

ADAPTATION OF PICTURE EXCHANGE COMMUNICATION SYSTEM (PECS) FOR CHILDREN WITH AUTISM SPECTRUM DISORDER: A CASE STUDY OF PAKISTAN.

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ABSTRACT: *Management of Autism has been the subject of much academic research around the globe in recent times. Autism affects the child's communication, socialization and cognition. From many decades Picture Exchange Communication System (PECS) has been successfully used for autistic children and evidenced significant positive results respectively. The present study was aimed at exploring the awareness of the application of this system for autistic children, to check the cultural appropriateness and comprehensibility of (PECS) in Pakistan. For this purpose, a questionnaire and a focus group discussion was conducted with 150 participants from special education institutions of five provinces i.e. Punjab, Baluchistan, Sindh, Khyberpaktunkha and Azad Jammu Kashmir of Pakistan. Results indicated that 50% of the participants are not aware of the system. Results also showed that there is a 100% need to adapt this system in Urdu language. Results are discussed in a cultural context proposing a need for the adaptation of PECS for children with autism spectrum disorder in Pakistan.*

Key words: Autism, Communication, Special education, ABA, PECS.

INTRODUCTION

Autism is a complex neuro-developmental disorder that is seen in children from 18 months to three years of age. It is caused by certain genetic factors, and be stimulated by the environmental factors. All kinds of factors interfere with the normal development of the nervous system. Other than the children of the same age, autistic children in the brain have less functional nerve cells. (Drs. Like Wu, Xiao Juan Wang and Bo Cheng). Drugs that have been used cannot control all the symptoms of autism, therefore different therapeutic techniques are being used along with medications where needed. Hence, there is no particular drug to treat autism.

One of the key features of autism is a lack or difficulty in verbal and nonverbal communication and socialization. Applied Behavior Analysis (ABA) and other various strategies are being used for the management of autistic children.

Picture Exchange Communication System (PECS) is used as an intervention, and relies on the principles of ABA and pictorial images are used instead of words to develop functional communication skills. It is a method to teach young children or any individual with communication impairment.

According to the book "verbal behavior" by Skinner, there is a need to teach systematically the use of prompting and reinforcement strategies, to develop independent, functional communication.

Picture exchange communication system was first tried out at Delaware Autistic Program, implementing in different schools and received remarkable appreciation for highlighting the component of communication as in it there is no need of expensive materials. PECS was specially designed for parents and professionals to apply in different settings to overcome learning barriers.

In developing countries need for tools are multifold. Various tools are needed including initial assessment tests and management strategies for the maximum utilization of human resources in these countries. Similarly specific tests and / or teaching techniques required for the autistic children. Appropriate special education curriculum with teaching

strategies/tests can give better results in the performance of autistic children.

Likewise, there is a limited focus on development of indigenous assessment tools and management programs and training of professionals, in the area of Autism specifically in Pakistan. So far, due to the lack of awareness and means for designing new tests, efforts have been made to adapt many international tests for the assessment and teaching requirements in Pakistan.

Furthermore, there are limited institutions for autistic children in Pakistan and the non availability of indigenous intervention plans and trained teachers in the relevant field become the reason that autistic children are treated in the same way like intellectually challenged children.

Though, in the recent years, drastic awareness campaigns are launched for the treatment and teaching of autistic children in Pakistan and the Government has taken the keen interest for providing the facilities for children with ASD. Still, there is a dire need to introduce the adapted version of PECS, as it is an intervention for the development of functional communication in autistic children.

The objectives of this study were to assess the awareness about the PECS among the professionals. Another one is to explore cultural appropriateness and comprehensibility of PECS's original version according to Pakistani culture. As the respective program contains pictures to teach communication to the children, therefore, in this study focus is to check the culture appropriateness of the pictures used in the original PECS with the help of experts.

It might provide more understanding of the need to adapt the current version of PECS in Pakistani culture and to perhaps serve as a basis for betterment in management plans of children with ASD. In addition, it might also provide help in designing management programs to improve functional communication level of children with ASD.

Objectives

The objectives were:

1. To assess the awareness of the application of (PECS) among the professionals.
2. To check the cultural appropriateness and comprehensibility of (PECS) in Pakistani culture.

