

## Autism – Picture Exchange Communication System

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### ABSTRACT

**Objective:** The method used is a Czech version of the Picture Exchange Communication System (PECS), which was designed in Chicago, USA. The research aimed to map the user satisfaction with the method, to evaluate how difficult it is to master the PECS method, and to map the compliance with recommended practice. For the purposes of this study, a user is a professional who uses PECS to communicate with clients with ASD. The research section introduces the findings of a survey carried out in five selected special care centres and four schools in the Czech Republic.

**Methods:** The survey was held from September 2010 to December 2010, using a tailored questionnaire with 24 questions. The eligibility criterion set for the survey was that the respondents be using the PECS method at their current jobs. A total of 54 people participated in the research.

**Results:** An analysis of the results indicated that most respondents were satisfied with the PECS method. There are significant differences concerning the time the users need to learn to work with the PECS. The group of respondents participating in the study did not allow for the determination of generally valid time that is needed for the mastering of the PECS method. Furthermore, strict compliance with the procedures proved to be problematic. The main reasons for poor compliance with the procedures in practice included the need for an individual approach to the client, staff shortage, and lack of time for training. A major problem is using the method when the trained personnel are away on holiday.

**Conclusion:** The research showed that from the respondents' perspective, the PECS method appears suitable for communication with clients who have a variety of speech disorders. The PECS method may help the personnel of special care facilities to improve the quality of nursing care and accommodate clients' needs.

### KEY WORDS

autism, autistic spectrum disorders (ASD), intervention in autism, communication systems, picture exchange communication system (PECS)

### INTRODUCTION

Autism is one of the most serious developmental disorders. It is a mental developmental disability characterized by deficient social interaction, repetitive patterns of behaviour, and impaired communication skills. (Bondy, Frost, 2007)

The latest US research shows the prevalence of various forms of autism spectrum disorders (ASD) in the population is 9 per 1,000 children. (Rice, 2009)

In the Czech Republic (CR), children with ASD receive schooling in special education primary schools or are integrated in standard primary schools, while some children are placed in homes for special care. Special education schools now have programmes for children with ASD. The renowned Belgian expert on autism Theo Peeters reports that the creation of autistic

programmes has led to significant improvements in the performance of children with ASD thanks to special communication methods and an individual approach of teachers. (Sroková, Olšáková, 2004)

Parents and speech therapists try to teach children with speech impediments to speak. Traditional methods, however, are either ineffective or children take a very long time before they learn to use the language coherently. This often results in undesirable behaviour. (Knapcová, 2006)

Specialized care and good guidance provided by both the teacher and parent or caregiver are a great help for autistic individuals, improving the children's integration, quality of life, while reducing undesirable behaviour. (Kušová, 2011)

The key pillar that this care builds on is visualized, image-based, and structured learning. In order to help these children, alternative and augmentative forms of communication are introduced that completely replace or supplement speech. The implementation of these systems requires the child is able to e.g. mimic movement or concentrate on a task. (Knapcová, 2006)

The research part of the paper focused on a communication system that was specifically developed for children with ADS and adapted to their problems with verbal communication and socializing.

The Czech version of PECS (Picture Exchange Communication System), a method that was designed in the USA, can also be used with clients that have other diagnoses with significant problems e.g. concerning communication. The PECS teaches clients to communicate, emphasizing the importance and power of communication. (Knapcová, 2006)

## OBJECTIVE

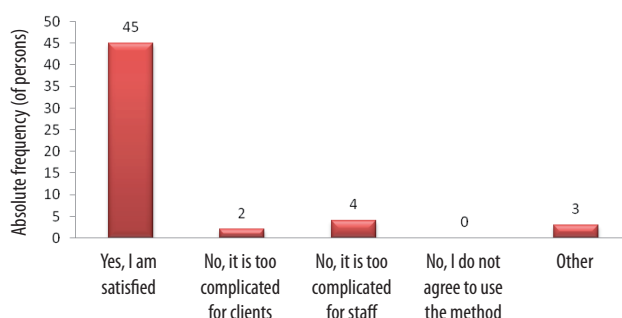
The research aimed at mapping the user satisfaction with the studied method, evaluating how difficult it is to master the PECS method, and mapping the respondent compliance with recommended procedures. We identified three research questions based on the above objectives: Are respondents satisfied with the use of the PECS method? How do respondents evaluate the mastering of the PECS method? What is the respondent compliance rate with the PECS method?

