

Effectiveness of An Educational Program on Elementary Schools' Teachers' Knowledge about Autism Spectrum Disorders

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ABSTRACT

Background: World Health Organization mentioned that people with autism have a wide range of abilities and requirements, which might change over time. While some persons with autism are able to live independently, others have severe difficulties that necessitate lifelong care and assistance. Autism has a significant influence on schooling and employment prospects.

Objective(s): This study aims to determine the effectiveness of an educational program on elementary schools' teachers' knowledge about autism spectrum disorders.

Methodology: A quasi-experimental design (purposive study) used to guide this study, it was applied by the use of pre-post-test approach for two groups of samples (case and control) to determine the effectiveness of an educational program on elementary schools' teachers' knowledge about autism spectrum disorder in Al-Diwaniyah Educational Directorate during the period from (25th September, 2021) to (1st April, 2022). A non-probability purposive sample was selected from all the schools' teachers. The total number of teachers who attended to the chosen place during the study period and who fulfilled the study criteria was (50). These (50) teachers were divided into two groups (25) teachers as a group of cases who are exposed to the educational program and (25) teachers who were not exposed to the educational program as a control group.

Results of the study: The results exhibit that educational program is highly effective on teachers' knowledge about autism spectrum disorder in the study group evidenced by high significant difference in total score of knowledge with regard to post-test at p -value=0.001 respectively. While in the control group, it shows no significant difference in knowledge score.

Conclusion: The researcher concludes that the education program was successful in improving the knowledge of the teachers about autism spectrum disorders. This conclusion is illustrated by the statistical methods that display there is an improvement in the study sample knowledge at post-test compared with the pre-test.

Recommendations: Educational lectures and workshops should be conducted regularly, updated, and circulated to all teaching staff in elementary schools. Providing elementary schools with an educational booklet prepared by the researcher.

Keywords: Effectiveness, Educational Program, Elementary Schools, Teachers, Knowledge, Autism Spectrum Disorders.

INTRODUCTION

Autism is a developmental disorder that affects a person's capacity to communicate with and relate to others, as well as how they perceive the environment (National Autistic Society 2018). The autism spectrum disorders (ASD) comprised of autism and related disorders. ASD is considered a complex developmental disability because in the first the children with autism/ ASD have wide range of difficulties with social behavior and communication, have limited interests, and engage in repetitive and restricted behaviors. While the second cause are symptoms of ASD occur to be lifelong for the majority of autistic children. Cause three these challenges with social communication, behavior, and social interaction often happen with other disorders such as Attention Deficit Hyperactivity Disorder (ADHD), Intellectual Disorder, and Epilepsy, making it difficult for many individuals with autism/ ASD to live in a way that is free from outside control or influence (Özerk and Cardinal 2020).

World Health Organization (WHO,2021) mentioned that people with autism have a wide range of abilities and requirements, which might change over time. While some persons with autism are able to live independently, others have severe difficulties that necessitate lifelong care and assistance. Autism has a significant influence on schooling and employment prospects. Furthermore, the obligations placed on families providing care and assistance might be substantial. The quality of life of people with autism is influenced by societal views and the quantity of support provided by local and national governments.

According to the Morbidity and Mortality Weekly Report (MMRW), ASDs are still a major public health concern in the United States (Zwaigenbaum et al., 2015). Because of these characteristics people with autism are frequently stigmatized and discriminated against, and they are denied access to health care, education, and opportunities to engage and participate in their communities (WHO,2021).

The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-V) divides ASD into three levels based on severity. The first level is defined by the diagnosis of Asperger's disorder, which includes difficult social interactions, a lack of

interest in their social worlds, difficulty switching between activities, and inflexible behaviors. Level two covers those who have problems with communication (both verbal and nonverbal) and who engage in repeated behaviors. Level three people have severe communication (verbal and nonverbal) impairments, give the least response to others, have extreme issues with change, show indicators of severe distress when changing tasks, and engage in confined and repetitive behaviors) American Psychiatric Association [APA] 2013).