METHOD

Main Study

The objective of this phase was to assess the awareness of the application of (PECS) for autistic children among professionals.

Sample

The sample of 150 participants (72 males; 78 females) of special education institutions of five provinces i.e. Punjab (40), Baluchistan (23), Sindh (25), Khyberpakhtunkha (30) and Azad Jammu & Kashmir (32) of Pakistan.

Design of the study

The present study aimed to assess the need for adaptation of picture exchange communication system into Pakistani culture. A survey was conducted to assess the current situation in an organized way.

Instruments

Demographic Questionnaire.

On the basis of literature review, the demographic variables of gender and profession were included.

Questionnaire.

A questionnaire consisted of ten items was developed with the help of 5 experts with options of Yes and No. Questions are designed to assess the awareness of the PECS program and current practices among participants.

Focus Group

Focus group discussion was conducted as the tool of research. The main focus of the group was to assess the awareness among the participants regarding PECS program, current assessment and management practices for autistic children. Another aim of the focus group discussion was to check the culture appropriateness of the items used in Original PECS by showing some items using multimedia. The discussion lasted for about two hours. The video recording has been made of the proceedings of the focus group.

Procedure

Before collecting the data, participants were taken in confidence that the data of this survey would be used only for this study. After obtaining consent, questionnaires were distributed among the participants. They were told about the time required during the whole process. They were briefed about the purpose and rationale of the study and verbal consent was taken from them. After that instructions were given to the participants and the administration was carried out in a group form. After administration, the focus group discussion was carried out with the participants. It was followed by the debriefing about the research purpose. They were encouraged to ask questions, if they had any. They were also encouraged to discuss any of the issues regarding the PECS program.

RESULTS AND DISCUSSION

The present study explored a distinct phenomenon of adapting PECS for children with ASD in Pakistani culture. It is also aimed at exploring the awareness of the current practices and need to adapt the respective system in Pakistani culture. Focus group discussion was carried out as a medium with 150 stakeholders of special education from 5 provinces of Pakistan.

Findings suggested that 50% of the participants are not aware of the PECS program and never have heard of it as a teaching method or management strategy for autistic learners. It might be because of lack of training programs in the area of special education and lack of researches to develop indigenous tools for special education sector.

Moreover, a significant majority of 95% respondents were not aware about the age group for which picture exchange communication system can be used and how beneficial it would be for them. It might be for the reason that usually autistic cases are reported in late childhood and professionals have little knowledge about early intervention tools.

Furthermore, a sweeping majority of 98.6% reported that they were not aware about whether any Government or private special education institute is implementing PECS program in its original form or not. It might be again due to the lack of awareness. It also shows that there is a lack of coordination between special education institutes in Pakistan.

Results also revealed that all the participants recommended the adaptation of PECS into Pakistani culture. They also proposed that children can better learn using PECS if it would be translated in Urdu language, which is a national language of Pakistan.

CONCLUSION

The present study was conducted to justify the claim that there is a dire need to adapt the Picture Exchange Communication System into the Pakistani culture. I have designed this study just to identify that the stakeholders of special education know about the term PECS or have any idea about its application or not.

Evidences suggested that there is a significant need to introduce that picture images based system named (PECS) in Pakistan. Also, it would be more beneficial if PECS would be translated into National language i.e. Urdu along with the adaptation of pictorial images according to the Pakistani culture.

Recommendations

On the basis of results and findings, following recommendations are proposed

1. PECS is an beneficial program for autistic children to develop functional communication, so it shall be adapted according to the Pakistani culture.
2. PECS due to its effectiveness and easy applicability shall be introduced to the special education institutions of Pakistan where it can be used as an intervention program for all children with communication difficulties.
3. The professional staff of special education institutes shall be provided with the basic and modernized trainings on Government level and they shall be equipped with the

- updated knowledge and skills to deal with the children with special needs.
4. There shall be the forum for all the special educational institutes' professionals, where they can share their knowledge and current practices to improve the overall system and quality of education.

