



# Increasing the Independent Performance of Self Care Tasks in Children with ASD

For the parents and caregivers of children with disabilities, the main goal is often to increase the independence of the child in performing simple self care (e.g., brushing teeth) and daily living tasks (e.g., washing hands). Children with autism spectrum disorder (ASD) are often dependent on others to help them perform such tasks. When children become more independent in performing these tasks, it reduces the burden on the parent or caregiver, and can improve the self confidence of the child.

There are many ways that children with ASD are taught new skills. The teacher may use cues such as modeling the appropriate behaviour, telling the child using words or gestures, or physically guiding the child through the behaviour. However, even when the child has learned the skill, they may still need the cues from the teacher. For many children with ASD, it has been found effective to replace the cues from the teacher with self-management strategies such as picture schedules. However, visual schedules are not effective for some children who continue to rely on their teacher.

Another self-management strategy is the self-operated auditory prompting system (SOAPs). This strategy uses technology, such as a tape recorder, to record the verbal instructions of a task and remove the need for the teacher to be present.

## The Study

The present study investigated the effects of the SOAP system on the independent

performance of hand washing and tooth brushing by children with ASD and an intellectual disability. Two boys (6 and 11 years) and two girls (7 and 11 years) took part in the study. Their teacher reported that these children responded better to verbal cues than visual cues, and teaching them using picture schedules in the past had been unsuccessful.

## The SOAP System

This was a cassette tape player with the verbal instructions recorded on it. The children had been taught to press the play button, which had a smiley face sticker on it. The tasks of hand washing and tooth brushing were broken down into very small steps. Each of these steps was verbally recorded on a tape with enough space in between for the step to be completed.

## Before the SOAP System

The children were observed washing their hands and brushing their teeth without the SOAP system. The teacher recorded which of the steps of the tasks the children were able to perform independently.

## With the SOAP System

The teacher told the children 'brush your teeth' or 'wash your hands' and pointed to the cassette tape player. The teacher then recorded which of the steps of the tasks the children were able to perform independently.

## The Effect of the SOAP System

The tables below presents the percentage of steps of each task that each child was



able to perform independently before the SOAP system and with the SOAP system, along with the number of sessions required.

<b>Hand Washing</b>			
<b>Child</b>	<b>Before SOAPS</b>	<b>With SOAPS</b>	<b>Number of SOAPS sessions</b>
Todd	47%	100%	4
Yasmine	18%	100%	2
Rebecca	47%	94%	4
Henry	24%	88%	3

<b>Tooth Brushing</b>			
<b>Child</b>	<b>Before SOAPS</b>	<b>With SOAPS</b>	<b>Number of SOAPS sessions</b>
Todd	46%	77%	1
Yasmine	41%	82%	3
Rebecca	55%	100%	3
Henry	25%	78%	4

All of the children greatly improved in the percentage of steps of each task they were able to perform independently when the SOAP system was introduced. The authors reported that from the very first session, all children were able to complete a greater percentage of the tasks independently with the SOAP system than without.

Three of the children (Todd, Yasmine and Henry) performed better on the hand

washing than on the tooth brushing. Todd only had one session using the SOAP system for tooth brushing as the school holidays began and the researchers ran out of time. He may have improved further if he had had more sessions. For Yasmine and Henry, they might have done better because some of the hand washing tasks had been practices in the classroom prior to this intervention. Another reason may be that tooth brushing is a more difficult task because it requires fine motor skills.

The results of the study suggest that SOAP systems might be effective in helping children with ASD and intellectual disabilities become more independent in performing self care tasks. In addition, after the study, parents of all four children reported that the children were more independent in washing their hands and brushing their teeth at home.

#### **Limitations of the Study**

The authors noted that the number of children in the study was only small, and that more research should be done to confirm the results. They said that, while the SOAP system worked well for the children in this study, it may not work well for children with ASD who respond better to visual cues. While there were huge improvements in the performance of the children, they did not score zero before the SOAP system was introduced. This means it is likely the children had some experience with these tasks in the past. The result might not be so immediate for tasks that are completely new to the child. Finally, the SOAP system might disturb people around the child. If this is the case, a walkman or ipod could be used in the place of a cassette tape player, however, the child would need to tolerate headphones on or in their ears, which may



be a sensory issue for some children with ASD.

### **Summary**

A SOAP system is a self management system, where the steps of a task are recorded verbally and played back to a child with enough pausing in between for each step to be completed. The present study found that SOAPs greatly increased the percentage of steps of a task that were performed independently in children with ASD and an intellectual disability. SOAPs are likely to work best for children who respond well to verbal cues on tasks that are not completely new to them.

### **Reference**

McGaha Mays, N. & Heflin, L. J. (2011). Increasing independence in self-care tasks for children with autism using self-operated auditory prompts. *Research in Autism Spectrum Disorders*, 5, 1351-1357.