METHODOLOGY

Design: A quasi-experimental design (purposive study) used to guide this study, it was applied by the use of pre-post-test approach for two groups of samples (case and control) to determine the effectiveness of an educational program on elementary schools teachers' knowledge about autism spectrum disorder in Al-Diwaniyah Educational Directorate during the period from (25th September, 2021) to (1st April, 2022).

Administrative Arrangements and Ethical Considerations: After gaining the approval by the Department of Community Health Nursing in the College of Nursing - University of Baghdad and Ethical Research Committee to conduct the study. The researcher submitted a detailed description of the study including objectives and methodology (questionnaire) of the study to the Ministry of Planning (Central Statistical Organization) and to General Directorate of Diwaniyah Education - Department of Preparation and Training - Division of Research and Studies to have official permissions to perform the study, then, the permission was sent to Al-Diwaniyah governmental schools in order to ensure the agreement and cooperation.

The researcher obtained verbal informed consent from each teacher. And explained the purpose of the study before participation, told the participants that their participation in this study is voluntary and they can withdraw from this study at any time they want, and also assured them that he will safeguard the confidentiality of the data and they will be securely maintained

during and after conducting the study according to the subject's agreement sheet.

Setting of the Study: The current study was conducted in elementary schools affiliated with the Diwanayah Education Directorate, the sample was collected from Dar al_salam elementary, Khadija elementary School, Al-ebaa elementary school, Al-resafa elementary school, AL-Zaytoon elementary school, and the program was presented in Dar al_salam elementary school.

Sample of the Study: A non-probability purposive sample was selected from all the aforementioned schools' teachers. The total number of teachers who attended to the chosen place during the study period and who fulfilled the study criteria was (50). These (50) teachers were divided into two groups (25) teachers as a group of cases who are exposed to the educational program and (25) teachers who were not exposed to the educational program as a control group.

RESULTS OF THE STUDY

Table 1: Effectiveness of an Educational Program on Teachers' Knowledge about Autism Spectrum Disorder

Knowledge	Study Group (N=25)						Control Group (N=25)					
	M.	SD	t	df	p-value	Sig.	M.	SD	t	df	p-value	Sig.
Pre-test	7.00	3.916	26.400	48	.001	H.S	6.24	2.006	.063	48	.950	N.S
Post-test	28.56	1.158					6.20	2.449				

M: Mean, t: t-test, df: Degree of freedom, p: Probability, Sig.: Significance, HS: High Significant, N.S: Not Significant

This table exhibits that educational program is highly effective on teachers' knowledge about autism spectrum disorder in in the study group evidenced by high significant difference in total score of knowledge with regard to post-test at p-value=0.001 respectively. While in the control group, it shows no significant difference in knowledge score.

about autism spectrum disorder in the study group evidenced by high significant difference in total score of knowledge with regard to post-test respectively. While in the control group, it shows no significant difference in knowledge score Table (1) and Figure (1).

These findings were also favored by Garrad et al. (2019) who stated that this study's findings may suggest a similar trend of favorable views that may have been impacted by policy and regulation rather than specific degrees of training or experience. In the past, the inclusion of children with disabilities in mainstream education has resulted in more positive views about inclusion among teachers in nations with integrated, inclusive education systems than in countries with segregated schooling systems (Garrad et al., 2019).

This result may be connected to a previous study's conclusion that inclusive education teaching skills must be relearned and that older instructors adapted to inclusive education less effectively. The lack of difference in teachers' levels of education was consistent with the overall makeup of instructors in the area where the survey was performed (Lu et al., 2020).

In general, teachers' knowledge of ASD is inadequate. The amount of knowledge appears to rely on the stage at which instructors work, their past experience, and their likely prior encounter with pupils with ASD. Studies combining both pre-service teachers and specialists (such as special education teachers or counselors) produced greater levels of knowledge than those involving solely mainstream instructors. In order to fulfill inclusive education and sustainability goals, it is necessary to train pre-service and in-service teachers at each and every stage of education (Tárraga-Mínguez, 2017).

On the knowledge of ASD measure, teachers who reported experience teaching a kid with an ASD scored considerably higher than those with no experience. These complements prior studies indicating that instructors who have worked with children with ASD have a greater grasp of the disorder than those who have not. This recommends that pre-qualifying teacher education programs should offer student teachers with the chance to engage with children with ASD in a supportive atmosphere (Ballantyne et al., 2021).