## PARTICIPANTS AND METHODS

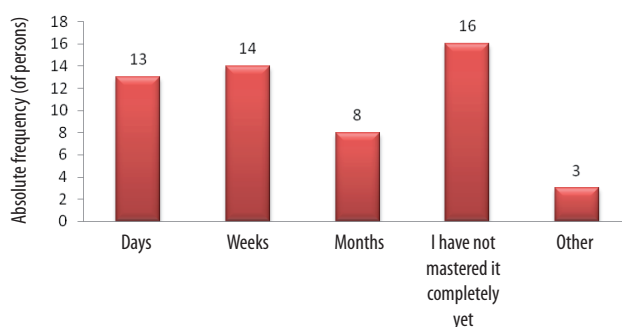
A questionnaire survey that had been designed specifically for this research was carried out as part of the research in order to achieve the objectives. It featured 24 questions selected on the basis of a pilot survey that took place in June 2010. A total of 41 special care facilities were asked to participate in the research, of which 32 were subsequently eliminated from the survey due to either not using the PECS method or declining to participate in the research. The survey was, therefore, conducted in 5 special care facilities and 4 schools, where 62 questionnaires were distributed. Fifty-four questionnaires (87%) were returned. The survey was conducted from September to December 2010. The criterion for respondent inclusion in the survey was that the respondents were using the PECS method at their current jobs. A total of 54 persons participated in the research.

## RESULTS

Respondent satisfaction with the PECS method was mapped by means of a closed-ended question. The answer choices had been compiled based on the pilot survey. Graph 1 shows the almost unanimous opinion on the PECS method. Of the total 54 (100%) respondents, 45 (83.33%) are satisfied with this method without reservation. Dissatisfaction and complexity for clients were reported by 2 (3.70%) respondents, while dissatisfaction and complexity for staff by 4 (7.41%) people. Three (5.56%) respondents reported satisfaction with the method only after the modification and introduction of a uniform approach for all employees (see Graph 1).

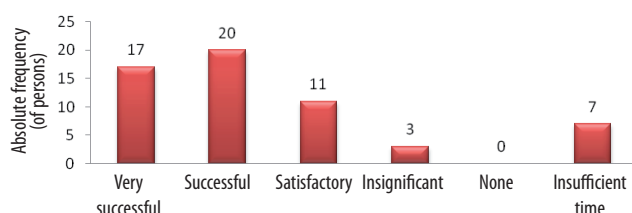


Graph 1 Respondent satisfaction with PECS method



Graph 2 Time needed to master PECS method

Graph 2 shows that the time needed to master the PECS method is very individual. As the survey involved only a particular group of respondents, it is impossible to provide an accurate estimate of the time required for flawless and self-confident mastering of the method. Twenty-seven (50%) respondents took several days or weeks to master the PECS method, while 8 (14.81%) respondents needed months. In comparison, 16 (29.63%) respondents have not mastered the PECS method completely yet. Three (5.56%) respondents reported to be still learning the PECS method.



**Graph 3** Evaluation of communication results when using the PECS method

Graph 3 shows the positive evaluation of the results of the PECS method. In their answer to this question, respondents could select from multiple responses, which were compiled based on the preceding pilot survey. The survey proper indicated that 17 respondents report the results to be very successful, 20 respondents successful, and 11 respondents satisfactory. Seven respondents claimed the time since the launch of the method had been too short for result assessment and 3 respondents rated the results as insignificant, which may have been affected by the lack of trust in new approaches or the short time interval for evaluation.

