS in the family

The research around PECS is positive (Carre et al 2009). Benefits include reducing behaviours that challenge (Frea et al 2001, Anderson et al 2007), encouraging speech (Charlop-Christy et al 2002) and increasing social communication (Lerna et al 2014). Literature evaluating the use of PECS in the family at home is limited. As a learning disability nurse, the author has witnessed the benefits and progress in functional communication when the PECS system is in place in a special school environment. This progress is more difficult to attain in the home environment where circumstances vary. Carre et al (2009) implemented PECS training and identified that transition of PECS training from school to home was a challenge.

It was suggested that parents may not have responded consistently to their child's attempts to communicate using PECS and therefore the child reverted to inappropriate means of communication. This may stem from a lack of support provided to parents at the early stages of PECS implementation. In the school environment, there are more adults available and professionals who have been trained in PECS are immediately available for support. Parents may be more isolated at home and are therefore more likely to give up due to confusion in how to use PECS. This situation may be exacerbated by

parents having less time and structure in the home environment when compared with the more predictable structure at school. Links between home and school are therefore important when introducing PECS (Magiati and Howlin 2003).

When considering the family's situation, a significant barrier to implementation of phase 1 of PECS is apparent for single parents as two adults are needed to support the child. Practitioners need to consider each family's situation before implementing PECS at home.

Families are in differing socioeconomic circumstances and their needs require careful consideration before beginning PECS training. For example, a single parent with mental health problems who has four children may not be as motivated to implement PECS as a two-parent family with one child and no health problems. The priority for the former family is practical and emotional support, and this should be put in place for families with additional difficulties.

### Clinical outcomes

In circumstances when the author has supported the implementation of PECS in the home environment, there have been favourable outcomes in terms of facilitating choice and increasing social interactions between the child and parent. One parent reported how pleased she was that her child began eating breakfast again as he was able to use PECS to communicate that he did not want cereal, toast or yoghurt, and instead wanted curry which he began eating each morning. Previously he had no means to communicate this as he was non-verbal and, on some occasions, this would result in challenging behaviours.

Another parent was delighted that her daughter was able to express her inner thoughts after being told that her favourite yoghurts had been used up and there were none left. This ten-year-old girl could use her PECS book to find a picture of a shop and gave it to her mother. She was indicating that she wanted to go to the shops to get some more yoghurts. Before using the PECS programme this girl would become frustrated and would hit out at others. Her mother reported a reduction in the frequency of aggression after starting to use PECS.

A reduction in episodes of challenging behaviour was also identified by another parent of a ten-year-old boy. He would bang his head to communicate that he wanted access

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Figure 2. 'I want' picture card



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to food from a cupboard that he was unable to reach. This behaviour also represented his frustrations at not being able to gain access to what he wanted. He had no other means of communication. Joint support between school, community nurse and parents enabled the child to attain phase 4 PECS at home with a significant reduction in head banging and an increased use of PECS to communicate his needs effectively. The child also used PECS to enable him to communicate if he wanted to escape from a stressful environment. Previously he was only able to use aggression to communicate his need to escape a situation.

Carr and Durrand (1985) identify an inverse relationship between an effective means of communication and a reduction in challenging behaviours. Other research supports the benefits of PECS for reducing difficult behaviour. Anderson et al (2007) demonstrated improvements in challenging behaviours in a six-year-old boy with autism. Magiati and Howlin (2003) in a group study involving 34 children found a reduction of challenging behaviours when compared with the baseline before the intervention. Therefore the consideration of PECS as a foundation for behavioural intervention strategies should be considered by practitioners.

## Family-based approach

A family-based approach to employing the intervention is essential. Involving all family members enables effective generalisation rather than the child targeting one parent for PECS exchange. Both parents need to be included in PECS training. Involving fathers may be more of a challenge as they may often be perceived as the 'peripheral parent' and it is mothers who predominantly receive support in managing their child's needs about autism (Lashewicz et al 2016).

Bagner (2013) identifies that there are benefits for the child in terms of developmental progress and increased cohesion in the family when both parents are involved. Practitioners need to make an extra effort to ensure a family-based approach when using PECS. This may necessitate scheduling appointments to fit in with work. Siblings are another important part of the family and they also need to be included (Ferraioli et al 2012). PECS is a positive communication strategy between siblings that will promote a more positive relationship that can replace negative interactions and frustrations that may be

present between siblings of children with autism. Ferraioli et al (2012) advise that interactions between siblings can often be limited and the use of PECS can encourage positive interactions.

## Conclusion

There are considerable benefits to using PECS as an intervention strategy for families with children with autism, including improvements in social interaction and communication. Non-targeted outcomes include a reduction in challenging behaviours. It has been discussed that there can be challenges in the implementation of PECS in the family situation.

Considering the circumstances of individual families and providing the necessary support are essential before introducing PECS at home. Involving all family members should be considered as this is beneficial in building up positive family relationships and improving social interaction for the child with autism.



## Implications for practice

- » Implementation of PECS should be considered by practitioners for children with autism who have little or no verbal communication.
- » PECS is an appropriate intervention strategy for children with autism who present with behavioural challenges and it could formulate part of a proactive behaviour management plan.
- » Practitioners should carry out an assessment of the family's needs before implementing PECS.
- » Involvement of all family members should be prioritised to include each parent and siblings.
- » Links between home and school should be established when implementing PECS, and regular meetings will enable documentation of progress when using PECS in different environments. This will ensure a consistent approach and facilitate any necessary support from speech and language therapists.

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