REFERENCES

- [1] American, P. A. 1994. Diagnostic and Statistical Manual of Mental Disorders. 4th ed. Washington D. C; American Psychiatric Association.
- [2] American Psychiatric Association. 2000. Diagnostic and statistical manual of mental disorders. 4th ed. Washington, DC
- [3] Bondy, A., L. Frost. 2001. The Picture Exchange Communication System (PECS). *Behave Modify.* 25:725-44
- [4] Centers for Disease Control and Prevention About autism. Retrieved July 10, 2005, from <http://www.cdc.gov/ncbddd/autism.html>
- [5] Greinberg, A., M. Tomaino, M. Charlop. 2014. Adapting the Picture Exchange Communication System (PECS) to Elicit Vocalization in Children with Autism. *J. Dev. Phy. Dis.*, 26(1):35
- [6] Kanner, L.1943. Autistic disturbances of effective contact. *The Nervous Child*2, Reprinted in Donnellan, A. M (Ed.), *Classic readings in autism.* New York: Teachers College Press. pp. 217-250.
- [7] Ozonoff, S., S. J. Rogers and R. L. Hendren. 2003. *Autism spectrum disorders: A research review for practitioners.* Washington, DC: American psychiatric publishing, Inc
- [8] Lovaas, O. I. 1981. *Teaching developmentally disabled children.* Baltimore, MD: University Park press. General Accounting Office (GAO) (2005). *Special education: Children with autism.* Washington, Dc: Author.
- [9] Apel, K. and J. Masterson. 2001. *Beyond baby talk: From sounds to sentences, a parent's complete guide to language development.* Roseville, CA: prima publishing.
- [10] Bondy, A. and L. Frost. 1994. The Picture exchange communication system. *Focus on Autistic Behaviour*, 11(3):19.
- [11] Bondy, A. and L. Frost. 1994. The Delaware Autistic Program. In: Harris and J.Handleman (Eds.), *Pre school education Programs for children with autism.* Austin, TX: Pro- Ed., pp.37-54
- [12] Bondy, A. and L. Frost. 2001. The Picture exchange communication system. *Behaviour Modification*, 25(5):725-744.
- [13] Henninger, N. A., J. L. Taylor. 2013. Outcomes in adults with autism spectrum disorders: a historical perspective. *Autism*, 17(1):103-116.
- [14] Smith, T. 2012. Evolution of research on interventions for individuals with autism spectrum disorders. *Education and Training in Autism and Developmental Disabilities*, 46(1):62-77.
- [15] Walton, K. M. and B. R. Ingersoll. 2012. Evaluation of a sibling- mediated imitation intervention for young children with autism. *J. Pos. Behav. Interv.*, 4(4):241-253.
- [16] Ingersoll, B. 2010. Brief Report: Pilot randomized controlled trial of Reciprocal Imitation Training for teaching elicited and spontaneous imitation to children with autism. *J. Aut. Deve. Dis.*, 40:1154-1160.
- [17] Ingersoll, B., E. Lewis and E. Kroman. 2007. Teaching the imitation and spontaneous use of descriptive gestures to young children with autism using a naturalistic behavioral intervention. *J. Aut. Deve. Dis.*, 37:1446-1456.
- [18] Ingersoll, B. and L. Schreibman. 2006. Teaching reciprocal imitation skills to young children with autism using a naturalistic behavioral approach: Effects on language, pretend play, and joint attention. *J. Aut. Deve. Dis.*, 36:487-505.
- [19] Kodak, T., A. Paden and N. Dickes. 2012. Training and Generalization of Peer-Directed Mands With Non-vocal Children With Autism. *The Analysis of Verbal Behavior*, 28:119-124.
- [20] Paden, A. R., T. Kodak, W. W. Fisher, E. M. Gawley-Bullington and K. J. Bouxsein. 2012. Teaching children with autism to engage in peer - directed minds using a picture exchange communication system. *J. App. Beh. Anal.*, 45(2):425-429.
- [21] Cannella-Malone, H. I., J. L. Fant and C. A. Tullis. 2010. Using the Picture Exchange Communication System to increase the social communication of two individuals with severe developmental disabilities. *J. Deve. Phy. Dis.*, 22:149-163.