When establishing whether the respondents observe the procedures adequately, three questions were used to verify the adequacy: Is the method used even in summer, when the staff is away on holidays?, Do you use two teachers for PECS?, Do you follow precise procedures, instructions, and guidelines in every situation with all the selected clients?

Where respondents answered 'definitely agree', 'tend to agree' or 'agree to these questions, the compliance with procedures was considered sufficient. Where respondents answered 'tend to disagree' or 'disagree' to at least one of these questions, the compliance was considered insufficient. The findings indicate that 58.64% of respondents respect the procedures adequately, while 41.36% comply inadequately.

## DISCUSSION

Satisfaction is a term that is mentioned very often in everyday life. Specialized literature records several definitions that characterize and explain satisfaction. This points to the fact that satisfaction is highly individual and associated with feelings and emotions. It involves individual views on to which extent one's expectations have been met or fallen short. Satisfaction is associated with other health-reinforcing phenomena such as: success, prosperity, well-being, happiness, bliss, joy, empathy, humility, etc. (Křivohlavý, 2004)

The above graphs indicate that of the total 54 respondents, 45 respondents are very satisfied with the PECS method, which provides an excellent basis for the

development and implementation of this method when working with ASD clients. Satisfaction with methods used is very closely related to job satisfaction and to the satisfaction with results achieved at work. This is also reflected in the research by the fact that the high levels of satisfaction with the PECS method are proportional to the positive evaluation of the method's results. Only 3 of the 54 respondents evaluate the results to be negligible; these are the same respondents who have an ambivalent (mixed) view of the PECS method.

Efficient and smooth mastering of the method depends on the method's initial introduction, on adequate training, approach, and naturally on the individual's ability to learn. Of the 54 respondents, only 11 first came across this method in college. This proves that the method does not form a standard part of the university syllabuses, neither is it present in the curricula of secondary nursing schools.

The survey established that the time needed to master the method varies greatly as it is very individual and depends on a number of factors that our research did not include. The respondent group of the present research did not provide the average best time needed to master the method. Twenty-seven respondents required several days or weeks to master the PECS method, 8 respondents needed months, and 19 respondents claimed not to have mastered the method yet.

It is important to constantly encourage the client to use the method in contact with various people in various situations. Therefore, it is necessary to start with the immediate family and gradually expand to include friends. Efforts are rewarded when the client has the first conversation with a stranger after the client has only been communicating with family members so far. (Kubová, 1996)

Compliance with the methodology procedures represents an important prerequisite if the client is to learn to communicate functionally. The PECS method demands that each new step is thoroughly prepared and procedures continuously verified. The main reason for poor compliance with the procedures is often the need for an individual approach to the client, followed by staff shortages and lack of time to practice. A major problem is using the method when the trained personnel are away on holiday (e.g. in summer). Once the client stops following the method for a while, the result is a significant delay in progress, with some clients experiencing discomfort.

When a person with ADS arrives in a medical facility, he/she is struggling with difficulties that arise from the nature and specifics of the disorder. This is a difficult situation for both the client and the healthcare professionals who are in contact with the client. Good

knowledge of the issue and understanding and using specific approaches greatly facilitate interaction and the course of medical procedures. (Říhová, 2010)

## CONCLUSION

Autism spectrum disorders are a very serious diagnosis (Bondy, Frost, 2007). Based on the above results, PECS ranks among the most effective methods to establish effective communication with clients with ADS. It would therefore be desirable to focus on raising awareness of the PECS system especially among professionals. The awareness of the method is currently promoted through this paper, presentations in seminars, and by completing a specialized course offered by the National Institute of Education, Education Counselling Centre, and Centre for Continuing Education of Teachers. The course includes training, the introduction of the PECS method to the participants, and practical training of individual lessons.

Another key condition of the success of the PECS method is continuous coordination and harmonization of the training at school, home, and the healthcare centre.

Although the PECS has not always met with positive reception only, perseverance and determination of all involved and the generally positive results help elevate the method among highly regarded and popular communication techniques.

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