With respect to the increasing importance of such educational programs a supportive clue can be drawn from a study conducted by Lu and his colleagues (2020), who stated that ASD information is crucial for parents, physicians, and teachers. However, misunderstandings and false information have occasionally emerged. Teachers and parents have a misunderstanding of ASD, according to a study. For instance, disobedience stemming from a child's lack of comprehension or ability may be misconstrued as refusal or defiance. Such misconceptions regarding ASD may cause parents or instructors to place unreasonable expectations on children with ASD, resulting in dissatisfaction among children, parents, and teachers (Lu et al., 2020).

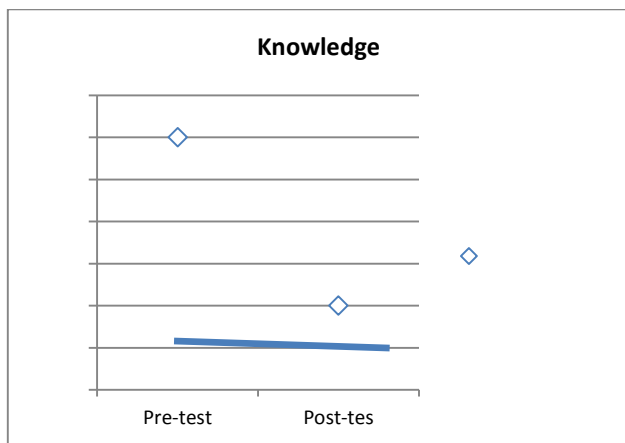
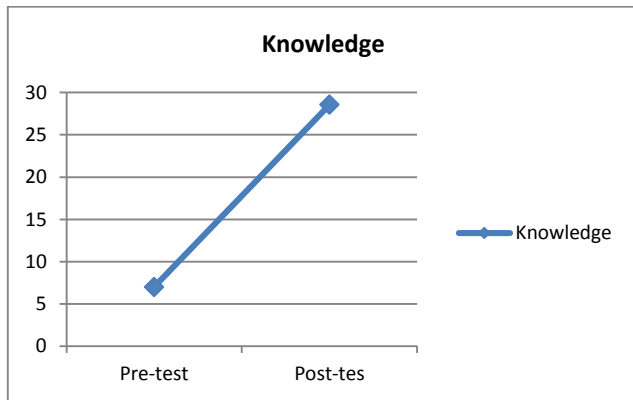


Figure 1: Marginal Means for Teachers' Knowledge about Autism Spectrum Disorder

This figure shows the noticeable increasing in knowledge score in the study group during pre-test through post-test while no change has been seen in knowledge score in the control group.

DISCUSSION

The findings after the data analysis in this study exhibits that educational program is highly effective on teachers' knowledge

Therefore, we agree with prior research that training promotes teachers' expertise and inclusiveness. Only one of the studies that indicated inadequate levels of knowledge explored implementing an evaluation and improvement education program (Gómez-Mar et al., 2021).

According to a research, insufficient emphasis has been paid to assessing the attributes of special education and general education instructors who provide services to these children in inclusive settings. In addition, several scholars have asserted that the increased legislative emphasis on teacher attributes raises problems regarding the instructors who serve children with Autism. Consequently, it has become more important to guarantee that school instructors are sufficiently prepared and possess the essential skills and expertise. To meet the demands of the rising number of kids with Autism and to take the required steps to aid them, school instructors must get an understanding of the disorder. Teachers must learn about the biology of autism and the requirements of autistic children (Haimour & Obaidat, 2013).

For earlier intervention, effective educational planning, and the coordination of family support services, it is vital that school instructors have adequate understanding and expertise of Autism Spectrum Disorder (Alharbi et al., 2019).

CONCLUSION

The researcher concludes that the education program was successful in improving the knowledge of the teachers about autism spectrum disorders. This conclusion is illustrated by the statistical methods that display there is an improvement in the study sample knowledge at post-test compared with the pre-test.

Recommendations: Educational lectures and workshops should be conducted regularly, updated, and circulated to all teaching staff in elementary schools. Providing elementary schools with an educational booklet prepared by the researcher.

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